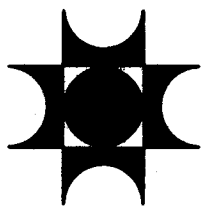
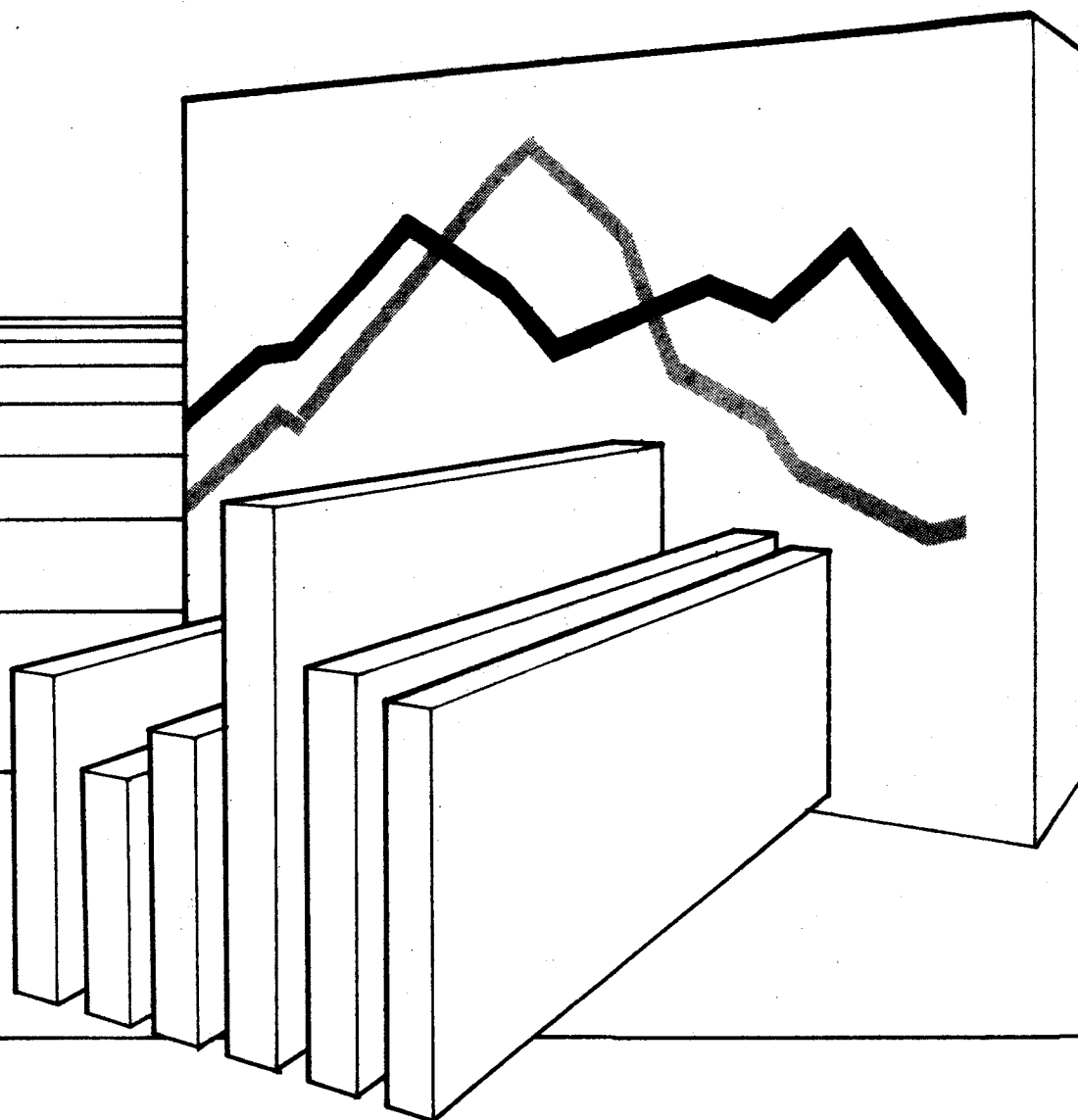


MICHIGAN HEALTH STATISTICS

1975



MICHIGAN DEPARTMENT OF PUBLIC HEALTH

SYMBOLS USED IN TABLES

Data not available	---
Category not applicable	000
Quantity zero	-
Quantity more than zero but less than 0.05	0.0
Figure does not meet standards of reliability or precision	*

Expanded tabulations and improved data quality for this publication were made possible by participation in the Michigan Cooperative Health Information System through contract number HSM 110-73-406 with the National Center for Health Statistics.

ERRATA

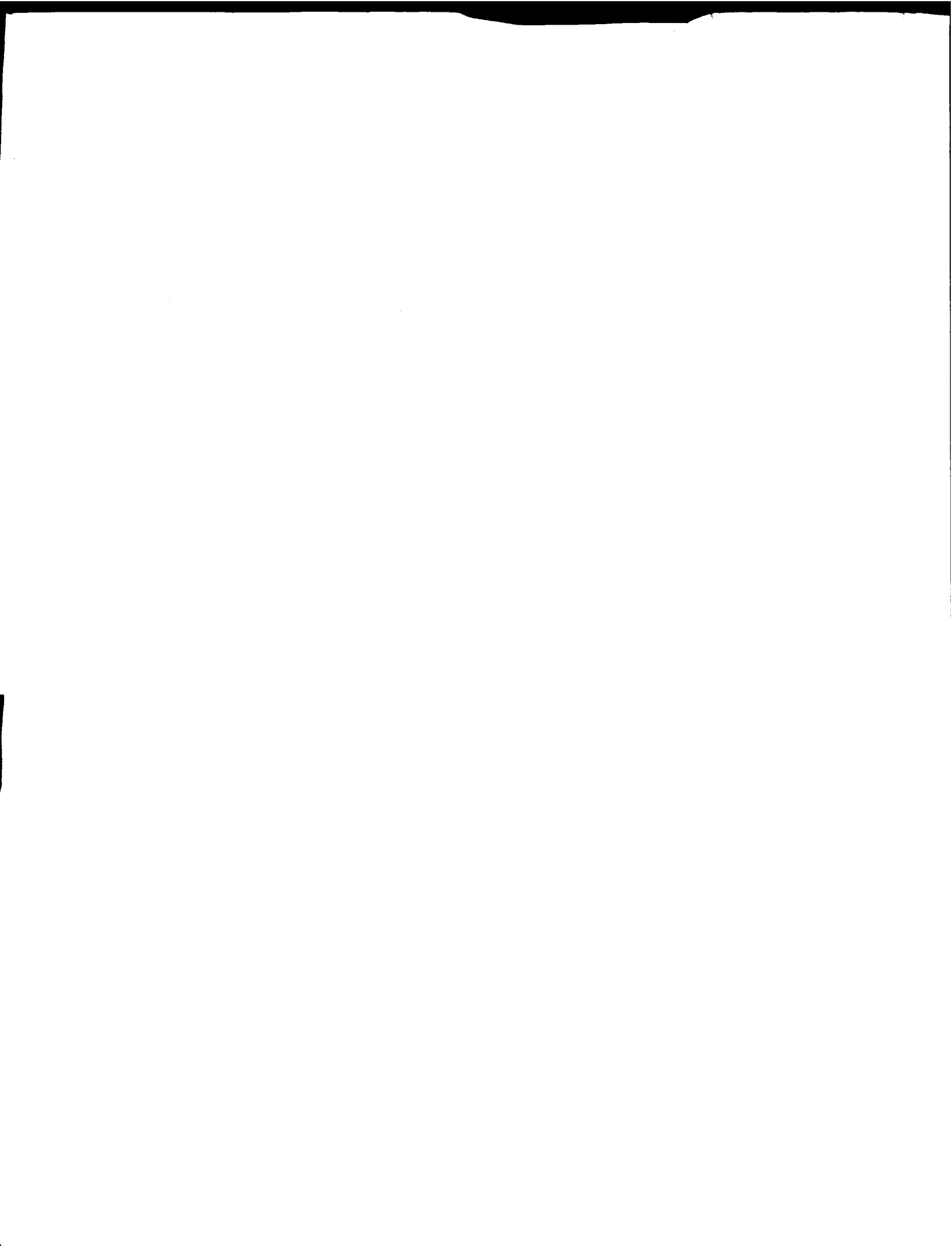
1975 Michigan Health Statistics
(Annual Statistical Report 1975)
Office of Vital and Health Statistics
Michigan Department of Public Health
Lansing, Michigan 48909

Changes in Natality - An Overview 1975 - Page 15

Please replace "FETAL DEATH RATIO" 10.1 with 10.3
and replace "FERTILITY RATE" 67.0 with 67.1

Change Text "CIRRHOSIS OF LIVER" - Page 52 - Line 1

Please replace sixth with seventh leading cause of Michigan
resident deaths - - - - -



MICHIGAN HEALTH STATISTICS

Annual Statistical Report 1975

**Michigan Department of Public Health
Office of Vital and Health Statistics
Lansing 48909**



Table of Contents – TOPICAL

	PAGE
INTRODUCTION	9
TECHNICAL NOTES	
Definitions: Rates and Ratios	10
Qualifications and Limitations of Data and Calculations	12
SECTION I NATALITY	
Natality: An Overview	15
Fertility	16
Racial Composition	17
Age of Mother	18
Age—Specific Birth Rates	18
Illegitimate Live Births	19
Birth Weight	20
Prenatal Care	21
Birth Order	23
Interpregnancy Time Period	23
Attendant	24
Congenital Anomalies	24
Complications of Pregnancy and Labor	24
Place of Occurrence	25
Fetal Deaths	25
Causes of Fetal Death	26
Maternal Characteristics Related to Fetal Death	26
Birth Weight of Stillborn	27
Illegitimate Fetal Deaths	27
Prenatal Care of Mothers Having Stillbirths	28
Interpregnancy Time Period Among Fetal Deaths	28
SECTION II MORTALITY	
Mortality: An Overview	31
Leading Causes of Death	33
Probability of Eventual Death Due to a Specified Cause	35
Diseases of the Heart	36
Cancer	39
Cerebrovascular Diseases	42
Accidents	44
Influenza and Pneumonia	47
Diabetes Mellitus	50
Cirrhosis of the Liver	52
Homicide	54
Suicide	56
Arteriosclerosis	58
Infant Deaths	60
Communicable Disease Deaths	63
Life Expectancy	64
Place of Occurrence	65

Table of Contents—TOPICAL

SECTION III MARRIAGE AND DIVORCE

Marriage and Divorce: An Overview	69
Residence of Couples Marrying in Michigan	70
Age at Marriage	70
Order of Marriage	72
First Marriages	73
Age at First Marriage	74
Divorces and Annulments	74
Duration of Marriage at Divorce	75
Minor Children of Divorced Couples	76
Grounds for Divorce	76

SECTION IV REFERENCE APPENDIX

Table of Contents—TABULAR

PAGE

SECTION I—NATALITY

	PAGE
Table 1.1 Live Births and Crude Birth Rates, Michigan and the United States Residents, Selected Years, 1900-1975	16
Table 1.2 Fertility Rates, Michigan and the United States, Selected Years, 1900-1975	17
Table 1.3 Live Births by Race, Michigan Residents, 1965-1975	17
Table 1.4 Crude Birth Rates and Fertility Rates by Race, Michigan Residents, 1970-1975	17
Table 1.5 Total Live Births and Percent Distribution by Age of Mother and Race of Child, Michigan Residents, 1975	18
Table 1.6 Age-Specific Live Birth Rates, Michigan Residents, 1965 and 1975	18
Table 1.7 Age-Specific Live Birth Rates by Race, Michigan Residents, 1970 and 1975	19
Table 1.8 Illegitimate Live Births and Ratio by Age of Mother, Michigan Residents, 1965 and 1975	19
Table 1.9 Illegitimate Live Births and Illegitimacy Ratios, Michigan and United States Residents, 1965-1975	19
Table 1.10 Illegitimate Live Births by Selected Characteristics, Michigan Residents, 1975	20
Table 1.11 Illegitimate Live Births and Ratio by Age of Mother and Race of Child, Michigan Residents, 1975	20
Table 1.12 Live Births by Birth Weight and Legitimacy Status, Michigan Residents, 1975 ..	21
Table 1.13 Low Weight Live Births and Ratio by Age of Mother and Race of Child, Michigan Residents, 1975	21
Table 1.14 Live Births with No Prenatal Care by Age of Mother and Race of Child, Michigan Residents, 1975	21
Table 1.15 Live Births by Month Prenatal Care Began and Number of Prenatal Visits, Michigan Residents, 1975	22
Table 1.16 Total Live Births by Month of Pregnancy Prenatal Care Began and Live Birth Order, Michigan Residents, 1975	22
Table 1.17 Total Live Births by Live Birth Order, Michigan Residents, 1965 and 1975	23

Table 1.18 First Births, Michigan and United States Residents, 1965-1975	23
Table 1.19 Total Live Births by Live Birth Order and Age of Mother, Michigan Residents, 1975	23
Table 1.20 Live Births to Mothers Reporting Previous Pregnancy Terminations by Time Span between Last and Current Termination, Michigan Residents, 1970 and 1975	23
Table 1.21 Live Births by Type of Attendant, Michigan Residents, 1975	24
Table 1.22 Congenital Anomalies Reported by Type of Anomaly, Michigan Residents, 1975 ...	24
Table 1.23 Live Births Occurring Outside the Mother's State of Residence by State of Occurrence, Michigan Occurrences and Residents, 1975	25
Table 1.24 Fetal Deaths and Fetal Death Ratios, Michigan and United States Residents, Selected Years, 1900-1975	25
Table 1.25 Fetal Deaths by Cause of Death (Underlying) and Cause-Specific Ratios, Michigan Residents, 1975	26
Table 1.26 Fetal Deaths, Live Births, and Fetal Death Rates by Age of Mother and Race of Fetus, Michigan Residents, 1975	27
Table 1.27 Fetal Deaths by Age of Mother and Race of Fetus, Michigan Residents, 1975	27
Table 1.28 Fetal Deaths by Fetal Weight and Plurality, Michigan Residents, 1975	27
Table 1.29 Fetal Deaths, Live Births and Fetal Death Rates by Age of Mother and Legitimacy Status, Michigan Residents, 1975	28
Table 1.30 Fetal Deaths by Month Prenatal Care Began and Number of Prenatal Visits, Michigan Residents, 1975	28
Table 1.31 Fetal Deaths and Live Births to Mothers Reporting Prior Pregnancy Terminations by Time Span between Last and Current Termination, Michigan Residents, 1975	28

SECTION II—MORTALITY

Table 2.1 Number of Deaths and Crude Death Rates, Michigan and United States Residents, 1965-1975	31
Table 2.2 Number of Deaths by Age, Race and Sex, Michigan Residents, 1975	32

	PAGE		PAGE
Table 2.3 Death Rates by Age and Sex, Michigan Residents, 1975	32	Table 2.23 Diabetes Mellitus Deaths by Presence of Acidosis or Coma, Michigan Residents, 1975	51
Table 2.4 Leading Causes of Death and Cause-Specific Rates, Michigan and United States Residents, 1975	33	Table 2.24 Deaths Due to Cirrhosis of the Liver by Age, Race and Sex, Michigan Residents, 1975	52
Table 2.5 Leading Causes of Death and Cause-Specific Rates by Age, Race and Sex, Michigan Residents, 1975	34	Table 2.25 Cirrhosis of the Liver Death Rates by Age and Sex, Michigan Residents, 1975	52
Table 2.6 Deaths Due to Diseases of the Heart by Age, Race and Sex, Michigan Residents, 1975	36	Table 2.26 Deaths Due to Cirrhosis of the Liver by Mention of Alcoholism, Michigan Residents, 1975	53
Table 2.7 Heart Disease Death Rates by Age and Sex, Michigan Residents, 1975	37	Table 2.27 Deaths Due to Homicide by Age, Race and Sex, Michigan Residents, 1975	54
Table 2.8 Deaths Due to Diseases of the Heart by Detailed Cause, Michigan Residents, 1975 ..	38	Table 2.28 Homicide Death Rates by Age and Sex, Michigan Residents, 1975	54
Table 2.9 Deaths Due to Cancer by Age, Race and Sex, Michigan Residents, 1975	39	Table 2.29 Deaths Due to Homicide by Detailed Cause, Michigan Residents, 1975	55
Table 2.10 Cancer Death Rates by Age and Sex, Michigan Residents, 1975	40	Table 2.30 Deaths Due to Suicide by Age, Race and Sex, Michigan Residents, 1975	56
Table 2.11 Malignant Neoplasms by Site Affected, Michigan Residents, 1975	41	Table 2.31 Suicide Death Rates by Age and Sex, Michigan Residents, 1975	56
Table 2.12 Deaths Due to Cerebrovascular Disease by Age, Race and Sex, Michigan Residents, 1975	42	Table 2.32 Deaths Due to Suicide by Method, Michigan Residents, 1975	57
Table 2.13 Cerebrovascular Disease Death Rates by Age and Sex, Michigan Residents, 1975	42	Table 2.33 Deaths Due to Arteriosclerosis by Age, Race and Sex, Michigan Residents, 1975 ..	58
Table 2.14 Deaths Due to Cerebrovascular Disease by Detailed Cause, Michigan Residents, 1975	43	Table 2.34 Arteriosclerosis Death Rates by Age and Sex, Michigan Residents, 1975	58
Table 2.15 Deaths Due to Accidents by Age, Race and Sex, Michigan Residents, 1975	44	Table 2.35 Deaths Due to Arteriosclerosis by Detailed Cause, Michigan Residents, 1975	59
Table 2.16 Accident Death Rates by Age and Sex, Michigan Residents, 1975	45	Table 2.36 Infant Deaths and Infant Mortality Rates, Michigan and United States Residents, 1965-1975	60
Table 2.17 Accidental Deaths by Type of Accident, Michigan Residents, 1975	46	Table 2.37 Infant Deaths, Live Births and Infant Mortality Rates by Age of Mother and Race of Infant, Michigan Resident Infants Born in 1974	60
Table 2.18 Deaths Due to Influenza and Pneumonia by Age, Race and Sex, Michigan Residents, 1975	47	Table 2.38 Infant Deaths and Mortality Rates by Infants Age at Death, Michigan Residents, 1970-1975	61
Table 2.19 Influenza and Pneumonia Death Rates by Age and Sex, Michigan Residents, 1975	48	Table 2.39 Perinatal Deaths, Total Births, and Perinatal Death Rates by Age of Mother and Race of Infant, Michigan Residents Born in 1974	61
Table 2.20 Influenza and Pneumonia Deaths by Detailed Cause, Michigan Residents, 1975	49	Table 2.40 Infant Deaths by Cause of Death, Michigan Residents, 1975	62
Table 2.21 Deaths Due to Diabetes Mellitus by Age, Race and Sex, Michigan Residents, 1975 ..	50	Table 2.41 Infant Deaths by Month Prenatal Care Began and Number of Prenatal Visits, Michigan Resident Infants Born in 1974	62
Table 2.22 Diabetes Mellitus Death Rates by Age and Sex, Michigan Residents, 1975	50		

	PAGE
Table 2.42 Infant Deaths by Birth Weight and Mothers Age, Michigan Resident Infants Born in 1974	63
Table 2.43 Deaths from Selected Infective and Parasitic Diseases, Michigan Residents, 1975 ..	63
Table 2.44 Life Expectancy at Birth by Sex, Michigan and United States Residents, Selected Years, 1901-1975	64
Table 2.45 Life Expectancy at Birth by Sex and Race, Michigan Residents, Selected Years, 1950-1975	64
Table 2.46 Deaths Occurring Outside the State of Residence by State of Occurrence, Michigan Occurrences and Residents, 1975	65

SECTION III

MARRIAGE AND DIVORCE

Table 3.1 Marriages, Divorces and Annulments, Michigan and United States Occurrences, Selected Years, 1920-1975	69
Table 3.2 Marriages by Residence Status of Bride and Groom, Michigan Occurrences, 1965 and 1975	70
Table 3.3 State of Residence of Nonresident Brides and Grooms, Michigan Occurrences, 1975	70
Table 3.4 Number of Marriages and Rates by Age and Sex, Michigan Occurrences, 1970 and 1975	70
Table 3.5 Age at First Marriage and Remarriage: Bride, Michigan Occurrences, 1965 and 1975	71
Table 3.6 Age at First Marriage and Remarriage: Groom, Michigan Occurrences, 1965 and 1975	71
Table 3.7 Remarriages of Brides by Age and Order of Marriage, Michigan Occurrences, 1965 and 1975	72
Table 3.8 Remarriages of Grooms by Age and Order of Marriage, Michigan Occurrences, 1965 and 1975	72
Table 3.9 First Marriages by Age of Bride, Michigan Occurrences, 1970-1975	73
Table 3.10 First Marriages by Age of Groom, Michigan Occurrences, 1970-1975	73

	PAGE
Table 3.11 First Marriage Rates by Age of Bride, Michigan Occurrences, 1970-1975	74
Table 3.12 First Marriage Rates by Age of Groom, Michigan Occurrences, 1970-1975	74
Table 3.13 Divorces and Annulments by Duration of Marriage, Michigan Occurrences, 1965 and 1975	75
Table 3.14 Divorces and Annulments by Children Under 18 Present, Michigan Occurrences, 1965 and 1975	76
Table 3.15 Divorces and Annulments by Legal Grounds for Decree, Michigan Occurrences, 1965 and 1975	76

SECTION IV

REFERENCE APPENDIX

Table 4.1 Population; Live Births, Total and Illegitimate; Deaths, All Ages, Infant, Neonatal, Perinatal, Fetal, Maternal and Deaths Due to Immaturity; Marriages and Divorces, Michigan, 1900-1975	79
Table 4.2 Live Birth Rates, Total and Illegitimate; Death Rates, All Ages, Infant, Neonatal, Perinatal, Maternal and Death Rates Due to Immaturity; Fetal Death Ratio; Marriage and Divorce Rates, Michigan, 1900-1975	80
Table 4.3 Number of Live Births by Age of Mother, Michigan Residents, 1920-1975	81
Table 4.4 Live Birth Rates by Five Year Age Groups of Mother, Michigan Residents, 1920-1975	82
Table 4.5 Reported Cases of Certain Communicable Diseases, Michigan Occurrences, 1900-1975	83
Table 4.6 Case Rates of Certain Reported Communicable Diseases, Michigan Occurrences, 1900-1975	84
Table 4.7 Number of Deaths and Death Rates for Certain Communicable Diseases, Michigan Residents, 1900-1975	85
Table 4.8 Number of Deaths and Death Rates by Specified Causes, Michigan Residents, 1900-1975	86
Table 4.9 Selected Vital Statistics by County, Michigan Residents, 1975	87

	PAGE
Table 4.10 Selected Vital Statistics Rates by County, Michigan Residents, 1975	88
Table 4.11 Vital Statistics by Selected Cities, Michigan Residents, 1975	89
Table 4.12 Selected Causes of Death by County, Michigan Residents, 1975	90
Table 4.13 Reported Cases of Certain Communicable Diseases by County, Michigan Residents, 1975	91
Table 4.14 Number of Deaths by Cause, Michigan Residents, 1975	92
Table 4.15 Population by Age and Sex, Michigan Residents, 1975	96
Table 4.16 Population Changes by County, Michigan Residents, 1975	97
Table 4.17 Abridged Life Table, Michigan Residents, 1975	98
Table 4.18 Abridged Life Table for Males, Michigan Residents, 1975	98
Table 4.19 Abridged Life Table for Females, Michigan Residents, 1975	98
Table 4.20 Abridged Life Table for Whites, Michigan Residents, 1975	99
Table 4.21 Abridged Life Table for White Males, Michigan Residents, 1975	99
Table 4.22 Abridged Life Table for White Females, Michigan Residents, 1975	99
Table 4.23 Abridged Life Table for Non-whites, Michigan Residents, 1975	100
Table 4.24 Abridged Life Table for Non-White Males, Michigan Residents, 1975	100
Table 4.25 Abridged Life Table for Non-White Females, Michigan Residents, 1975	100

Table of Contents—GRAPHICS

SECTION I—NATALITY

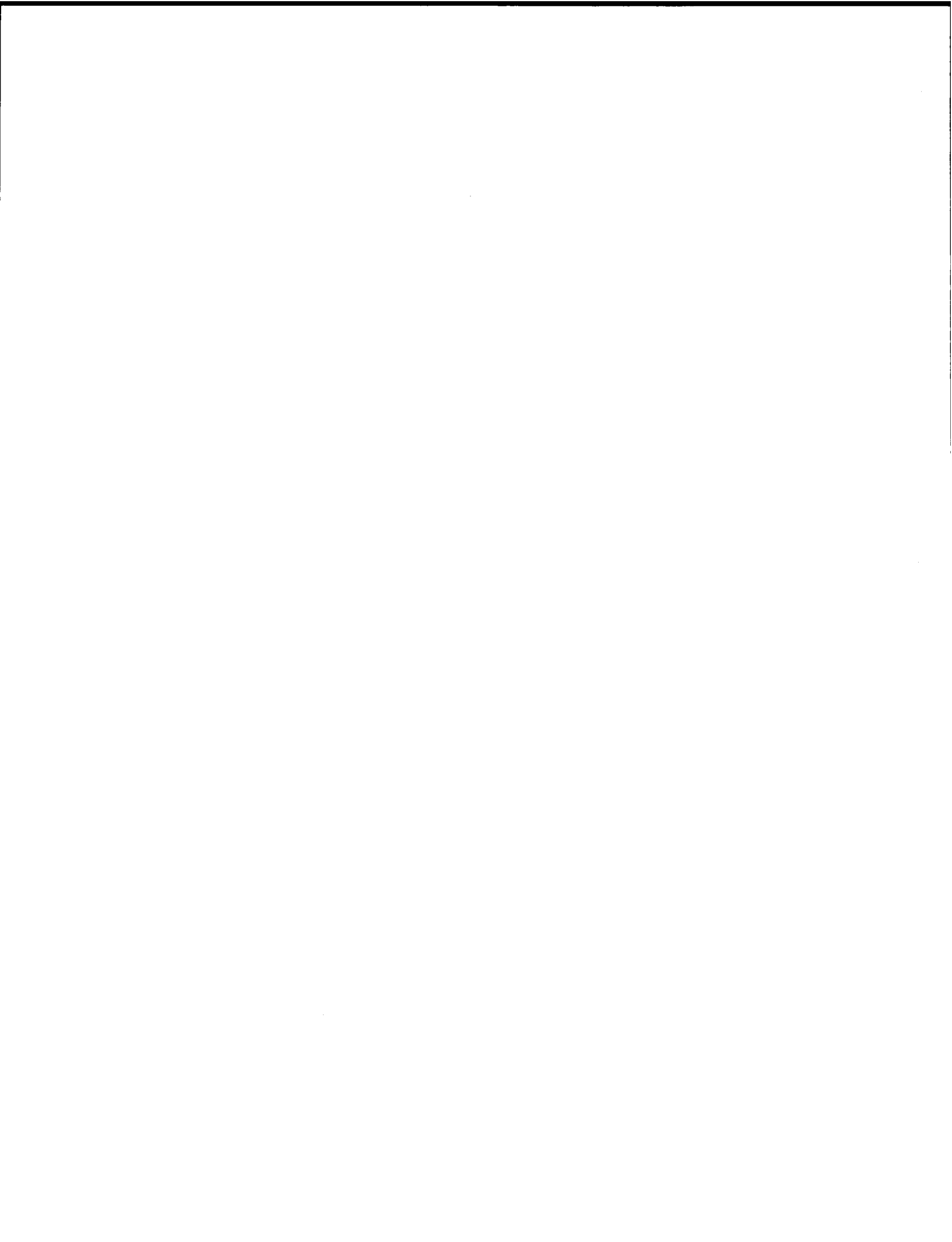
Figure 1.1 Live Births, Michigan Residents, 1900-1975	15
Figure 1.2 Fetal Deaths, Michigan Residents, 1900-1975	15
Figure 1.3 Live Birth Rate and Fetal Death Ratio, Michigan Residents, 1900-1975	16
Figure 1.4 Illegitimate Live Birth Ratio, Michigan Residents, 1900-1975	19

	PAGE
Figure 1.5 Percent of Women Having Live Births Who Received Medical Care Prior to the Sixth Month of Pregnancy, Michigan Residents, 1970-1975	22
Figure 1.6 Incidence of Congenital Anomalies Reported per 10,000 Live Births, Michigan Residents, 1970-1975	24
Figure 1.7 Incidence of Complications Related and Unrelated to Pregnancy, Complications of Labor and the Presence of Birth Injury, Michigan Residents, 1970-1975	25
Figure 1.8 Percent of Women Having Fetal Deaths Who Receive Medical Care Prior to the Sixth Month of Pregnancy, Michigan Residents, 1970-1975	28

SECTION II—MORTALITY

Figure 2.1 Crude Death Rate, Michigan Residents, 1900-1975	31
Figure 2.2 Death Rates by Age and Sex, Michigan Residents, 1975	32
Figure 2.3 Leading Causes of Death, Michigan Residents, 1975	33
Figure 2.4 Heart Disease Death Rates by Age and Sex, Michigan Residents, 1975	37
Figure 2.5 Heart Disease Death Rates, Michigan and United States Residents, 1900-1975	37
Figure 2.6 Probability of Eventually Dying from Heart Disease by Age and Sex, Michigan Residents, 1973 through 1975	38
Figure 2.7 Cancer Death Rates by Age and Sex, Michigan Residents, 1975	40
Figure 2.8 Cancer Death Rates, Michigan and United States Residents, 1900-1975	40
Figure 2.9 Probability of Eventually Dying from Cancer by Age and Sex, Michigan Residents, 1973 through 1975	41
Figure 2.10 Cerebrovascular Disease Death Rates by Age and Sex, Michigan Residents, 1975	43
Figure 2.11 Cerebrovascular Disease Death Rates, Michigan and United States Residents, 1900-1975	43
Figure 2.12 Probability of Eventually Dying from Cerebrovascular Disease by Age and Sex, Michigan Residents, 1973 through 1975	43
Figure 2.13 Accident Death Rates by Age and Sex, Michigan Residents, 1975	45

PAGE	PAGE		
Figure 2.14 Accident Death Rates, Michigan and United States Residents, 1900-1975	45	Figure 2.35 Remaining Years of Life by Age, Sex and Race, Michigan Residents, 1975	64
Figure 2.15 Probability of Eventually Dying from Accidental Causes by Age and Sex, Michigan Residents, 1973 through 1975	46	SECTION III	
Figure 2.16 Influenza and Pneumonia Death Rates by Age and Sex, Michigan Residents, 1975	48	MARRIAGE AND DIVORCE	
Figure 2.17 Influenza and Pneumonia Death Rates, Michigan and United States Residents, 1900-1975	48	Figure 3.1 Marriage Rates, Michigan and United States Occurrences, 1900-1975	69
Figure 2.18 Probability of Eventually Dying from Influenza and Pneumonia by Age and Sex, Michigan Residents, 1973 through 1975	49	Figure 3.2 Percent of All Marriages That Are First Marriages, Michigan Occurrences, 1960-1975	73
Figure 2.19 Diabetes Mellitus Death Rates by Age and Sex, Michigan Residents, 1975	51	Figure 3.3 Median Age at First Marriage by Sex, Michigan Occurrences, 1955-1975	74
Figure 2.20 Diabetes Mellitus Death Rates, Michigan and United States Residents, 1900-1975	51	Figure 3.4 Divorce Rates, Michigan and United States Occurrences, 1900-1975	75
Figure 2.21 Probability of Eventually Dying from Diabetes Mellitus by Age and Sex, Michigan Residents, 1973 through 1975	51	Figure 3.5 Median Duration of Divorced and Annulled Marriages, Michigan Occurrences, 1960-1975	76
Figure 2.22 Cirrhosis of the Liver Death Rates by Age and Sex, Michigan Residents, 1975	53	SECTION IV	
Figure 2.23 Cirrhosis of the Liver Death Rates, Michigan and United States Residents, 1900-1975	53	REFERENCE APPENDIX	
Figure 2.24 Probability of Eventually Dying from Cirrhosis of the Liver by Age and Sex, Michigan Residents, 1973 through 1975	53	Figure 4.1 Rate of Natural Increase, Michigan 1900-1975 and United States, 1909-1975	101
Figure 2.25 Homicide Death Rates by Age and Sex, Michigan Residents, 1975	55	Figure 4.2 Total Population, Percent Under Age 20 and Percent Age 65 and Over by Region, Michigan, 1975	102
Figure 2.26 Homicide Death Rates, Michigan and United States Residents, 1900-1975	55	Figure 4.3 Population Density, Live Birth Rates, Illegitimate Live Birth Ratio, Fetal Death Ratio, Death Rates and Infant Mortality Rates by Region, Michigan Residents, 1975	103
Figure 2.27 Probability of Eventually Dying from Homicide by Age and Sex, Michigan Residents, 1973 through 1975	55	Figure 4.4 Leading Causes of Death; Number of Deaths by Region, Michigan Residents, 1975	104
Figure 2.28 Suicide Death Rates by Age and Sex, Michigan Residents, 1975	57	Figure 4.5 Leading Causes of Death; Death Rates by Region, Michigan Residents, 1975	105
Figure 2.29 Suicide Death Rates, Michigan and United States Residents, 1900-1975	57	Figure 4.6 Marriages and Marriage Rates, Divorces and Divorce Rates by Region, Michigan Residents, 1975	106
Figure 2.30 Probability of Eventually Dying from Suicide by Age and Sex, Michigan Residents, 1973 through 1975	57	Figure 4.7 Life Expectancy at Birth by Sex, by Region, Michigan Residents, 1974-1975	107
Figure 2.31 Arteriosclerosis Death Rates by Age and Sex, Michigan Residents, 1975	59	Figure 4.8 Michigan Live Birth Certificate	108
Figure 2.32 Arteriosclerosis Death Rates, Michigan and United States Residents, 1900-1975	59	Figure 4.9 Michigan Fetal Death Certificate	109
Figure 2.33 Probability of Eventually Dying from Arteriosclerosis by Age and Sex, Michigan Residents, 1973 through 1975	59	Figure 4.10 Michigan Death Certificate	110
Figure 2.34 Infant Mortality Rates, Michigan and United States Residents, 1900-1975	60	Figure 4.11 Michigan Marriage License	111
		Figure 4.12 Michigan Divorce Record	112



Introduction

The 1975 edition of Michigan Health Statistics is a statistical summary of vital events for calendar year 1975. 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 1975, some 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 relating to where the event occurred rather than the residence status 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 residence tabulations pertaining to Michigan residents. This report includes all such out-of-state certificates received prior to March 15, 1976, and all in-state certificates and records received prior to March 15, 1976. Although a few records for calendar year 1975 were received after these filing dates, their exclusion from this report is statistically insignificant.

The 1970 edition of Michigan Health Statistics contained a complete section devoted to population characteristics. Similar data are not available for 1975 and thus the 1975 edition of Michigan Health Statistics does not have a section on population. The reader is referred to the 1970 edition for detailed population characteristics and to the reference appendix of this edition for county and state population estimates. More detailed population data are available in the Bureau of Management and Budget publication "Population Projections" and in the U.S. Census Bureau P-26 series.

The report is composed of the following sections and appendices:

1. Natality Section, 2. Mortality Section, 3. Marriage and Divorce Section, 4. Reference Appendix.

Any 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 of Vital and Health Statistics. A summary of prepared vital statistics tabulations, *Index to Michigan Vital Statistics 1960 to Present*, is also available. This index lists the type of tabulations and data available. The Office will make every attempt to comply with requests for data within the limitation of staff and resources.

Office of Vital and Health Statistics
Michigan Department of Public Health
3500 North Logan Street
P.O. Box 30035
Lansing, Michigan 48909
Area Code (517) 373-1390

Technical Notes, Definitions, Rates and Ratios

Definitions

BIRTH WEIGHT—Weight of fetus or infant at time of delivery (normally recorded in pounds and ounces).

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; 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 includes both spontaneous and 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 weeks elapsed between the first day of the last menstrual period and date of delivery.

HEBDOMADAL DEATH—Death occurring to an individual less than 7 days of age.

ILLEGITIMATE BIRTH—Birth wherein there is no marital tie between mother and father, nor an acknowledgement of paternity.

INFANT DEATH—Death occurring to an individual of less than 1 year of age.

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.

LEADING CAUSES OF DEATH—Deaths are grouped into 111 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

${}_nd_x$ = 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

l_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

\dot{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.

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

LOW-WEIGHT BIRTH—Birth wherein the birth weight is equivalent to 2,500 grams or less (approximately 5 lbs., 8 oz.).

MATERNAL DEATHS—Those deaths wherein the physician has designated a maternal condition as the underlying cause of death.

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 individual less than 28 days of age.

OCCURRENCE—Place where the event actually occurred.

PERINATAL DEATH—Fetal death or death under 1 week 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. Nonwhite includes all noncaucasian races.

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 person to whom 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.

Rates and Ratios

AGE-SPECIFIC BIRTH RATE = No. of Resident Live Births for a Specific Age of Mother divided by Total Female Population of Specific Age $\times 1,000$

AGE-SPECIFIC DEATH RATE = No. of Deaths in Specific Age Group divided by Total Resident Population in Specific Age Group $\times 100,000$

AGE-SPECIFIC DEATH RATE BY CAUSE OF DEATH = No. of Deaths in Specific Age Group and From a Specific Cause divided by Total Resident Population in Specific Age Group $\times 100,000$

AGE-SPECIFIC MARRIAGE RATE = No. of Marriages in Specific Age Group by Sex divided by Total Resident Population in Specific Age and Sex Group $\times 1,000$

CAUSE-SPECIFIC RATE = No. of Deaths due to a Specific Cause divided by Total Resident Population $\times 100,000$

COMMUNICABLE DISEASE CASE RATE = No. of Reported Cases (Specific Communicable Diseases) divided by Total Resident Population $\times 100,000$

CRUDE BIRTH RATE = No. of Resident Live Births divided by Total Resident Population $\times 1,000$

CRUDE DEATH RATE = No. of Resident Deaths divided by Total Resident Population $\times 1,000$

DIVORCE RATE = No. of Persons (Divorces and Annulments) divided by Total Resident Population $\times 1,000$

FERTILITY RATE = No. of Resident Live Births divided by Total Female Population (Ages 15-44) $\times 1,000$

FETAL DEATH RATE = No. of Resident Fetal Deaths divided by Total Resident Live Births and Resident Fetal Deaths $\times 1,000$

FETAL DEATH RATIO = No. of Resident Fetal Deaths divided by Total Resident Live Births $\times 1,000$

FIRST MARRIAGE RATE = No. of Marriages to Persons not Previously Married by Sex divided by Total Resident Population by Sex $\times 1,000$

ILLEGITIMACY RATIO = No. of Resident Illegitimate Births divided by Total Resident Live Births $\times 1,000$

INFANT MORTALITY RATE = No. of Infant Deaths divided by Total Resident Live Births $\times 1,000$

LOW-WEIGHT BIRTH RATIO = No. of Low-Weight Births divided by Total Resident Live Births $\times 1,000$

MARRIAGE RATE = No. of Persons Married divided by Total Resident Population $\times 1,000$

MATERNAL DEATH RATE = No. of Maternal Deaths divided by Total Resident Live Births $\times 10,000$

NEONATAL DEATH RATE = No. of Neonatal Deaths divided by Total Resident Live Births $\times 1,000$

NO PRENATAL CARE RATIO = No. of Live Births to Mothers With No Prenatal Care divided by Total Resident Live Births $\times 1,000$

PERINATAL DEATH RATE = No. of Perinatal Deaths divided by Total Resident Live Births and Resident Fetal Deaths $\times 1,000$

RATE OF NATURAL INCREASE = Total Resident Live Births divided by Total Resident Deaths

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 arteriosclerosis 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 compounding 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. Inadequacies in determining the gestational age of the fetus may account for some underreporting of fetal deaths.

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.

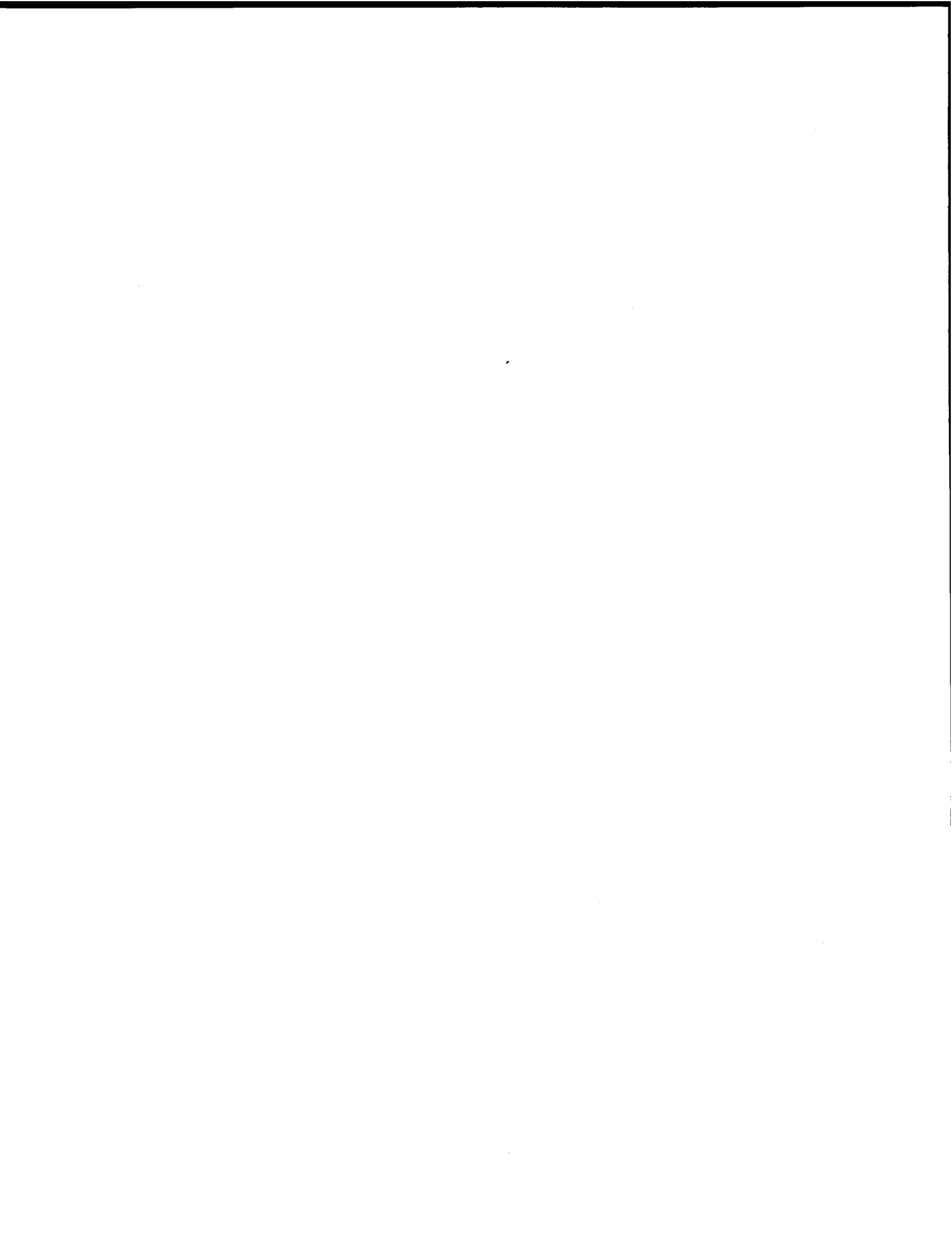
LIFE EXPECTANCY

The procedure used to obtain the Michigan life table values is called the iterative method. This is a method which has been developed by Professor Felix Moore 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 ${}_n d_x$ and ${}_n q_x$. An iteration procedure is also used for ${}_n l_x$ 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.

NATALITY

SECTION I



Nativity

An Overview 1975

TOTAL BIRTHS	135,304
TOTAL RESIDENT LIVE BIRTHS	133,931
RESIDENT LIVE BIRTHS PER DAY	366.9
TOTAL RESIDENT FETAL DEATHS	1,373
RESIDENT FETAL DEATHS PER DAY	3.8
CRUDE BIRTH RATE	14.6
FETAL DEATH RATIO	10.1
FERTILITY RATE	67.0
ILLEGITIMACY RATIO—LIVE BIRTHS	146.9
ILLEGITIMACY RATIO—FETAL DEATHS	246.2
FIRST ORDER BIRTHS (PERCENT OF TOTAL LIVE BIRTHS)	41.6
NO PRENATAL CARE RATIO	77.8
NONWHITE BIRTHS (PERCENT OF TOTAL LIVE BIRTHS)	18.1
MEDIAN AGE OF MOTHER (LIVE BIRTHS)	24
MEDIAN AGE OF MOTHER (FETAL DEATHS)	24
OLDEST MOTHER (LIVE BIRTHS)	48
YOUNGEST MOTHER (LIVE BIRTHS)	11
MEDIAN BIRTH WEIGHT IN GRAMS (LIVE BIRTHS)	3,344
MEDIAN BIRTH WEIGHT IN GRAMS (FETAL DEATHS)	1,551
HEAVIEST LIVE BORN INFANT IN GRAMS	8,533
LIGHTEST LIVE BORN INFANT IN GRAMS	60
LIVE BORN SETS OF TWINS	1,205
LIVE BORN SETS OF TRIPLETS	10
LIVE BORN MULTIPLE BIRTHS OF FOUR OR MORE	0

Between 1900 and 1975, the number of total births occurring each year varied considerably. This pattern has not been totally consistent for the two component parts of deliveries (live births and fetal deaths). The smallest number of live births recorded in this century was 43,221. This occurred in 1901. The greatest number was 208,488 in 1957. The smallest number of fetal deaths was 1,325 (recorded in 1900) and the greatest number was 3,834 (recorded in 1927). Figures 1.1 and 1.2 portray the changes that have taken place in the number of live births and fetal deaths recorded each year since 1900. Since 1957, excepting the year 1970, there has been a steady decline in the number of resident live births. The number reported for 1975 is the lowest figure in twenty years.

Another view of the changing pattern in total births may be obtained through the examination of changes in the crude birth rate and the fetal death ratios. The crude birth rate has ranged from a low of 14.6 in 1975 to a high of 27.4 in 1956. The fetal death ratio has ranged from a low of 10.3 in 1975 to a high of 43.5 in 1905.

Figure 1.3 is a graphic portrayal of trends in live birth rates and fetal death ratios for Michigan since 1900. As can be seen quite clearly from the graph, birth rates display a bimodal pattern with maximum values in 1916, 1917, and 1956 whereas fetal death ratios have declined with virtual consistency from the very high levels of the teens and early 1920's.

FIGURE 1.1—Live Births, Michigan Residents, 1900-1975

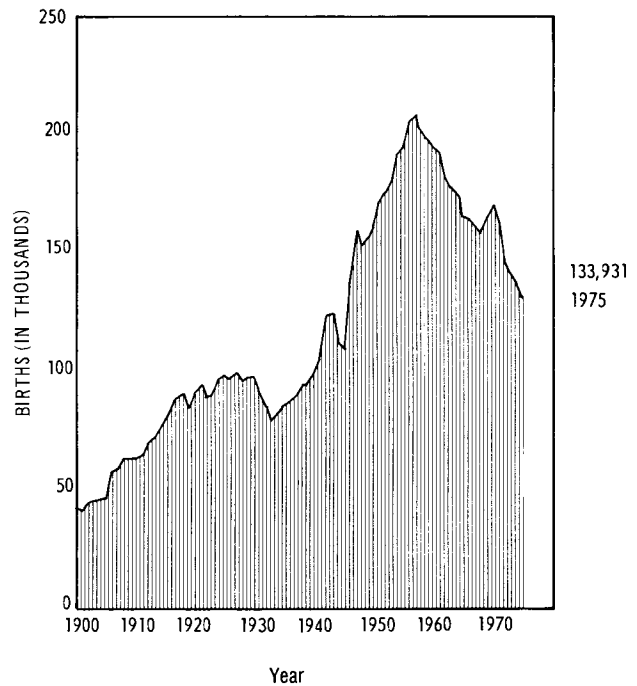
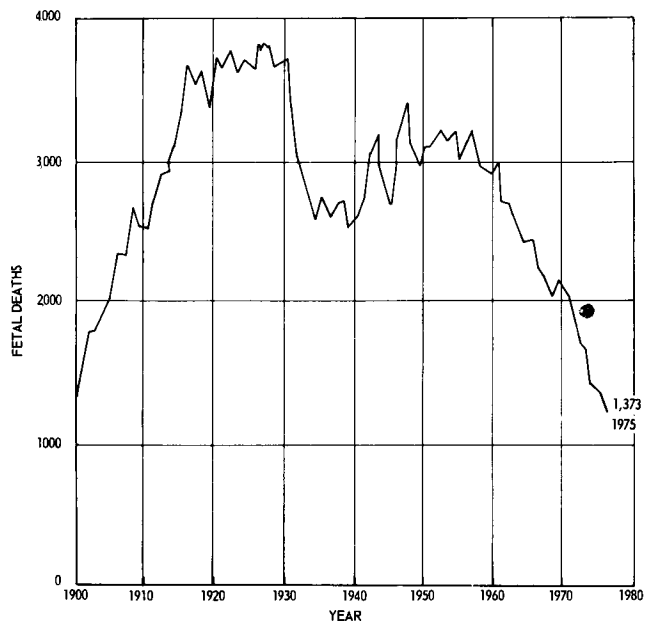


FIGURE 1.2—Fetal Deaths, Michigan Residents, 1900-1975



Crude birth rates rose steadily during the period from 1900-1920. This period was also marked by a significant growth of heavy industry in the state. During the 1920's, however, the crude birth rate started to decline, finally troughing out during the early and middle 1930's. As Michigan's economic viability returned during the late 1930's and early 1940's, the crude birth rate once again increased. Significant increases were observed in the years immediately following World War II and the rate finally reached an all time high in 1956. Since that time, the rate has declined rather steadily with a slight upward movement in 1969 and 1970, then downward through 1975.

From 1900 through 1940, Michigan's crude birth rate lagged behind that of the United States as a whole. By 1949 Michigan's crude birth rate exceeded that of the Nation. The crude birth rate for Michigan in 1975 is below the United States figure for the first time in 27 years (Table 1.1).

The rapidly decreasing number of live births since 1957 coupled with an increasing population has resulted in the 1975 crude birth rate being the lowest ever recorded. This marks the third straight year that a new low has been established for the state.

FERTILITY

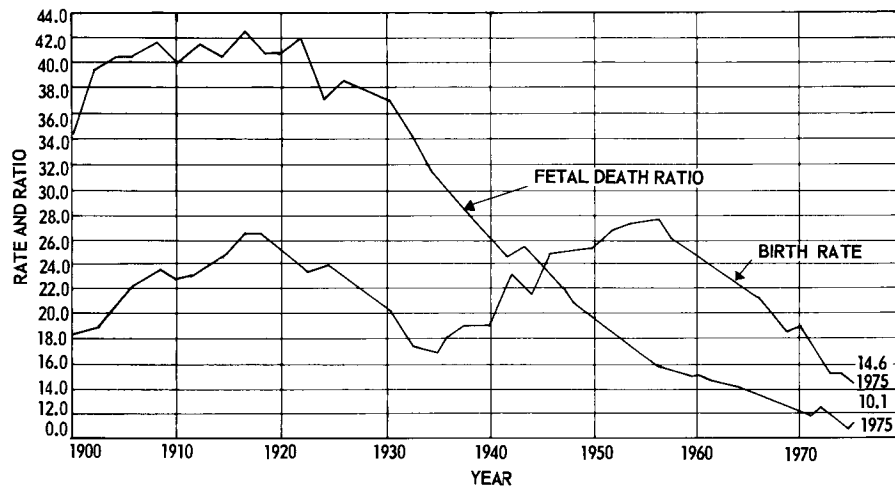
The crude birth rates examined above are useful statistics for gauging the overall trends in live births for specific geographic areas. Where attempts are made to interpret such trends, however, crude birth

rates can be misleading. These rates do not incorporate specifically the size of the population at risk. Should this population subset, generally considered to be women between the ages of 15 through 44, not maintain a stable relationship with the total population, the crude rate may resultantly vary. A measure for analyzing changing birth patterns that is more exacting is the fertility rate. Since the fertility rate relates the number of live births to the female population of childbearing age, comparisons for various

TABLE 1.1—Live Births and Crude Birth Rates, Michigan and United State Residents, Selected Years, 1900-1975

UNITED STATES		YEAR	MICHIGAN	
LIVE BIRTHS	RATE		LIVE BIRTHS	RATE
---	---	1900	43,699	18.1
2,777,000	30.1	1910	64,109	22.8
2,950,000	27.7	1920	92,245	25.1
2,618,000	21.3	1930	98,882	20.4
2,559,000	19.4	1940	99,106	18.9
3,632,000	24.1	1950	160,055	25.1
4,257,850	23.7	1960	195,056	24.9
4,268,326	23.3	1961	192,825	24.4
4,167,362	22.4	1962	182,790	23.0
4,098,020	21.7	1963	178,871	22.3
4,027,490	21.0	1964	175,103	21.6
3,760,358	19.4	1965	166,464	20.3
3,606,274	18.4	1966	165,794	19.9
3,520,959	17.8	1967	162,756	18.9
3,501,564	17.5	1968	159,058	18.3
3,600,206	17.8	1969	165,760	19.0
3,731,386	18.4	1970	171,667	19.3
3,555,970	17.2	1971	162,244	18.0
3,258,411	15.6	1972	146,854	16.3
3,136,965	14.9	1973	141,550	15.6
3,159,958	14.9	1974	137,414	15.1
3,144,198	14.8	1975	133,931	14.6

FIGURE 1.3—Live Birth Rate and Fetal Death Ratio, Michigan Residents, 1900-1975



periods of time and various locations can be made with less regard for population structure.

A comparison of fertility rates for Michigan and the United States for selected years is presented in Table 1.2. Some interesting contrasts can be seen between fertility rates and the crude birth rates in Table 1.1. In both the state and the country the crude birth rate dropped from 1950 to 1960 while the fertility rate rose between these two years. While Michigan's crude birth rate was below the United States rate in 1975 for the first time since 1948, the fertility rate for the state is above the national rate in 1975 but has been below that for the country as recently as 1965. These differences point to the importance of the fertility rate in making comparisons and drawing conclusions. The crude birth rate changes observed understate the decline in fecundity for both regions. Since 1960 the crude birth rate in Michigan had dropped 41.4 percent by 1975, while the fertility rate in 1975 is 45.5 percent below the

TABLE 1.2—Fertility Rates, Michigan and United States Residents, Selected Years, 1900-1975

FERTILITY RATE UNITED STATES	YEAR	FERTILITY RATE MICHIGAN
---	1900	78.5
126.8	1910	99.0
117.9	1920	111.6
89.2	1930	87.6
79.9	1940	78.9
106.2	1950	110.5
118.0	1960	123.1
117.2	1961	119.0
112.2	1962	110.8
108.5	1963	106.6
105.0	1964	102.6
96.6	1965	95.9
91.3	1966	94.0
87.6	1967	90.8
85.7	1968	87.3
86.5	1969	89.6
87.9	1970	91.7
81.8	1971	84.7
73.4	1972	76.5
69.2	1973	72.1
68.4	1974	70.0
66.7	1975	67.1

1960 rate. For the United States over this same period the birth rate declined 37.6 percent and the fertility rate fell by 43.5 percent. Thus, the childbearing population has been increasing in proportion relative to the total population over this 15 year period.

RACIAL COMPOSITION

During the eleven year period from 1965 through 1975, the racial composition of live births in Michigan was also changing. As can be seen from Table 1.3, the number of nonwhite births has increased since 1965, while white births have steadily and substantially decreased. It should be noted, however, that nonwhite live births have been decreasing since 1971. Since 1970, the number of white live births has declined 23.7 percent while nonwhite live births are 12.9 percent lower in 1975.

Inspection of Table 1.3 indicates that in 1965 non-white live births accounted for 12.4 percent of all live births to Michigan residents. This percentage rose steadily through 1973 when 18.8 percent of all live births were nonwhite. Over the last two years this percentage has stabilized at 18.1 percent.

TABLE 1.4—Crude Birth Rates and Fertility Rates by Race, Michigan Residents, 1970-1975

WHITE RACE		YEAR	NON-WHITE RACES	
CRUDE BIRTH RATE	FERTILITY RATE		CRUDE BIRTH RATE	FERTILITY RATE
18.4	88.0	1970	26.6	117.6
17.0	80.5	1971	26.1	119.4
15.1	71.7	1972	24.6	112.4
14.5	68.5	1973	23.8	107.0
14.1	66.0	1974	21.7	96.5
13.8	63.4	1975	20.5	90.5

Table 1.4 examines the racial composition of Michigan live births more carefully. In 1970 the crude birth rate for nonwhites was 44.6 percent above that

TABLE 1.3—Live Births by Race, Michigan Residents, 1965-1975

YEAR	TOTAL LIVE BIRTHS		WHITE LIVE BIRTHS		NON-WHITE LIVE BIRTHS	
	Number	% of all Births	Number	% of all Births	Number ¹	% of all Births
1965.....	166,464	100.0	145,784	87.6	20,680	12.4
1966.....	165,794	100.0	143,876	86.8	21,918	13.2
1967.....	162,756	100.0	139,721	85.8	23,035	14.2
1968.....	159,058	100.0	135,436	85.1	23,622	14.9
1969.....	165,760	100.0	140,222	84.6	25,538	15.4
1970.....	171,667	100.0	143,871	83.8	27,796	16.2
1971.....	162,244	100.0	134,165	82.7	28,079	17.3
1972.....	146,854	100.0	119,788	81.6	27,066	18.4
1973.....	141,550	100.0	114,878	81.2	26,672	18.8
1974.....	137,414	100.0	112,474	81.9	24,940	18.1
1975.....	133,931	100.0	109,718	81.9	24,213	18.1

¹ Non-White includes race not stated.

for whites. By 1975, this percentage had increased to 48.6 percent. At the same time, however, the declines in crude birth rates for both groups are evident over these six years. It is of interest that the decline in crude rates since 1970 is nearly the same for both groups. The crude birth rate for whites in 1975 is 25.0 percent below that observed in 1970, while the rate displayed by nonwhites declined 22.9 percent over the same period. These rates dropped 2.1 percent for whites and 5.5 percent for nonwhites from 1974 to 1975.

The fertility rates contained in Table 1.4 reveal that there are important differences in population structure between whites and nonwhites. By comparing white and nonwhite live births to the respective numbers of women aged 15-44 for these two groups, the relative differences in rates are decreased. The fertility rate for nonwhites was 33.6 percent above the rate for whites in 1970 and 42.7 percent higher in 1975. Since 1970 the nonwhite fertility rate has declined 23.0 percent compared with a 28.0 percent drop for whites. From 1974 to 1975, fertility rates decreased 3.9 percent for whites and 6.2 percent for nonwhites.

AGE OF MOTHER

In 1975, 54.9 percent of all live births were to mothers age 24 or less. Only 0.8 percent occurred to women 40 or more years of age. The median age of the mothers was 24 years. Mothers of nonwhite infants were younger (median 22 years) than mothers of white children. Approximately 66 percent of the nonwhite infants were born to mothers age 24 or less; whereas, only 53 percent of white infants were born to mothers 24 years of age or less. The difference is primarily the result of the large percentage of nonwhite live births to mothers ages 15-19 (Table 1.5).

AGE-SPECIFIC BIRTH RATES

In 1965, the fertility rate in Michigan was 95.9. The fertility rate was 67.1 or 30.0 percent less in 1975.

As shown in Table 1.6, a substantial reduction has occurred over the last eleven years in the age-specific birth rates for Michigan females across all age groups.

The least relative changes in rates were observed for women under 30, with the 25-29 age-specific rate declining least of all. Still, this rate dropped by 21.6 percent. The greatest decrease in evidence was for women 40 years of age and over, where the rate per 1,000 women fell by 70.3 percent. The strong declines in rate for women in the 30 and over age groups did not effect overall fertility greatly due to the lower numbers of births to these women.

TABLE 1.6—Age-Specific Live Birth Rates, Michigan Residents, 1965 and 1975

AGE GROUP	LIVE BIRTHS		BIRTH RATE		% CHANGE IN BIRTH RATE
	1965	1975	1965	1975	
Under 20 ¹ Years...	24,920	24,972	68.2	52.7	(22.7)
20-24 Years.....	59,439	48,675	192.0	118.8	(38.1)
25-29 Years.....	40,693	40,061	149.0	116.8	(21.6)
30-34 Years.....	23,767	14,891	91.2	49.2	(46.1)
35-39 Years.....	13,528	4,273	51.5	17.7	(65.6)
40 and Over ²	4,097	1,036	15.5	4.6	(70.3)
Not Stated.....	20	23	*	*	*
Total ³	166,464	133,931	95.9	67.1	(30.0)

¹ Age-Specific Birth Rates for under 20 Based on Female Population 15-19.
² Age-Specific Birth Rates for 40 and over Based on Female Population 40-44.
³ Total Birth Rate (Fertility Rate) Based on Female Population 15-44.

Table 1.7 displays age-specific live birth rates for whites and nonwhites in the years 1970 and 1975. Nonwhite rates are generally above those of whites. The exception to this is the age group 25-29. In both 1970 and 1975 the nonwhite live birth rate for this age group was slightly below that for whites. Live birth rates declined significantly over these six years across all ages for both racial categories. White rates have declined more steeply than those of nonwhites for age groups of 20 years or over. The under 20 age group decline for whites was 24.4 percent compared to 29.6 percent for nonwhites. The greatest decline observed was for white females aged 40 years and over, while the smallest percentage change was the 19.3

TABLE 1.5—Total Live Births and Percent Distribution by Age of Mother and Race of Child, Michigan Residents, 1975

AGE OF MOTHER	TOTAL		RACE OF CHILD					
			WHITE		NON-WHITE		NOT STATED	
	No.	%	No.	%	No.	%	No.	%
Under 15 Years.....	463	0.3	166	0.2	297	1.2	—	—
15-19 Years.....	24,509	18.3	17,215	15.7	7,265	30.2	29	16.1
20-24 Years.....	48,675	36.3	40,306	36.7	8,310	34.6	59	32.8
25-29 Years.....	40,061	29.9	34,946	31.9	5,057	21.0	58	32.2
30-39 Years.....	19,164	14.3	16,244	14.8	2,888	12.0	32	17.8
40 Years and Over.....	1,036	0.8	829	0.8	205	0.9	2	1.1
Not Stated.....	23	0.0	12	0.0	11	0.0	—	—
Total.....	133,931	99.9	109,718	100.1	24,033	99.9	180	100.0
Median Age of Mother.....	24	000	24	000	22	000	25	000

percent drop for nonwhite females aged 25-29.

TABLE 1.7—Age Specific Live Birth Rates by Race, Michigan Residents, 1970 and 1975

AGE GROUP	RACE					
	WHITE			NON-WHITE		
	1970	1975	% CHANGE IN RATE	1970	1975	% CHANGE IN RATE
Under 20 ¹ Years..	56.9	43.0	(24.4)	154.3	108.6	(29.6)
20-24 Years.....	172.9	114.1	(34.0)	198.1	147.5	(25.5)
25-29 Years.....	156.0	117.3	(24.8)	141.4	114.1	(19.3)
30-34 Years.....	75.6	48.5	(35.8)	80.5	53.7	(33.3)
35-39 Years.....	31.2	16.6	(46.8)	41.1	25.6	(37.7)
40 and Over ²	8.1	4.1	(49.4)	13.0	8.0	(38.5)
Total ³	88.0	63.4	(28.0)	117.6	90.5	(23.0)

¹ Age-Specific Birth Rates for under 20 Based on Female Population 15-19.
² Age-Specific Birth Rates for 40 and Over Based on Female Population 40-44.
³ Total Birth Rate (Fertility Rate) Based on Female Population 15-44.

ILLEGITIMATE LIVE BIRTHS

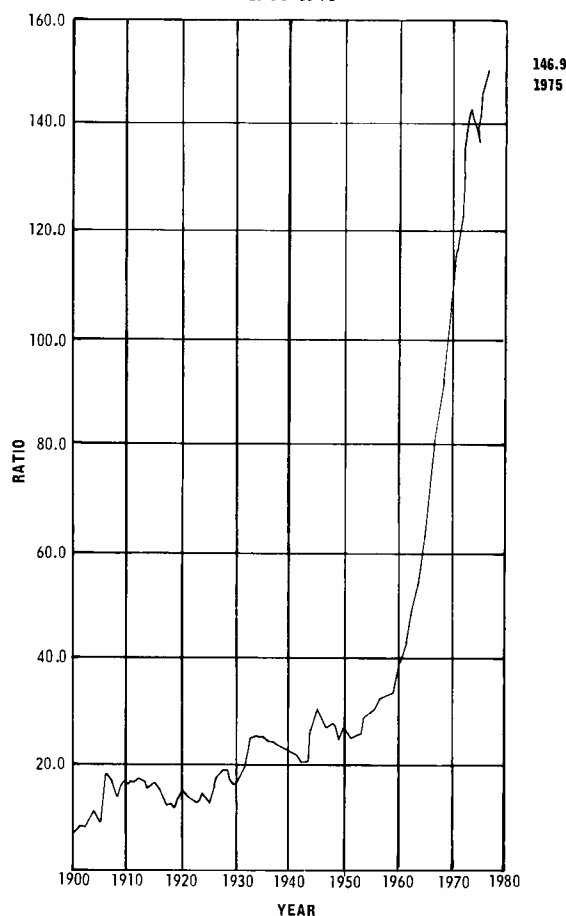
In 1900 illegitimate live births for Michigan residents numbered 332 (an illegitimacy ratio of 7.6). By 1906 that ratio had more than doubled to 18.6. Then for more than 20 years the ratio fluctuated between 12.3 and 19.9. It was not until 1933 that the ratio became greater than 20.0. In 1960 the ratio had reached 36.9. Between 1965 and 1975 the illegitimacy ratio increased from 65.4 to 146.9, an increase of 124.6 percent (Table 1.8).

TABLE 1.8—Illegitimate Live Births and Illegitimacy Ratio by Age of Mother, Michigan Residents, 1965 and 1975

AGE GROUP	ILLE-GITIMATE LIVE BIRTHS		ILLE-GITIMACY RATIO		% CHANGE IN ILLE-GITIMACY RATIO
	1965	1975	1965	1975	
Under 20 Years.....	5,641	10,791	226.4	432.1	90.9
20-24 Years.....	3,226	5,927	54.3	121.8	124.3
25-29 Years.....	1,045	1,911	25.7	47.7	85.6
30-34 Years.....	524	700	22.0	47.0	113.6
35-39 Years.....	338	263	25.0	61.5	146.0
40 and Over.....	107	70	26.1	67.6	159.0
Not Stated.....	7	12	000	000	000
Total.....	10,888	19,674	65.4	146.9	124.6

The illegitimacy ratio has risen consistently and dramatically over the last 25 years. In fact, this statistic rose annually from 25.3 in 1951 to 143.4 in 1973 or 466.8 percent. In 1974, both the number of illegitimate births and the illegitimacy ratio declined from 1973 levels. The 1975 frequency of 19,674 is below the historic high of 1973 by 625, but the 1975 ratio of 146.9 represents a 2.4 percent increase over the 1973 ratio. The illegitimacy ratio in 1975 is the highest ever recorded for Michigan (Figure 1.4).

FIGURE 1.4—Illegitimate Live Birth Ratio, Michigan Residents, 1900-1975



It should be pointed out that during the calendar year 1971 a modification of legitimacy determination was instituted. This change allowed the filing of a birth certificate as legitimate for infants born to unwed mothers when there is a paternity acknowledgement. During 1972 this modification affected the legitimacy status of 935 live births. The number of births effected has risen annually, reaching 1,961 in 1975. This modification of legitimacy determination and the increasing number of births affected must be considered when

TABLE 1.9—Illegitimate Live Births and Illegitimacy Ratios, Michigan and United States Residents, 1965-1975

UNITED STATES		YEAR	MICHIGAN	
NO. OF ILLEGITIMATE BIRTHS	RATIO		NO. OF ILLEGITIMATE BIRTHS	RATIO
291,200	77.4	1965	10,888	65.4
302,400	83.9	1966	12,299	74.2
318,100	90.3	1967	13,403	82.4
339,200	96.9	1968	14,451	90.9
360,800	100.2	1969	16,329	98.5
398,700	106.9	1970	18,712	109.0
401,400	112.9	1971	19,098	117.7
403,200	123.7	1972	19,526	133.0
407,300	129.8	1973	20,299	143.4
418,100	132.3	1974	18,733	136.3
447,900	142.5	1975	19,674	146.9

evaluating the trends in illegitimate births and ratios since 1971. The ratios presented since 1972 are consistently lower than would otherwise have occurred.

The trend of increasing illegitimacy ratios has been observed nationwide through 1975. In that year the ratio stood at 142.5 nationally. Table 1.9 displays the parallel patterns of illegitimacy ratios over the last decade in Michigan and the United States. In the first five years of the time period 1965-1975, the Michigan illegitimacy ratio was below that observed nationally. The statistic for the state has been higher than the United States ratio throughout the 1970's.

Table 1.10 presents a comparison of legitimate and illegitimate live births with respect to several social and health factors. From the table it can be seen that a higher percentage of illegitimate births are accompanied by complications of labor, complications related to pregnancy and complications not related to pregnancy. A greater percentage of mothers having illegitimate children have had less than nine years of

education as compared to mothers having legitimate children (6.2% as compared to 2.4 %). A majority, (54.8%) of illegitimate live births are to women less than twenty years of age. The corresponding figure for legitimate live births is 12.4 percent. The median age of all mothers having illegitimate births is 19 compared to a median age of 24 for all live births (Table 1.11). The median age for nonwhite mothers who have illegitimate births was 19 compared to an overall nonwhite median age of 22. The age differential for whites is 5 years, with median ages of 19 for illegitimate births and 24 for all live births.

BIRTH WEIGHT

The mean weight for all live births was 3,321 grams or approximately 7 lbs., 5 oz. The median weight was 3,344 or approximately 7 lbs., 6 oz. (Table 1.12). As was alluded to previously, birth weights among ille-

TABLE 1.10—Illegitimate Live Births by Selected Characteristics, Michigan Residents, 1975

SELECTED CHARACTERISTICS	TOTAL		ILLEGITIMATE		LEGITIMATE	
	LIVE BIRTHS	% OF TOTAL	LIVE BIRTHS	% OF TOTAL	LIVE BIRTHS	% OF TOTAL
Low-Weight Birth (2,500 grams or less).....	9,962	7.4	2,591	13.2	7,371	6.5
Mother's Age <20 Years.....	24,972	18.6	10,791	54.8	14,181	12.4
Mother's Education—8th Grade or less.....	4,008	3.0	1,218	6.2	2,790	2.4
Complications of Labor.....	21,584	16.1	3,529	17.9	18,055	15.8
Complications Related to Pregnancy.....	12,178	9.1	2,217	11.3	9,961	8.7
Complications Not Related to Pregnancy.....	3,833	2.9	945	4.8	2,888	2.5
Total.....	133,931	100.0	19,674	100.0	114,257	100.0

TABLE 1.11—Illegitimate Live Births and Ratio by Age of Mother and Race of Child, Michigan Residents, 1975

AGE OF MOTHER	TOTAL		RACE OF CHILD					
			WHITE		NON-WHITE		NOT STATED	
	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio
Under 15 Years.....	435	939.5	145	873.5	290	976.4	—	000
15-19 Years.....	10,356	422.5	4,719	274.1	5,622	773.8	15	000
20-24 Years.....	5,927	121.8	2,419	60.0	3,498	420.9	10	000
25-29 Years.....	1,911	47.7	729	20.9	1,179	233.1	3	000
30-39 Years.....	963	50.3	414	25.5	547	189.4	2	000
40 Years and Over.....	70	67.6	34	41.0	36	175.6	—	000
Not Stated.....	12	*	5	*	7	*	—	000
Total.....	19,674	146.9	8,465	77.2	11,179	465.2	30	000
Median Age of Mother.....	19	000	19	000	19	000	*	000

gitimate live births are slightly lower. The mean and median birth weights for illegitimate births are respectively 3,097 grams (6 lbs., 13 oz.) and 3,160 grams (6 lbs., 15 oz.).

A subgroup of major importance when analyzing birth weight trends is the infant weighing 2,500 grams or less (approximately 5 lbs., 8 oz. or less) at birth. For a considerable length of time this was the criterion for defining a "premature" infant. In recent years a

broader definition which includes a consideration of the gestational period has come into use and births 2,500 grams or less are called low weight births. Table 1.12 displays that illegitimate births are below 2,500 grams with twice the relative frequency of legitimate live births. Of the 19,674 illegitimate births 2,591 or 13.2 percent were low weight, compared to 6.5 percent of all legitimate live births in 1975.

Approximately 74 of every 1,000 live births were low weight in 1975. The ratio for nonwhites was more than double that of whites, with ratios of 134.6 and 61.2, respectively (Table 1.13). While the nonwhite ratios were consistently and substantially higher than those for whites for all ages, both racial groupings displayed a pattern of extremely high ratios for under 15 years, lower ratios through successive age groups to 25-29, then rising through 40 and over. Thus, age, race, and legitimacy seem to have interrelated influences on the occurrence of low weight infants.

TABLE 1.12—Live Births by Birth Weight and Legitimacy Status, Michigan Residents, 1975

WEIGHT AT BIRTH	LEGITIMACY STATUS		
	TOTAL	LEGITIMATE	ILLE-GITIMATE
500 Grams or Less.....	162	121	41
501-1,000 Grams.....	646	476	170
1,001-1,500 Grams.....	877	627	250
1,501-2,000 Grams.....	1,893	1,388	505
2,001-2,500 Grams.....	6,384	4,759	1,625
2,501-3,000 Grams.....	23,032	18,165	4,867
3,001-3,500 Grams.....	49,335	41,910	7,425
3,501-4,000 Grams.....	37,632	33,818	3,814
4,001-4,500 Grams.....	11,511	10,700	811
4,501 Grams and Over..	2,328	2,192	136
Not Stated.....	131	101	30
Total.....	133,931	114,257	19,674
Mean Weight.....	3,321	3,357	3,097
Median Weight.....	3,344	3,377	3,160

PRENATAL CARE

In 1975, 1,042 resident live births (0.8%) occurred without the mother having had any prenatal care. These include only those where no prenatal care was specified. Those mothers who received no prenatal

TABLE 1.13—Low Weight Live Births and Ratio by Age of Mother and Race of Child, Michigan Residents, 1975

AGE OF MOTHER	TOTAL		RACE OF CHILD					
			WHITE		NON-WHITE		NOT STATED	
	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio
Under 15 Years.....	76	164.1	24	144.6	52	175.1	—	000
15-19 Years.....	2,446	99.8	1,337	77.7	1,104	152.0	5	000
20-24 Years.....	3,515	72.2	2,397	59.5	1,112	133.8	6	000
25-29 Years.....	2,402	60.0	1,821	52.1	578	114.3	3	000
30-39 Years.....	1,418	74.0	1,056	65.0	360	124.7	2	000
40 Years and Over.....	101	97.5	75	90.5	26	126.8	—	000
Not Stated.....	4	*	2	*	2	*	—	000
Total.....	9,962	74.4	6,712	61.2	3,234	134.6	16	000
Median Age of Mother.....	23	000	24	000	22	000	*	000

TABLE 1.14—Live Births With No Prenatal Care by Age of Mother and Race of Child, Michigan Residents, 1975

AGE OF MOTHER	TOTAL		RACE OF CHILD					
			WHITE		NON-WHITE		NOT STATED	
	No.	Ratio	No.	Ratio	No.	Ratio	No.	Ratio
Under 15 Years.....	12	25.9	7	42.2	5	16.8	—	—
15-19 Years.....	403	16.4	172	10.0	231	31.8	—	—
20-24 Years.....	353	7.3	191	4.7	162	19.5	—	—
25-29 Years.....	158	3.9	89	2.5	69	13.6	—	—
30-39 Years.....	103	5.4	68	4.2	35	12.1	—	—
40 Years and Over.....	13	12.5	11	13.3	2	9.8	—	—
Total.....	1,042	7.8	538	4.9	504	21.0	—	—
Median Age of Mother.....	21	000	22	000	20	000	—	—
Total Live Births.....	133,931	000	109,718	000	24,033	000	180	000

TABLE 1.15—Live Births by Month Prenatal Care Began and Number of Prenatal Visits, Michigan Residents, 1975

MONTH OF PREGNANCY CARE BEGAN	TOTAL	NUMBER OF VISITS						
		NONE	UNDER 5	5-9	10-14	15-19	20 AND OVER	NOT STATED
Total.....	133,931	1,042	7,001	36,059	73,104	10,435	2,733	3,557
No Care.....	1,042	1,042	—	—	—	—	—	—
1st Month.....	12,260	—	127	1,445	7,262	2,326	740	360
2nd Month.....	49,086	—	424	8,383	33,389	4,997	1,127	766
3rd Month.....	38,221	—	817	10,822	23,244	2,308	530	500
4th Month.....	15,341	—	956	7,045	6,393	562	177	208
5th Month.....	7,769	—	1,148	4,361	1,915	135	90	120
6th Month.....	4,217	—	1,091	2,406	569	46	36	69
7th Month.....	2,461	—	1,090	1,148	165	12	15	31
8th Month.....	1,315	—	893	360	33	4	9	16
9th Month.....	456	—	395	25	14	1	1	20
Unknown.....	1,763	—	60	64	120	44	8	1,467

care are for the most part younger mothers (median age of 21). Also, the lack of prenatal care is disproportionately high among nonwhites. The relative percentage of nonwhites receiving no prenatal care was 4.3 times as large as among whites in 1975 (Table 1.14).

A total of 99,567 (74.3%) women having live births started their prenatal care prior to the fourth month of pregnancy. This is an increase over the 73.9 percent figure recorded for 1974. Most women began prenatal care in the second month of pregnancy and had between 10 and 14 prenatal visits (Table 1.15). The number of visits varies strongly with the month prenatal care began, as might be expected.

Since 1970 there has been a small but steady increase in the percentage of women receiving medical care prior to the sixth month of pregnancy. In 1970, 86.0 percent of women delivering live born received medical care prior to the sixth month. By 1975, this percentage had risen to 91.6 (Figure 1.5).

FIGURE 1.5—Percent of Women Having Live Births Who Received Medical Care Prior to the Sixth Month of Pregnancy, Michigan Residents, 1970-1975

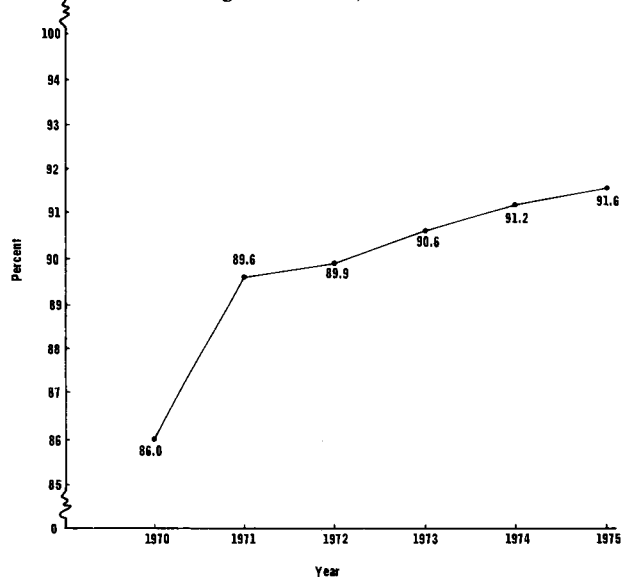


TABLE 1.16—Total Live Births by Month of Pregnancy Prenatal Care Began and Live Birth Order, Michigan Residents, 1975

MONTH OF PREGNANCY CARE BEGAN	TOTAL	LIVE BIRTH ORDER					
		1ST	2ND	3RD	4TH	5TH OR GREATER	NOT STATED
TOTAL.....	133,931	55,348	42,697	20,102	8,224	6,846	714
No Care.....	1,042	409	274	163	68	107	21
1st Month.....	12,260	5,100	4,107	1,805	707	489	52
2nd Month.....	49,086	19,852	16,918	7,500	2,819	1,840	157
3rd Month.....	38,221	15,495	12,440	5,949	2,328	1,869	140
4th Month.....	15,341	6,497	4,453	2,287	1,033	1,000	71
5th Month.....	7,769	3,539	1,962	1,040	544	637	47
6th Month.....	4,217	1,931	1,064	544	294	362	22
7th Month.....	2,461	1,128	602	332	162	226	11
8th Month.....	1,315	590	329	166	94	127	9
9th Month.....	456	205	107	55	41	48	—
Not Stated.....	1,763	602	441	261	134	141	184
Median Months of Prenatal Care.....	6.9	6.8	7.0	6.9	6.8	6.5	000

Of the women having live births in 1975, fifty percent began prenatal care 2.1 or more months from conception, for a median of 6.9 months of care. Women with second order live births displayed a median of 7.0 months, the longest length of prenatal care. Higher order live births received prenatal care for progressively shorter lengths of time. Women having their 5th or greater live birth had the shortest median prenatal care period (6.5 months) (Table 1.16).

BIRTH ORDER

As can be seen from Table 1.17, the relative distribution of Michigan resident live births by live birth order is changing considerably. In addition to the increase noted for first-order births an increase is also evident for second-order births. Decreases are evident for third-order, fourth-order, and fifth-order or greater births. The largest decline, relatively speaking, occurred among fifth-order or greater births. These decreased from 18.5 percent in 1965 to 5.1 percent of all live births in 1975.

TABLE 1.17—Total Live Births by Live Birth Order, Michigan Residents, 1965 and 1975

LIVE BIRTH ORDER	NO. OF BIRTHS		PERCENT	
	1965	1975	1965	1975
First Birth.....	48,660	55,348	29.2	41.3
Second Birth.....	38,666	42,697	23.2	31.9
Third Birth.....	28,480	20,102	17.1	15.0
Fourth Birth.....	19,652	8,224	11.8	6.1
Fifth Birth or >.....	30,870	6,846	18.5	5.1
Not Stated.....	136	714	0.1	0.5
Total.....	166,464	133,931	99.9	99.9

The relative increase in first-order births is not unique to Michigan. As can be observed from Table 1.18, the percentage of first-order births is increasing nationwide. The relative proportion of first order births was lower in Michigan than the United States as a whole in ten of the eleven years from 1965 to 1975. In 1973, the Michigan proportion (40.6%) was higher than that for the country (39.6%).

Examination of Table 1.19 reveals that the frequency of higher-order births increases with the age of the

mother. The median age of mothers among first-order births is 21 years, compared to a median age of 33 years among fifth-order or greater births. The median age of all mothers is 24 years. There were 6 fifth-order or greater births to mothers under 20 years and 53 first-order births to mothers aged 40 and over.

TABLE 1.18—First Births, Michigan and United States Residents, 1965-1975

UNITED STATES		YEAR	MICHIGAN	
FIRST BIRTHS	% OF ALL BIRTHS		FIRST BIRTHS	% OF ALL BIRTHS
1,157,386	30.8	1965	48,660	29.2
1,224,786	34.0	1966	55,100	33.2
1,228,274	34.9	1967	55,409	34.0
1,311,460	37.5	1968	52,147	32.8
1,353,278	37.6	1969	56,497	34.1
1,430,680	38.3	1970	64,222	37.4
1,375,668	38.7	1971	60,413	37.2
1,289,257	39.6	1972	57,477	39.1
1,243,358	39.6	1973	57,411	40.6
1,314,194	41.6	1974	56,233	40.9
1,319,126	42.0	1975	55,348	41.3

INTERPREGNANCY TIME PERIOD

Paralleling the decreasing birth rates and shifting birth order distribution, there has been a lengthening of the time period between pregnancies to women having live births. In 1970, 50 percent of all live births to women with prior terminations were reported as being spaced 2.59 years apart or longer. The median value in 1975 was 2.76 years or 6.6 percent longer (Table 1.20). The relative percent for spacings of less than 1

TABLE 1.20—Live Births to Mothers Reporting Previous Pregnancy Terminations by Time Span Between Last and Current Termination, Michigan Residents, 1970 and 1975

TIME SPAN IN YEARS	1970		1975	
	NUMBER	PERCENT	NUMBER	PERCENT
Total.....	108,516	100.0	82,009	100.0
Less than One.....	3,960	3.6	2,760	3.4
1 <2.....	34,715	32.0	23,244	28.3
2 <3.....	26,589	24.5	19,765	24.1
3 <5.....	25,784	23.8	21,930	26.7
5 or More.....	17,468	16.1	14,310	17.5
Median Time Span.....	2.59	000	2.76	000

TABLE 1.19—Total Live Births by Live Birth Order and Age of Mother, Michigan Residents, 1975

LIVE BIRTH ORDER	AGE OF MOTHER						TOTAL	MEDIAN AGE
	<20 YEARS	20-24 YEARS	25-29 YEARS	30-39 YEARS	40+ YEARS	N/A		
First Birth.....	19,707	22,319	10,857	2,393	60	12	55,348	21
Second Birth.....	4,414	18,404	15,221	4,551	100	7	42,697	24
Third Birth.....	600	5,822	8,805	4,767	106	2	20,102	27
Fourth Birth.....	67	1,476	3,310	3,251	119	1	8,224	28
Fifth Birth or >.....	6	415	1,688	4,093	643	1	6,846	33
Not Stated.....	178	239	180	109	8	—	714	23
TOTAL.....	24,972	48,675	40,061	19,164	1,036	23	133,931	24

year, 1 to 2 years and 2 to 3 years have declined over this period. While a 1 to 2 year spacing was the most common in both years examined, this interval displayed the largest relative decline. The effect of a lengthened interval between terminations is a shortrun reduction in live births. Long range decreases in fertility can only result from a sustained decrease in the average number of children born per woman, through her lifetime.

ATTENDANT AT BIRTH

Data in Table 1.21 reveals that 99.7 percent of the live births were attended by a physician, either M.D. or D.O. There were 14 live births attended by a midwife, while husbands delivered 70 infants in 1975.

TABLE 1.21—Live Births by Type of Attendant, Michigan Residents, 1975

ATTENDANT	NUMBER	PERCENT
Total	133,931	100.0
Physician, M.D.	113,301	84.6
Physician, D.O.	20,187	15.1
Registered Nurse	16	0.0
Physician's Assistant	2	0.0
Midwife	14	0.0
Husband	70	0.1
Other Attendant	50	0.0
No Attendant	47	0.0
Unknown	244	0.2

TABLE 1.22—Congenital Anomalies¹ Reported by Type of Anomaly, Michigan Residents, 1975

Type of Anomaly	ICDA No.	Occurrences ³	Rate per 100,000 Live Births
Other Congenital Anomalies of Limbs	755	313	235.2
Congenital Anomalies of Genital Organs	752	168	125.4
Clubfoot (Congenital)	754	146	109.0
Cleft Palate and Cleft Lip	749	139	103.8
Congenital Syndromes Affecting Multiple Systems	759	91	67.9
Congenital Anomalies of the Heart	746	79	59.0
Spina Bifida	741	56	41.8
Congenital Anomalies of Skin, Hair, and Nails	757	56	41.8
Other Congenital Anomalies of Musculoskeletal System	756	44	32.9
Other Congenital Anomalies of Upper Alimentary Tract	750	42	31.4
Other Congenital Anomalies of Digestive System	751	38	28.4
Anencephalus	740	36	26.9
Congenital Hydrocephalus	742	28	20.9
Congenital Anomalies of Ear, Face, and Neck	745	26	19.4
Other Congenital Anomalies of Circulatory System	747	24	17.9
Congenital Anomalies of Urinary System	753	19	14.2
Other and Unspecified Congenital Anomalies	758	18	13.4
Congenital Anomalies of Eye	744	18	13.4
Congenital Anomalies of Respiratory System	748	17	12.7
Other Congenital Anomalies of Nervous System	743	16	11.9
At Least One Anomaly ²		1,237	923.6

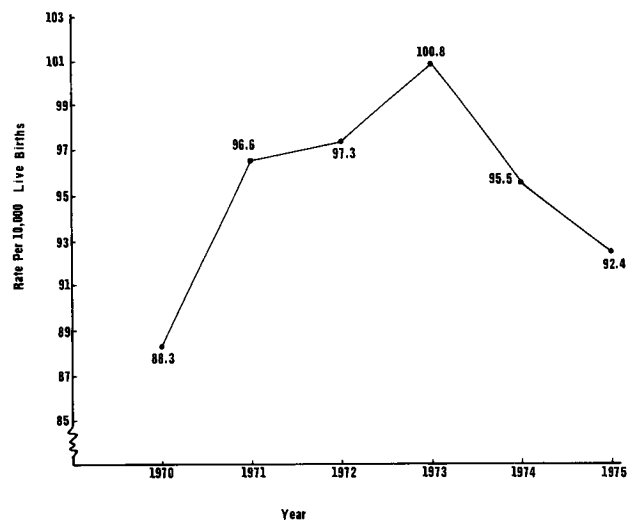
¹ Indicates anomalies apparent soon after a live birth.
² Does not equal the sum of anomalies specified because of multiple anomaly occurrences.
³ Includes three digit duplicates if 4th digit is different permitting total counting of distinct conditions.

CONGENITAL ANOMALIES

One or more congenital anomaly was reported for 1,237 of the 133,931 resident live births in 1975 (Table 1.22). This translates to a rate of 92.4 per 10,000 live births. Congenital anomalies of the limbs was the most frequently reported condition, occurring at a rate of 235.2 per 100,000 live births and comprising about 23 percent of all anomalies mentioned. The frequency of reporting specific anomalies is strongly affected by the reporting cycle, as many conditions are not apparent at birth, when the birth certificates are completed.

Figure 1.6 displays the incidence of congenital anomalies reported for Michigan resident live births over the period 1970-1975. This incidence rose appreciably from 1970 to 1971 then gradually through 1973. Since 1973 this rate has declined persistently through 1975. The incidence in 1975 is 8.3 percent below the 1973 figure.

FIGURE 1.6—Incidence of Congenital Anomalies Reported per 10,000 Live Births, Michigan Residents, 1970-1975



COMPLICATIONS OF PREGNANCY AND LABOR

Of the four categories of complications reported on birth certificates, all displayed increases in the rate of incidence from 1974 to 1975 (Figure 1.7). "Complications Unrelated to Pregnancy" is designed to include conditions of the mother that are not related to the pregnancy but can contribute to a difficult pregnancy. In 1970, physicians reported 212.7 such complications for every 10,000 live births. By 1975, this rate of reporting had risen to 286.2. "Complications Related to Pregnancy", or conditions associated with the pregnancy itself, has risen from 749.9 reported occurrences per 10,000 live births in 1970 to a rate of 909.3 in 1975. "Birth Injury" reporting has risen markedly

since 1970. In that year there were 37.5 reported occurrences per 10,000 live births. This rate rose 96 percent to 73.5 in 1975. The most frequently reported problem of pregnancy and labor is "Complications of Labor" or problems that arise during labor and delivery. In 1975, such complications occurred about 1,612 times for every 10,000 live births, or nearly one of every six births. This is 43.7 percent more frequently reported than in 1970 (1,121.6) when such problems were reported for one of every nine live births. It is important to note, when reviewing these rate changes that these items are underreported on birth certificates. Increases in reporting can be a reflection of better reporting and/or increases in incidence.

PLACE OF OCCURRENCE

Perhaps the primary source of 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 even outside its boundaries must be collected in order to obtain the full scope of activity for the state's population. Of the total 133,931 resident live births 1,772 occurred outside the state. The information on these events was forwarded to the state of Michigan, for statistical purposes only. While only 1.3 percent of the total for the state is involved, data for the counties on Michigan's southernmost and northwestern borders would be strongly affected were this information not made available.

TABLE 1.23—Live Births Occurring Outside the Mother's State of Residence by State of Occurrence, Michigan Occurrences and Residents, 1975

Geographic Area	Live Births To Residents Occurring Outside Michigan		Live Births To Nonresidents Occurring In Michigan	
	Number	Percent	Number	Percent
Total	1,772	99.9	618	99.9
Indiana	635	35.8	141	22.8
Ohio	573	32.3	121	19.7
Wisconsin	277	15.6	138	22.3
Canada	117	6.6	12	1.9
Other Areas	170	9.6	206	33.3

Table 1.23, shows the four major geographic areas where resident live births occur. These four border areas comprise over 90 percent of all resident events that occurred out of state. It is of interest that resident births occurred in 36 of the 50 states in 1975.

The number of nonresident live births occurring in Michigan in 1975 is 618. The information about these events was shared with the appropriate states by the State of Michigan under specific confidentiality guidelines, so that they might have a complete statistical file on their residents. The border areas comprised two thirds of these events, as shown in Table 1.23. There were live births in Michigan to residents from 33 states, two United States territories, and four foreign countries.

FETAL DEATHS

In 1975 there were 1,373 resident Michigan fetal deaths. This is the lowest resident fetal death figure recorded since 1900. The 1975 crude fetal death ratio for Michigan was 10.3 (Table 1.24).

FIGURE 1.7—Incidence of Complications Related and Unrelated to Pregnancy, Complications of Labor and the Presence of Birth Injury, Michigan Residents, 1970-1975

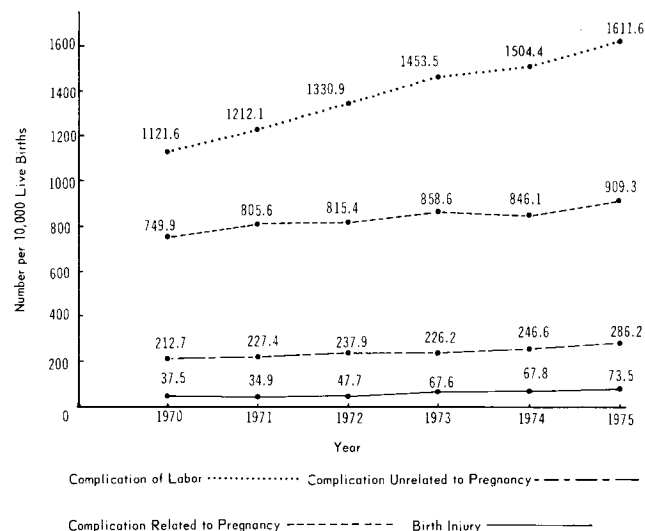


TABLE 1.24—Fetal Deaths and Fetal Death Ratios, Michigan and United States Residents, Selected Years, 1900-1975

UNITED STATES		YEAR	MICHIGAN	
FETAL DEATHS ¹	FETAL DEATH RATIOS ¹		FETAL DEATHS	FETAL DEATH RATIOS
—	—	1900	1,325	30.3
—	—	1910	2,559	39.9
70,010 ²	39.4	1920	3,770	40.9
86,466	39.2	1930	3,714	37.6
73,802	31.3	1940	2,602	26.3
68,262	19.2	1950	3,095	19.3
68,480	16.1	1960	3,008	15.4
52,961	14.2	1970	2,060	12.0
47,818	13.4	1971	1,923	11.9
41,380	12.7	1972	1,770	12.1
38,309	12.2	1973	1,682	11.9
33,796	10.7	1974	1,451	10.6
—	—	1975	1,373	10.3

¹ After 1944, includes only deaths of twenty or more weeks gestation.
² Data for 1922.

The fetal death ratio in Michigan has been generally below the national ratio in this century. In 1973, the ratio for Michigan residents was 2.5 percent below the national ratio of 12.2 per 1,000 live births.

Figure 1.3 (page 16) illustrates the historical pattern of the fetal death ratio in Michigan since 1900. This ratio remained at a relatively high level throughout the first 20 to 30 years of this century. In the 1930's significant declines were observed in the fetal death ratio. Since the 1950's declines in the ratio have been much more moderate. The declines observed each year from 1950 through 1974 have been small. In the twenty-six years since 1950 the fetal death ratio has declined an average of 1.8 percent a year. This constitutes a cumulative 47 percent decline.

CAUSES OF FETAL DEATH

A classification of fetal deaths by underlying cause of death is contained in Table 1.25. Due to a relatively large number of deaths allocated to unspecific causes,

TABLE 1.25—Fetal Deaths by Cause of Death (Underlying) and Cause-Specific Ratios, Michigan Residents, 1975

ICDA LIST NO.	CAUSE OF DEATH	FRE-QUENCY	RATIO ¹
740	Anencephalus	33	24.6
741	Spina Bifida	3	2.2
742	Congenital Hydrocephalus	10	7.5
743	Other Congenital Anomalies of the Nervous System	1	0.7
746	Congenital Anomalies of the Heart	6	4.5
751	Other Congenital Anomalies of the Digestive System	2	1.5
752	Congenital Anomalies of Genital Organs	1	0.7
753	Congenital Anomalies of the Urinary System	4	3.0
756	Other Congenital Anomalies of Musculoskeletal System	2	1.5
758	Other and Unspecified Congenital Anomalies	7	5.2
759	Congenital Syndromes Affecting Multiple Systems	24	17.9
760	Chronic Circulatory and Genito-Urinary Diseases in Mother	2	1.5
761	Other Maternal Conditions Unrelated to Pregnancy	93	69.4
762	Toxemia of Pregnancy	69	51.5
763	Maternal Ante- and Intra-Partum Infection	26	19.4
765	Difficult Labor with Disproportion but no Mention of Abnormality of Pelvis	1	0.7
766	Difficult Labor with Malposition of Fetus	12	9.0
768	Difficult Labor with Other and Unspecified Complications	5	3.7
769	Other Complications of Pregnancy and Childbirth	107	79.9
770	Conditions of Placenta	304	227.0
771	Conditions of Umbilical Cord	234	174.7
772	Birth Injury without Mention of Cause	2	1.5
775	Hemolytic Disease of Newborn without Mention of Kernicterus	15	11.2
776	Anoxic and Hypoxic Conditions not Elsewhere Classifiable	93	69.4
777	Immaturity, Unqualified	84	62.7
778	Other Conditions of Fetus or Newborn	233	174.0

¹ Ratios per 100,000 Resident Live Births.

the reader should exercise caution in attempting to draw specific inferences regarding cause of death among fetal deaths.

Of 1,373 resident fetal deaths, only 57 or approximately 4.2 percent were reported as due to congenital malformations, 188 or approximately 13.7 percent were due to conditions attributable to the mother, and 125 (9.1%) were reported as due to problems with the pregnancy or delivery. Conditions of the placenta and conditions of the umbilical cord was reported to have caused 538 fetal deaths or 39.2 percent of all fetal deaths. Immaturity (unqualified) and other conditions of the fetus resulted in 317 fetal deaths or approximately 23.1 percent of all fetal deaths.

While the induced termination of a pregnancy that has advanced through the 20th week of gestation results in a fetal death and is reportable as such, the numbers reported in 1975 are too few to significantly alter interpretation of these data. Induced terminations were not separately coded in 1975. These fetal deaths were coded to the ICDA category 769.9 which includes other causes of fetal death. The total number of resident fetal deaths in this category was 21 in 1975.

MATERNAL CHARACTERISTICS RELATED TO FETAL DEATH

It appears that the young, the older, and the non-white mothers have a greater risk of fetal mortality. The rates of fetal loss for the under-15 mother, the 40-and-over mother, and the nonwhite mother are considerably higher than those for other groups (Table 1.26 and 1.27).

The overall fetal death rate per 1,000 total births (live births plus fetal deaths) was 10.1 in 1975. The rate associated with whites was 8.8, while the nonwhite fetal death rate was 68.2 percent higher at 14.8. The association with age and fetal death rate is apparent from Table 1.27. The age group with the lowest overall rate was 25-29. Progressively older and younger age groups displayed increasingly higher rates. This pattern was mirrored by whites, while nonwhites differed. The lowest age group for nonwhites was 20-24. In progressively older ages among nonwhites, rates increased more sharply, while increases in progressively younger categories was muted.

Median ages of mothers having fetal deaths were identical to similar statistics for live births in 1975 (Table 1.5 and Table 1.27). The median age for nonwhites was two years below that of whites. As suggested by the fetal death rates in Table 1.26, the distribution of fetal deaths and live births by mothers age are not identical. Higher percentages of fetal deaths occurred to women under 20 and over 30 than was the case with live births. Of all fetal deaths 23.1 percent

were to women under 20, compared to 18.6 percent of all live births. Similarly, 15.1 percent of all live births were to mothers 30 or more years of age while this group accounted for 19.5 percent of all fetal deaths.

TABLE 1.26—Fetal Deaths, Live Births, and Fetal Death Rates by Age of Mother and Race of Fetus, Michigan Residents, 1975

AGE OF MOTHER AND RACE OF FETUS	FETAL DEATHS	LIVE BIRTHS	TOTAL BIRTHS	RATE PER 1,000 TOTAL BIRTHS
Under 15 Years.....	9	463	472	19.1
White.....	5	166	171	29.2
Nonwhite.....	4	297	301	13.3
Not Stated.....	—	—	—	000
15-19 Years.....	307	24,509	24,816	12.4
White.....	180	17,215	17,395	10.3
Nonwhite.....	119	7,265	7,384	16.1
Not Stated.....	8	29	37	000
20-24 Years.....	446	48,675	49,121	9.1
White.....	331	40,306	40,637	8.1
Nonwhite.....	103	8,310	8,413	12.2
Not Stated.....	12	59	71	000
25-29 Years.....	338	40,061	40,399	8.4
White.....	254	34,946	35,200	7.2
Nonwhite.....	76	5,057	5,133	14.8
Not Stated.....	8	58	66	000
30-39 Years.....	243	19,164	19,407	12.5
White.....	187	16,244	16,431	11.4
Nonwhite.....	49	2,888	2,937	16.7
Not Stated.....	7	32	39	000
40 and Over.....	25	1,036	1,061	23.6
White.....	15	829	844	17.8
Nonwhite.....	9	205	214	42.1
Not Stated.....	1	2	3	000
Not Stated.....	5	23	28	*
White.....	3	12	15	*
Nonwhite.....	—	11	11	*
Not Stated.....	2	—	2	000
Total.....	1,373	133,931	135,304	10.1
White.....	975	109,718	110,693	8.8
Nonwhite.....	360	24,033	24,393	14.8
Not Stated.....	38	180	218	000

TABLE 1.27—Fetal Deaths by Age of Mother and Race of Fetus, Michigan Residents, 1975

AGE GROUP	RACE OF FETUS							
	TOTAL	%	WHITE	%	NON WHITE	%	NOT STATED	%
Under 15 Years.....	9	0.7	5	0.5	4	1.1	—	—
15-19 Years.....	307	22.4	180	18.5	119	33.1	8	21.1
20-24 Years.....	446	32.5	331	33.9	103	28.6	12	31.6
25-29 Years.....	338	24.6	254	26.1	76	21.1	8	21.1
30-34 Years.....	173	12.6	132	13.5	36	10.0	5	13.2
35-39 Years.....	70	5.1	55	5.6	13	3.6	2	5.3
40-44 Years.....	22	1.6	13	1.3	8	2.2	1	2.6
45 Years and Over.....	3	0.2	2	0.2	1	0.3	—	—
Not Stated.....	5	0.4	3	0.3	—	—	2	5.3
Total.....	1,373	100.1	975	99.9	360	100.0	38	100.2
Median Age.....	24	000	24	000	22	000	*	000

BIRTH WEIGHT OF STILLBORN

Among live births, the percentage of children weighing 5 lbs., 8 oz. or less at birth was 7.4 percent. The comparable percentage among fetal deaths was 57.2 percent. The distribution of birth weight by plurality for fetal deaths is presented in Table 1.28. Note that twins and triplet deliveries are not sets but are total occurrences and that any given set may have included live births. The percentage of single delivery births under 2,500 grams (app. 5 lbs., 8 oz.) was 56.0 percent at a minimum. This same percentage for twin deliveries was 78.4.

TABLE 1.28—Fetal Deaths by Fetal Weight and Plurality, Michigan Residents, 1975

WEIGHT	FETAL DEATHS	CUM. %	SINGLE DELIV-ERY	TWIN DELIV-ERY	TRIPLET DELIV-ERY
500 Grams or Less.....	116	8.4	100	15	1
501-1,000 Grams.....	274	28.4	246	28	—
1,001-1,500 Grams.....	161	40.1	154	7	—
1,501-2,000 Grams.....	118	48.7	114	4	—
2,001-2,500 Grams.....	117	57.2	113	4	—
2,501-3,000 Grams.....	109	65.2	106	3	—
3,001-3,500 Grams.....	115	73.6	114	1	—
3,501-4,000 Grams.....	78	79.2	78	—	—
4,001-4,500 Grams.....	22	80.8	22	—	—
4,501-5,000 Grams.....	12	81.7	12	—	—
5,001 Grams and Over.....	4	82.0	4	—	—
Not Stated.....	247	100.0	235	12	—
Total.....	1,373	100.0	1,298	74	1

ILLEGITIMATE FETAL DEATHS

Table 1.29 presents a comparison of age specific fetal death rates by legitimacy status. Fetal death rates among illegitimates are consistently higher than those for legitimate births at all ages. The lowest fetal death rate for legitimate births is for the 25-29 year age group. Legitimate fetal death rates are slightly higher at progressively younger ages, and much higher for increasingly older age groups. Illegitimate fetal death rates are lowest at ages 20-24 and display a similar

pattern of increase away from these ages as with legitimate births.

TABLE 1.29—Fetal Deaths, Live Births and Fetal Death Rates by Age of Mother and Legitimacy Status, Michigan Residents, 1975

AGE OF MOTHER AND LEGITIMACY STATUS	FETAL DEATHS	LIVE BIRTHS	TOTAL BIRTHS	RATE PER 1,000 TOTAL BIRTHS
Under 15 Years.....	9	463	472	19.1
Legitimate.....	—	28	28	—
Illegitimate.....	9	435	444	20.3
15-19 Years.....	307	24,509	24,816	12.4
Legitimate.....	124	14,153	14,277	8.7
Illegitimate.....	183	10,356	10,539	17.4
20-24 Years.....	446	48,675	49,121	9.1
Legitimate.....	356	42,748	43,104	8.3
Illegitimate.....	90	5,927	6,017	15.0
25-29 Years.....	338	40,061	40,399	8.4
Legitimate.....	299	38,150	38,449	7.8
Illegitimate.....	39	1,911	1,950	20.0
30-39 Years.....	243	19,164	19,407	12.5
Legitimate.....	217	18,201	18,418	11.8
Illegitimate.....	26	963	989	26.3
40 and Over.....	25	1,036	1,061	23.6
Legitimate.....	23	966	989	23.3
Illegitimate.....	2	70	72	27.8
Not Stated.....	5	23	28	*
Legitimate.....	4	11	15	*
Illegitimate.....	1	12	13	*
Total.....	1,373	133,931	135,304	10.1
Legitimate.....	1,023	114,257	115,280	8.9
Illegitimate.....	350	19,674	20,024	17.5

PRENATAL CARE OF MOTHERS HAVING STILLBIRTHS

Of the 1,373 fetal deaths recorded for 1975, 73 or 5.3 percent of the records indicated mothers reported no prenatal visits. The comparable percentage for live births was 0.8 percent. Incomplete reporting occurred for these items on 313 certificates or 22.8 percent of the data file.

The month of pregnancy that prenatal care began is

TABLE 1.30—Fetal Deaths by Month Prenatal Care Began and by Number of Prenatal Visits, Michigan Residents, 1975

MONTH OF PREGNANCY PRENATAL CARE BEGAN	NUMBER OF VISITS							
	TOTAL	NONE	<5	5-9	10-14	15-19	20 AND OVER	NOT STATED
Total.....	1,373	73	225	412	271	51	28	313
No Care....	73	73	—	—	—	—	—	—
1st Month..	111	—	8	39	39	10	11	4
2nd Month..	333	—	41	135	109	22	13	13
3rd Month..	310	—	54	131	91	14	4	16
4th Month..	114	—	34	52	20	2	—	6
5th Month..	69	—	35	23	7	1	—	3
6th Month..	41	—	20	16	4	—	—	1
7th Month..	22	—	13	7	—	—	—	2
8th Month..	12	—	10	1	—	1	—	—
9th Month..	271	—	3	6	—	—	—	262
Unknown...	17	—	7	2	1	1	—	6

most frequently the second month (Table 1.31). Of those reporting, a relatively large percentage (68.2%) had received care before the sixth month of pregnancy. From 1970 through 1973 there were steady increases in the percentage of women having stillbirths who receive care prior to the sixth month of pregnancy (from 67.4% in 1970 to 74.0% in 1973). The proportion in 1974 (73.9%) indicated a break in this trend. The percentage in 1975 (68.2%) is the lowest observed since 1970 (Figure 1.8).

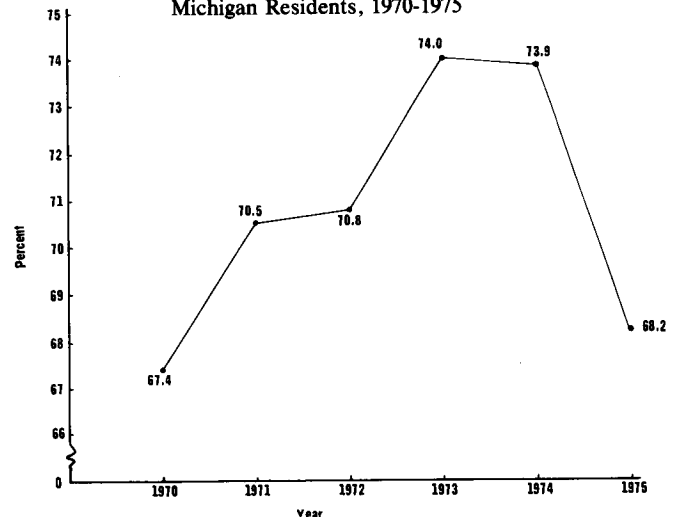
INTERPREGNANCY TIME PERIOD AMONG FETAL DEATHS

Of the 1,373 resident fetal deaths, prior pregnancies were reported for 50.4 percent (692) of the women terminating. This compares to 61.2 percent of all live births. For these women, the interpregnancy time periods reported on fetal death certificates in 1975 have a median length of 2.87 years. This is nearly the same as live births (Table 1.32). Terminations resulting in fetal deaths were relatively frequent following less than a one year or a five year or greater time span between terminations. The most frequent interval was one to two years, paralleling the mode for live births.

TABLE 1.31—Fetal Deaths and Live Births to Mothers Reporting Prior Pregnancy Terminations by Time Span Between Last and Current Termination, Michigan Residents, 1975

TIME SPAN IN YEARS	LIVE BIRTHS		FETAL DEATHS	
	NUMBER	PERCENT	NUMBER	PERCENT
Total.....	82,009	100.0	692	100.0
Less than One.....	2,760	3.4	65	9.4
1 < 2.....	23,244	28.3	167	24.1
2 < 3.....	19,765	24.1	131	18.9
3 < 5.....	21,930	26.7	168	24.3
5 or More.....	14,310	17.5	161	23.3
Median Time Span.....	2.76	000	2.87	000

FIGURE 1.8—Percent of Women Having Fetal Deaths Who Received Medical Care Prior to the Sixth Month of Pregnancy, Michigan Residents, 1970-1975



MORTALITY

SECTION II



Mortality

An Overview 1975

RESIDENT DEATHS	74,522
CRUDE DEATH RATE	8.1
INFANT DEATHS	2,205
INFANT DEATH RATE	16.5
NEONATAL DEATHS	1,563
NEONATAL DEATH RATE	11.7
PERINATAL DEATHS	2,690
PERINATAL DEATH RATE	19.9
MATERNAL DEATHS	16
MATERNAL DEATH RATE	1.2
DEATHS FROM HEART DISEASE PER DAY	77.5
DEATHS FROM CANCER PER DAY	39.6
DEATHS FROM STROKE PER DAY	19.9
DEATHS FROM ACCIDENTS PER DAY	11.0
MEDIAN AGE AT DEATH	70 Years
MEDIAN AGE AT DEATH FOR MALES	67 Years
MEDIAN AGE AT DEATH FOR FEMALES	74 Years

Between 1900 and 1975 the number of deaths occurring to Michigan residents increased from 32,453 to 74,522. The 31,472 deaths recorded in 1902 was the lowest number of resident deaths in this century, while the greatest number was recorded in 1972 when total resident deaths numbered 79,210. Although the total number of deaths increased between 1900 and 1975, the crude death rate decreased. The crude death rate in 1900 was 13.4 while the rate in 1975 was 8.1, the lowest crude death rate ever recorded for Michigan. The highest death rate (15.6) was observed in 1918.

Heart, cancer, and stroke deaths numbered 2,836, 1,460, and 2,136 respectively in 1900, whereas in 1975 heart, cancer, and stroke deaths numbered 28,298, 14,445, and 7,262 respectively. Although there have been significant increases in the number of deaths from these causes, changes in death rates per 100,000 population have not been nearly so dramatic. Heart, cancer, and stroke cause-specific death rates in 1900 were 117.1, 60.3, and 88.2 respectively. Comparable figures for 1975 are 309.0, 157.7, and 79.3.

In 1975, 74,522 deaths were recorded as having occurred to residents of Michigan. The crude death rate for 1975 was 8.1. This represents the lowest frequency of deaths in 10 years and the lowest crude rate in this century. The static pattern of death rates in the 1960's and early 1970's, has, at least temporarily, given way to decline. The 1975 crude death rate marks the third consecutive substantial decline. This pattern is also apparent, though not as substantial from national statistics. A comparison of deaths and crude death rates for Michigan and the United States for the period 1965-1975 is presented in Table 2.1.

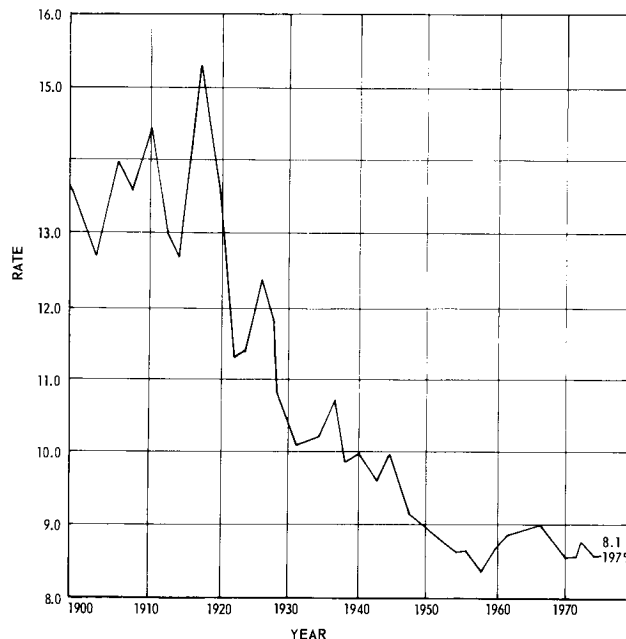
The stable pattern of deaths in the 60's and early 70's had often been attributed to the lack of change in the numbers of deaths in the major disease categories.

The crude rate decline observed both in 1974 and 1975 is the result of consecutive declines in the major cause of death groupings including heart disease and stroke. This is particularly striking in the presence of a gradual but continual aging of the population structure as these major causes of death are more prevalent in the older ages.

TABLE 2.1—Number of Deaths and Crude Death Rates, Michigan and United States Residents, 1965-1975

UNITED STATES		YEAR	MICHIGAN	
NO.	RATE		NO.	RATE
1,828,136	9.4	1965	73,665	9.0
1,863,149	9.5	1966	74,596	9.0
1,851,323	9.4	1967	75,360	8.7
1,930,082	9.7	1968	76,855	8.9
1,921,990	9.5	1969	76,693	8.8
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	9.4	1973	78,522	8.7
1,934,388	9.2	1974	76,143	8.4
1,892,879	8.9	1975	74,522	8.1

FIGURE 2.1—Crude Death Rate, Michigan Residents, 1900-1975



Of the 74,522 resident deaths that occurred in 1975, 41,989 occurred to males and 32,533 occurred to females. The median age at death for males was 67, compared to a significantly higher figure for females of 74. White deaths numbered 65,191 and accounted for 87.5 percent of all deaths. Deaths to blacks numbered 9,024 while 307 deaths occurred to members of other races (Table 2.2).

The greatest number of deaths occurred to persons 80-84 years of age and the least number to persons aged 5-9. The greatest number of deaths for black persons occurred to persons 70-74 years of age, while

TABLE 2.2—Number of Deaths by Age, Race, and Sex, Michigan Residents, 1975

AGE	ALL RACES			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year..	2,205	1,240	965	1,574	890	684	616	338	278	15	12	3
1-4 Years....	393	212	181	308	167	141	82	44	38	3	1	2
5-9 Years....	274	169	105	221	139	82	50	28	22	3	2	1
10-14 Years..	295	187	108	255	161	94	39	26	13	1	—	1
15-19 Years..	1,027	770	257	852	641	211	170	124	46	5	5	—
20-24 Years..	1,352	1,000	352	952	699	253	384	289	95	16	12	4
25-29 Years..	1,079	790	289	683	484	199	389	301	88	7	5	2
30-34 Years..	966	653	313	637	421	216	315	226	89	14	6	8
35-39 Years..	994	637	357	724	452	272	262	177	85	8	8	—
40-44 Years..	1,501	916	585	1,088	668	420	398	241	157	15	7	8
45-49 Years..	2,639	1,654	985	2,090	1,325	765	530	317	213	19	12	7
50-54 Years..	3,938	2,475	1,463	3,198	1,994	1,204	722	471	251	18	10	8
55-59 Years..	5,300	3,421	1,879	4,507	2,928	1,579	765	473	292	28	20	8
60-64 Years..	6,686	4,356	2,330	5,804	3,782	2,022	855	555	300	27	19	8
65-69 Years..	7,703	4,842	2,861	6,840	4,314	2,526	843	517	326	20	11	9
70-74 Years..	8,780	5,131	3,649	7,874	4,618	3,256	876	493	383	30	20	10
75-79 Years..	9,433	4,964	4,469	8,648	4,549	4,099	753	395	358	32	20	12
80-84 Years..	9,474	4,551	4,923	8,943	4,273	4,670	502	260	242	29	18	11
85-89 Years..	6,597	2,724	3,873	6,310	2,602	3,708	278	114	164	9	8	1
90 and Over..	3,875	1,291	2,584	3,678	1,224	2,454	191	64	127	6	3	3
Not Stated...	11	6	5	5	2	3	4	2	2	2	2	—
Total.....	74,522	41,989	32,533	65,191	36,333	28,858	9,024	5,455	3,569	307	201	106
Median Age..	70	67	74	71	68	75	58	56	61	60	59	60

deaths to whites were most frequent at ages 80-84. Differences in the mode for age at death are also evident in relation to sex. The most frequent age group at death was 70-74 for white males, 80-84 for white females, 60-64 for black males and 70-74 for black females. While these modal ages at death do not take into consideration differences in age structure of each subgroup population, they do reflect differences in the mortality patterns of each subgroup.

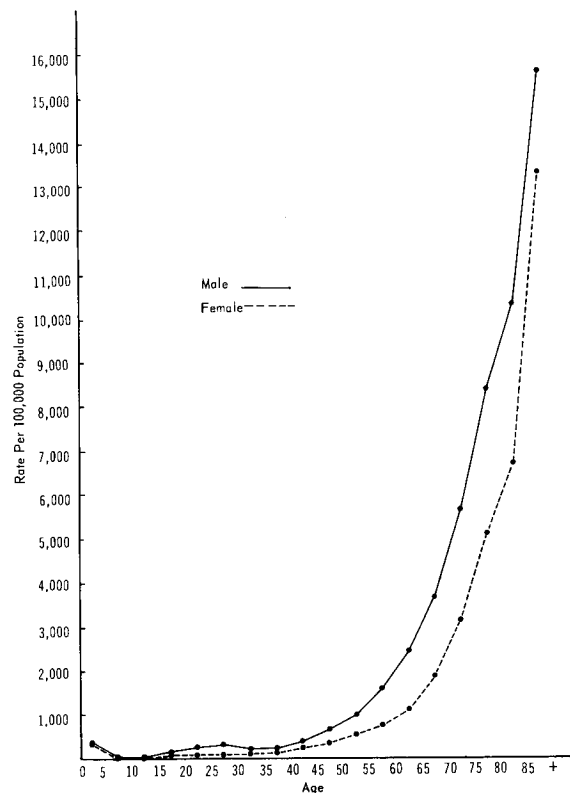
In 1975, 28,649 deaths occurred to persons under the age of 65. This constitutes 38.4 percent of all deaths. The percentage of all deaths to white males that involved persons under 65 years of age is 40.6. The corresponding figure for black males is 66.2. Similar-

TABLE 2.3—Death Rates¹ by Age and Sex, Michigan Residents, 1975

AGE	TOTAL	MALE	FEMALE
All Ages.....	813.8	933.1	698.6
0-4 Years.....	346.2	378.1	312.7
5-9 Years.....	33.6	40.7	26.2
10-14 Years....	31.8	39.6	23.7
15-19 Years....	106.1	155.8	54.2
20-24 Years....	164.4	242.5	85.9
25-29 Years....	178.1	300.4	84.3
30-34 Years....	156.1	206.4	103.5
35-39 Years....	198.5	245.3	148.1
40-44 Years....	327.9	397.3	257.6
45-49 Years....	512.5	643.5	382.0
50-54 Years....	761.1	992.0	546.0
55-59 Years....	1,166.9	1,583.1	789.2
60-64 Years....	1,786.4	2,444.5	1,188.3
65-69 Years....	2,695.4	3,658.6	1,864.6
70-74 Years....	4,275.0	5,668.5	3,176.9
75-79 Years....	6,450.9	8,372.8	5,140.3
80-84 Years....	8,041.8	10,306.4	6,684.0
85 and Over....	14,079.8	15,509.9	13,275.9

¹ Rates per 100,000 population.

FIGURE 2.2—Death Rates by Age and Sex, Michigan Residents, 1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

ly for black females, 55.1 percent were deaths before age 65; whereas, white females displayed the smallest percentage of deaths prior to age 65 with 28.2 percent.

Data in Table 2.3 and Figure 2.2 illustrate that males experience higher death rates at every age group than do females. The most significant differences occur in the age groups of 15-19, 20-24, and 25-29. The high death rates for age 0-4 reflect the influence of infant mortality. Death rates for males age 20-24 and 25-29 are higher than the rates for the preceding (younger) age group of 15-19 and the 30-34 age group, while females displayed a steady progression through these age intervals. The value of these age specific rates for comparison is that they compensate for differences in population structure. A good example of the effect this has is displayed by the age groups of 80-84 and 85 and over. In both these age intervals fewer male deaths were recorded than female deaths in 1975 (Table 2.2), yet male death rates for these ages are higher than those for females. This apparent paradox is the result of far fewer males at ages of 80 years and over than there are females.

LEADING CAUSES OF DEATH

In 1975, 84.1 percent of all deaths were caused by one of 10 cause of death categories. These principal causes of death in Michigan in 1975 remained much the same as they have in the recent past.

There has been no change in the first four rankings over the 26 years since 1950. The ranking of 5th and 6th have been held by diabetes mellitus and influenza

FIGURE 2.3—Leading Causes of Death, Michigan Residents, 1975

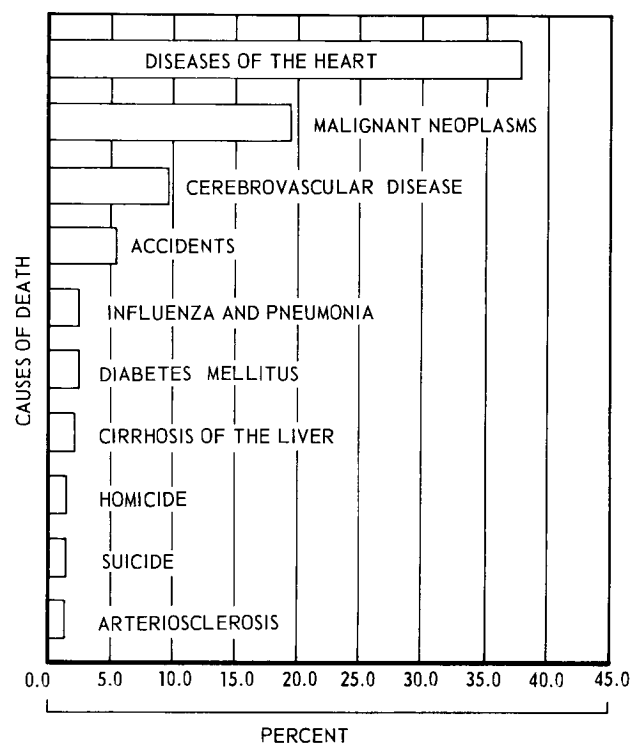


TABLE 2.4—Leading Causes of Death and Cause-Specific Rates, Michigan and United States Residents, 1975

RANK	CAUSE OF DEATH	NUMBER OF DEATHS		RATE	
		MICHIGAN	U.S.	MICHIGAN	U.S.
1	Diseases of the Heart	28,298	716,215	309.0	336.2
2	Malignant Neoplasms	14,445	365,693	157.7	171.7
3	Cerebrovascular Diseases	7,262	194,038	79.3	91.1
4	Accidents	4,002	103,030	43.7	48.4
5	Influenza and Pneumonia	1,825	55,664	19.9	26.1
6	Diabetes Mellitus	1,819	35,230	19.9	16.5
7	Cirrhosis of the Liver	1,574	31,623	17.2	14.8
8	Homicide	1,158	21,310	12.6	10.0
9	Suicide	1,136	27,063	12.4	12.7
10	Arteriosclerosis	1,119	28,887	12.2	13.6
	Sub Total	62,638	1,578,753	684.0	741.1
	All Other Causes	11,884	314,126	129.8	147.4
	Total	74,522	1,892,879	813.8	888.5

TABLE 2.5—Leading Causes of Death and Cause-Specific Rates by Age, Sex and Race, Michigan, 1975

Age	Total ¹					White Males					White Females					Non-White Males					Non-White Females									
	Rank and Cause of Death	Number	Specific Rate	Rank and Cause of Death	Number	Specific Rate	Rank and Cause of Death	Number	Specific Rate	Rank and Cause of Death	Number	Specific Rate	Rank and Cause of Death	Number	Specific Rate	Rank and Cause of Death	Number	Specific Rate	Rank and Cause of Death	Number	Specific Rate	Rank and Cause of Death	Number	Specific Rate	Rank and Cause of Death	Number	Specific Rate			
All Ages	1. Diseases of the Heart	28,798	309.0	1. Diseases of the Heart	14,614	372.1	1. Diseases of the Heart	11,165	274.7	1. Diseases of the Heart	1,382	241.4	1. Diseases of the Heart	1,094	184.5	1. Diseases of the Heart	1,094	184.5	1. Diseases of the Heart	1,094	184.5	1. Diseases of the Heart	1,094	184.5	1. Diseases of the Heart	1,094	184.5			
	2. Malignant Neoplasms	14,445	157.7	2. Malignant Neoplasms	6,953	177.0	2. Malignant Neoplasms	5,805	142.8	2. Malignant Neoplasms	1,021	178.3	2. Malignant Neoplasms	651	109.8	2. Malignant Neoplasms	651	109.8	2. Malignant Neoplasms	651	109.8	2. Malignant Neoplasms	651	109.8	2. Malignant Neoplasms	651	109.8			
	3. Cerebrovascular Disease	7,262	79.3	3. Cerebrovascular Disease	2,888	73.5	3. Cerebrovascular Disease	3,641	89.6	3. Cerebrovascular Disease	594	103.6	3. Cerebrovascular Disease	358	60.4	3. Cerebrovascular Disease	358	60.4	3. Cerebrovascular Disease	358	60.4	3. Cerebrovascular Disease	358	60.4	3. Cerebrovascular Disease	358	60.4			
	4. Accidents	4,002	43.7	4. Accidents	2,416	61.5	4. Accidents	1,066	26.2	4. Accidents	366	63.0	4. Accidents	145	24.4	4. Accidents	145	24.4	4. Accidents	145	24.4	4. Accidents	145	24.4	4. Accidents	145	24.4			
	5. Influenza and Pneumonia	1,825	19.9	5. Influenza and Pneumonia	857	21.8	5. Influenza and Pneumonia	930	22.9	5. Accidents	250	53.0	5. Accidents	144	24.3	5. Accidents	144	24.3	5. Accidents	144	24.3	5. Accidents	144	24.3	5. Accidents	144	24.3			
	All Causes	74,522	813.8	All Causes	36,333	925.1	All Causes	28,857	710.1	All Causes	5,367	972.3	All Causes	3,635	612.9	All Causes	3,635	612.9	All Causes	3,635	612.9	All Causes	3,635	612.9	All Causes	3,635	612.9			
Under 1 Year	1. Certain Diseases of Early Infancy (Birth Injury—62) (Asphyxia of Newborn—173) (Imaturity Unqualified—186) (Other—735)	1,156	842.3	1. Certain Diseases of Early Infancy (Birth Injury—24) (Asphyxia of Newborn—71) (Imaturity Unqualified—66) (Other—302)	463	791.8	1. Certain Diseases of Early Infancy (Birth Injury—23) (Asphyxia of Newborn—49) (Imaturity Unqualified—50) (Other—216)	338	612.9	1. Certain Diseases of Early Infancy (Birth Injury—7) (Imaturity Unqualified—43) (Other—127)	205	1,737.4	1. Certain Diseases of Early Infancy (Birth Injury—7) (Imaturity Unqualified—27) (Other—87)	144	1,218.4	1. Certain Diseases of Early Infancy (Birth Injury—7) (Imaturity Unqualified—27) (Other—87)	144	1,218.4	1. Certain Diseases of Early Infancy (Birth Injury—7) (Imaturity Unqualified—27) (Other—87)	144	1,218.4	1. Certain Diseases of Early Infancy (Birth Injury—7) (Imaturity Unqualified—27) (Other—87)	144	1,218.4	1. Certain Diseases of Early Infancy (Birth Injury—7) (Imaturity Unqualified—27) (Other—87)	144	1,218.4	1. Certain Diseases of Early Infancy (Birth Injury—7) (Imaturity Unqualified—27) (Other—87)	144	1,218.4
	2. Congenital Anomalies	382	278.4	2. Congenital Anomalies	176	301.0	2. Congenital Anomalies	138	250.2	2. Congenital Anomalies	39	330.5	2. Sudden Infant Death	47	397.7	2. Sudden Infant Death	47	397.7	2. Sudden Infant Death	47	397.7	2. Sudden Infant Death	47	397.7	2. Sudden Infant Death	47	397.7	2. Sudden Infant Death	47	397.7
	3. Sudden Infant Death	221	161.0	3. Sudden Infant Death	66	112.9	3. Sudden Infant Death	69	125.1	3. Congenital Anomalies	34	288.2	3. Congenital Anomalies	32	270.8	3. Congenital Anomalies	32	270.8	3. Congenital Anomalies	32	270.8	3. Congenital Anomalies	32	270.8	3. Congenital Anomalies	32	270.8	3. Congenital Anomalies	32	270.8
	4. Influenza and Pneumonia	76	55.4	4. Influenza and Pneumonia	33	56.4	4. Influenza and Pneumonia	25	45.3	4. Accidents	18	152.6	4. Influenza and Pneumonia	11	93.1	4. Accidents	11	93.1	4. Accidents	11	93.1	4. Accidents	11	93.1	4. Accidents	11	93.1	4. Accidents	11	93.1
	5. Accidents	66	48.1	5. Accidents	22	37.6	5. Influenza and Pneumonia	19	34.5	5. Accidents	8	67.8	5. Accidents	6	50.8	5. Accidents	6	50.8	5. Accidents	6	50.8	5. Accidents	6	50.8	5. Accidents	6	50.8	5. Accidents	6	50.8
	All Causes	2,205	1,606.7	All Causes	890	1,522.0	All Causes	683	1,238.5	All Causes	346	2,932.5	All Causes	278	12,352.1	All Causes	278	12,352.1	All Causes	278	12,352.1	All Causes	278	12,352.1	All Causes	278	12,352.1	All Causes	278	12,352.1
1-4 Years	1. Accidents	150	24.5	1. Accidents	73	27.6	1. Accidents	48	19.1	1. Accidents	14	28.3	1. Accidents	14	28.9	1. Accidents	14	28.9	1. Accidents	14	28.9	1. Accidents	14	28.9	1. Accidents	14	28.9	1. Accidents	14	28.9
	2. Congenital Anomalies	54	8.8	2. Congenital Anomalies	18	6.8	2. Congenital Anomalies	25	10.0	2. Congenital Anomalies	7	14.2	2. Congenital Anomalies	4	8.2	2. Congenital Anomalies	4	8.2	2. Congenital Anomalies	4	8.2	2. Congenital Anomalies	4	8.2	2. Congenital Anomalies	4	8.2	2. Congenital Anomalies	4	8.2
	3. Malignant Neoplasms	35	5.7	3. Malignant Neoplasms	17	6.4	3. Malignant Neoplasms	12	6.0	3. Malignant Neoplasms	4	8.1	3. Malignant Neoplasms	3	6.2	3. Malignant Neoplasms	3	6.2	3. Malignant Neoplasms	3	6.2	3. Malignant Neoplasms	3	6.2	3. Malignant Neoplasms	3	6.2	3. Malignant Neoplasms	3	6.2
	4. Homicide	2	0.3	4. Homicide	1	0.3	4. Homicide	1	0.3	4. Homicide	1	0.3	4. Homicide	1	0.3	4. Homicide	1	0.3	4. Homicide	1	0.3	4. Homicide	1	0.3	4. Homicide	1	0.3	4. Homicide	1	0.3
	5. Diseases of the Heart	16	2.6	5. Diseases of the Heart	8	3.0	5. Influenza and Pneumonia	5	2.0	5. Malignant Neoplasms	5	2.0	5. Malignant Neoplasms	2	4.1	5. Anemia	2	4.1	5. Anemia	2	4.1	5. Anemia	2	4.1	5. Anemia	2	4.1	5. Anemia	2	4.1
	All Causes	393	64.1	All Causes	167	63.2	All Causes	141	56.2	All Causes	44	89.1	All Causes	40	82.5	All Causes	40	82.5	All Causes	40	82.5	All Causes	40	82.5	All Causes	40	82.5	All Causes	40	82.5
5-14 Years	1. Accidents	303	17.4	1. Accidents	168	22.0	1. Accidents	88	12.0	1. Accidents	32	26.0	1. Accidents	14	11.4	1. Accidents	14	11.4	1. Accidents	14	11.4	1. Accidents	14	11.4	1. Accidents	14	11.4	1. Accidents	14	11.4
	2. Malignant Neoplasms	75	4.3	2. Malignant Neoplasms	45	5.9	2. Malignant Neoplasms	23	3.1	2-3. Malignant Neoplasms	5	4.1	2. Homicide	6	4.9	2. Homicide	6	4.9	2. Homicide	6	4.9	2. Homicide	6	4.9	2. Homicide	6	4.9	2. Homicide	6	4.9
	3. Congenital Anomalies	31	1.8	3. Congenital Anomalies	13	1.7	3. Congenital Anomalies	8	1.1	3. Cystic Fibrosis	4	1.9	3. Congenital Anomalies	2	1.6	3. Congenital Anomalies	2	1.6	3. Congenital Anomalies	2	1.6	3. Congenital Anomalies	2	1.6	3. Congenital Anomalies	2	1.6	3. Congenital Anomalies	2	1.6
	4. Homicide	23	1.3	4. Homicide	8	1.0	4. Cystic Fibrosis	4	1.1	4. Influenza and Pneumonia	2	1.6	4. Congenital Anomalies	1	0.8	4. Congenital Anomalies	1	0.8	4. Congenital Anomalies	1	0.8	4. Congenital Anomalies	1	0.8	4. Congenital Anomalies	1	0.8	4. Congenital Anomalies	1	0.8
	5. Influenza and Pneumonia	17	1.0	5. Influenza and Pneumonia	8	1.0	5. Diseases of the Heart	4	0.5	5. Diseases of the Heart	2	1.6	5. Diseases of the Heart	2	1.6	5. Septicemia	2	1.6	5. Septicemia	2	1.6	5. Septicemia	2	1.6	5. Septicemia	2	1.6	5. Septicemia	2	1.6
	All Causes	569	32.7	All Causes	300	39.3	All Causes	176	24.0	All Causes	55	44.7	All Causes	36	29.4	All Causes	36	29.4	All Causes	36	29.4	All Causes	36	29.4	All Causes	36	29.4	All Causes	36	29.4
15-24 Years	1. Accidents	1,077	60.1	1. Accidents	780	100.6	1. Accidents	209	27.6	1. Accidents	88	12.0	1. Accidents	32	26.0	1. Accidents	32	26.0	1. Accidents	32	26.0	1. Accidents	32	26.0	1. Accidents	32	26.0	1. Accidents	32	26.0
	2. Homicide	357	19.9	2. Suicide	183	23.6	2. Malignant Neoplasms	47	6.2	2. Malignant Neoplasms	23	3.1	2-3. Malignant Neoplasms	5	4.1	2. Homicide	6	4.9	2. Homicide	6	4.9	2. Homicide	6	4.9	2. Homicide	6	4.9	2. Homicide	6	4.9
	3. Malignant Neoplasms	247	13.8	3. Homicide	88	11.3	3. Congenital Anomalies	31	4.1	3. Congenital Anomalies	14	1.9	3. Congenital Anomalies	5	4.1	3. Congenital Anomalies	5	4.1	3. Congenital Anomalies	5	4.1	3. Congenital Anomalies	5	4.1	3. Congenital Anomalies	5	4.1	3. Congenital Anomalies	5	4.1
	4. Mental Disorders	164	9.2	4. Malignant Neoplasms	68	8.8	4. Mental Disorders	28	3.7	4. Cystic Fibrosis	8	1.1	4. Influenza and Pneumonia	2	1.6	4. Congenital Anomalies	2	1.6	4. Congenital Anomalies	2	1.6	4. Congenital Anomalies	2	1.6	4. Congenital Anomalies	2	1.6	4. Congenital Anomalies	2	1.6
	5. Malignant Neoplasms	130	7.3	5. Mental Disorders	49	6.3	5. Mental Disorders	18	2.4	5. Diseases of the Heart	4	0.5	5. Diseases of the Heart	2	1.6	5. Septicemia	2	1.6	5. Septicemia	2	1.6	5. Septicemia	2	1.6	5. Septicemia	2	1.6	5. Septicemia	2	1.6
	All Causes	2,379	132.9	All Causes	1,340	172.8	All Causes	464	61.3	All Causes	176	24.0	All Causes	55	44.7	All Causes	55	44.7	All Causes	55	44.7	All Causes	55	44.7	All Causes	55	44.7	All Causes	55	44.7
25-34 Years	1. Accidents	530	43.3	1. Accidents	341	65.7	1. Accidents	92	16.4	1. Accidents	88	15.7	1. Accidents	32	26.0	1. Accidents	32	26.0	1. Accidents	32	26.0	1. Accidents	32	26.0	1. Accidents	32	26.0	1. Accidents	32	26.0
	2. Homicide	337	27.5	2. Suicide	151	29.5	2. Malignant Neoplasms	88	15.7	2. Malignant Neoplasms	53	9.4	2. Malignant Neoplasms	19	15.7	2. Malignant Neoplasms	19	15.7	2. Malignant Neoplasms	19	15.7	2. Malignant Neoplasms	19	15.7	2. Malignant Neoplasms	19	15.7	2. Malignant Neoplasms	19	15.7
	3. Malignant Neoplasms	239	19.5	3. Malignant Neoplasms	91	13.8	3. Suicide	26	4.6	3. Suicide	26	4.6	3. Suicide	31	45.7	3. Mental Disorders	31	45.7	3. Mental Disorders	31	45.7	3. Mental Disorders	31	45.7	3. Mental Disorders	31	45.7	3. Mental Disorders	31	45.7
	4. Mental Disorders	203	16.6	4. Homicide	76	14.9	4. Homicide	26	4.6	4. Cirrhosis of the Liver	26	4.6	4. Cirrhosis of the Liver	27	39.8	4. Cirrhosis of the Liver	27	39.8	4. Cirrhosis of the Liver	27	39.8	4. Cirrhosis of the Liver	27	39.8	4. Cirrhosis of the Liver	27	39.8	4. Cirrhosis of the Liver	27	39.8
	5. Mental Disorders	134	10.9	5. Diseases of the Heart	61	11.9	5. Diseases of the Heart	415	74.0	5. Diseases of the Heart	21	3.6	5. Diseases of the Heart	27	39.8	5. Cirrhosis of the Liver	27	39.8	5. Cirrhosis of the Liver	27	39.8	5. Cirrhosis of the Liver	27	39.8	5. Cirrhosis of the Liver	27	39.8	5. Cirrhosis of the Liver	27	39.8
	All Causes	2,045	167.0	All Causes	905	176.9	All Causes	905	176.9	All Causes	415	74.0	All Causes	532	784.0	All Causes	532	784.0	All Causes	532	784.0	All Causes	532	784.0	All Causes	532	784.0	All Causes	532	784.0
35-44 Years	1. Diseases of the Heart	1,276	86.6	1. Diseases of the Heart	846	127.9	1. Malignant Neoplasms	525	81.7	1. Malignant Neoplasms	131	152.8	1. Malignant Neoplasms	110	131.6	1. Malignant Neoplasms	110	131.6	1. Malignant Neoplasms	110	131.6	1. Malignant Neoplasms	110	131.6	1. Malignant Neoplasms	110	131.6	1. Malignant Neoplasms	110	131.6
	2. Malignant Neoplasms	1,153	78.3	2. Malignant Neoplasms	427	64.5	2. Diseases of the Heart	218	33.9	2. Diseases of the Heart	129	150.4	2. Diseases of the Heart	75	89.8	2. Diseases of the Heart	75	89.8	2. Diseases of the Heart	75	89.8	2. Diseases of the Heart	75	89.8	2. Diseases of the Heart	75	89.8	2. Diseases of the Heart	75	89.8
	3. Accidents	511	34.7																											

and pneumonia, with influenza and pneumonia ranking 5th in 16 of the 26 years from 1950 through 1975. Cirrhosis of the liver was not among the 10 leading causes of death in 1950. This cause ranked 10th in 1954 and has been among the 10 most frequent causes consistently since 1960, gradually moving from 10th to 7th. The ranking of homicide and suicide in the top ten is also fairly recent, with homicide rising to the ninth leading cause in 1972 and suicide ranking 10th in 1964. Arteriosclerosis has consistently been ranked since 1950. This cause ranked 7th in 1950, gradually declining in rank and reaching the rank of tenth by 1974. In 1975, six of the ten leading causes of death are chronic conditions, one is an acute disease category and three are external nondisease groupings.

While the four leading causes of death have not changed since 1950, influenza and pneumonia, and diabetes mellitus have alternately ranked 5th and 6th over the last 4 years with influenza and pneumonia ranking 5th in 1975. Cirrhosis of the liver has ranked 7th since 1969, while the last three causes in the top ten, homicide, suicide and arteriosclerosis, hold the same ranking as were attained in 1974.

No major changes in the order of the ten leading causes for the United States occurred in 1975. Several major differences between the United States figures and those of Michigan should be noted. The 8th, 9th and 10th leading causes nationally are the reverse of what occurred in Michigan, with arteriosclerosis being 8th and homicide 10th. The overall Michigan death rate is significantly lower than the national rate. Some cause-specific rates are, however, higher than comparative national rates. These causes are diabetes mellitus, cirrhosis of the liver and homicide.

The five most frequent causes of death among all Michigan resident deaths has changed little in recent years. This does not imply similarity in the leading causes of death among residents at different ages, of different sexes or different races. Table 2.5 contains the five most frequent causes of death by age, sex and race. Careful examination of this table will disclose that major differences in the leading causes of death are associated with these three characteristics. No single cause of death is among the most frequent causes in all categories. Malignant neoplasms have the most widespread significance of any condition as it is present in 27 of the 32 cells. Accidental deaths are ranked in 25 cells. Heart disease, the most frequent cause of death in the state, is one of the five leading causes of death in 21 of the 32 individual cross classifications. The variation in leading causes of death by age is most evident among deaths to infants under 1 year. This category has little similarity to any other age group. External causes of death, including homicide, suicide and accidents, are predominant killers among persons 1 through 34 years of age. At ages 35 years and over, chronic conditions are responsible for the largest percentage of deaths.

THE PROBABILITY OF EVENTUAL DEATH DUE TO A SPECIFIED CAUSE

While cause-specific death rates are useful in gauging the frequency of death due to certain causes and in making comparisons between areas or populations, they do not relate the risk that the condition imposes on the population with clarity. Mortality data can be used to develop this risk in probabilistic terms. Through the application of life expectancy techniques, a probability of death due to a given cause can be estimated. Such probabilities represent the average risk of eventual death being caused by a specified condition under an assumption that the mortality across all ages that was observed in a time period will remain unchanged through the remaining life of the population. These probabilities can be estimated for any given age attained. The following list relates the probability at birth of dying from the 10 leading causes of death based upon Michigan mortality experience for the years 1973 through 1975.

Disease Category	Probability at Birth of Eventual Death Due to Condition for:	
	Males	Females
Heart Disease	.410	.423
Malignant Neoplasms	.184	.167
Cerebrovascular Disease	.090	.144
Accidents	.049	.029
Diabetes Mellitus	.020	.034
Influenza and Pneumonia	.026	.027
Cirrhosis of the Liver	.022	.011
Homicide	.015	.006
Suicide	.015	.004
Arteriosclerosis	.014	.027
All Other Causes	.155	.128

The 1973 through 1975 data would indicate that 84.5 percent of all males and 87.2 percent of all females in Michigan will die from one of the ten leading causes if all things remain constant. Approximately four of every ten people will die from heart disease. Women face higher risks of death due to the chronic conditions of cerebrovascular disease, diabetes mellitus and arteriosclerosis than do males. At the same time, males are more likely to die from accidents, cirrhosis of the liver, homicide, suicide or cancer, according to the mortality experience in Michigan during 1973 through 1975.

DISEASES OF THE HEART

In 1974, 28,298 Michigan residents died from diseases of the heart. Heart disease continues to be the single largest cause of death in Michigan and the United States, accounting for more deaths than the next four largest causes combined, namely cancer, stroke, accidents and diabetes mellitus.

Of the 28,298 deaths due to diseases of the heart in 1975, 16,028 were to males and 12,270 to females.

The median age at death for males was 70 years compared to a figure of 78 for females. The median age at death for all heart deaths was 74 (Table 2.6).

White male median age of 71 years exceeded the black male median by 6 years. The median age at death for white females was 79, 7 years above that for black females.

Examination of Table 2.7 reveals that the heart disease death rate for males is substantially higher than that for females (356.2 as compared to 263.5). Age-

TABLE 2.6—Deaths Due to Diseases of the Heart by Age, Race, and Sex, Michigan Residents, 1975

AGE	ALL RACES			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year..	17	12	5	10	7	3	6	4	2	1	1	—
1-4 Years...	16	7	9	11	5	6	5	2	3	—	—	—
5-9 Years...	5	1	4	4	1	3	1	—	1	—	—	—
10-14 Years..	5	4	1	5	4	1	—	—	—	—	—	—
15-19 Years..	18	11	7	15	9	6	3	2	1	—	—	—
20-24 Years..	23	11	12	18	9	9	5	2	3	—	—	—
25-29 Years..	40	25	15	25	15	10	15	10	5	—	—	—
30-34 Years..	69	56	13	56	46	10	10	7	3	3	3	—
35-39 Years..	144	105	39	111	83	28	32	21	11	1	1	—
40-44 Years..	351	282	69	285	236	49	63	44	19	3	2	1
45-49 Years..	781	595	186	668	527	141	107	63	44	6	5	1
50-54 Years..	1,370	1,028	342	1,158	889	269	208	136	72	4	3	1
55-59 Years..	1,960	1,456	504	1,716	1,295	421	238	156	82	6	5	1
60-64 Years..	2,607	1,859	748	2,285	1,655	630	311	195	116	11	9	2
65-69 Years..	3,231	2,154	1,077	2,914	1,962	952	310	188	122	7	4	3
70-74 Years..	3,838	2,269	1,569	3,461	2,069	1,392	366	190	176	11	10	1
75-79 Years..	4,264	2,178	2,086	3,943	2,028	1,915	309	141	168	12	9	3
80-84 Years..	4,393	2,043	2,350	4,170	1,928	2,242	212	109	103	11	6	5
85-89 Years..	3,165	1,275	1,890	3,030	1,224	1,806	130	47	83	5	4	1
90 and Over..	2,000	657	1,343	1,893	622	1,271	130	33	70	4	2	2
Not Stated...	1	—	1	1	—	1	—	—	—	—	—	—
Total.....	28,298	16,028	12,270	25,779	14,614	11,165	2,434	1,350	1,084	85	64	21
Median Age..	74	70	78	75	71	79	68	65	71	70	68	75

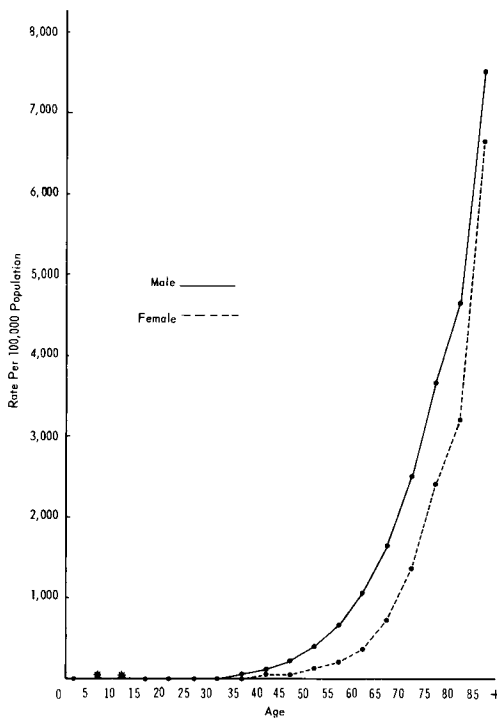
specific heart disease death rates for males and females are similar below the age of 25. For all older ages the male rates are substantially above those of females, with the greatest differential noted for the age groups 40-44, 45-49, 50-54, and 55-59. Male rates in these age groups range from 3 to 4 times the corresponding rates for females.

The age and sex specific heart disease death rates contained in Table 2.7 are graphically displayed in Figure 2.4. The death rate associated to this cause can be seen to rise markedly with advancing age. Heart disease was the underlying cause of 33 deaths in the age group 0-4 or about 1.3 percent of all deaths in this age group. In contrast 58.9 percent of all deaths in the age group 85+ were attributed to this cause in 1975. The heart disease death rate was 6,944.4 in the 85+ age group.

TABLE 2.7—Heart Disease Death Rates by Age and Sex, Michigan Residents, 1975

AGE	TOTAL	MALE	FEMALE
All Ages.....	309.0	356.2	263.5
0-4 Years.....	4.4	4.9	3.8
5-9 Years.....	*	*	*
10-14 Years.....	*	*	*
15-19 Years.....	1.9	2.2	1.5
20-24 Years.....	2.8	2.7	2.9
25-29 Years.....	6.6	9.5	4.4
30-34 Years.....	11.2	17.7	4.3
35-39 Years.....	28.8	40.4	16.2
40-44 Years.....	76.7	122.3	30.4
45-49 Years.....	151.7	231.5	72.1
50-54 Years.....	264.8	412.0	127.6
55-59 Years.....	431.5	673.8	211.7
60-64 Years.....	696.5	1,043.2	381.5
65-69 Years.....	1,130.6	1,627.5	701.9
70-74 Years.....	1,868.7	2,506.7	1,366.0
75-79 Years.....	2,916.0	3,673.7	2,399.3
80-84 Years.....	3,728.9	4,626.7	3,190.6
85 and Over.....	6,944.4	7,506.1	6,647.2

FIGURE 2.4—Heart Disease Death Rates by Age and Sex, Michigan Residents, 1975¹

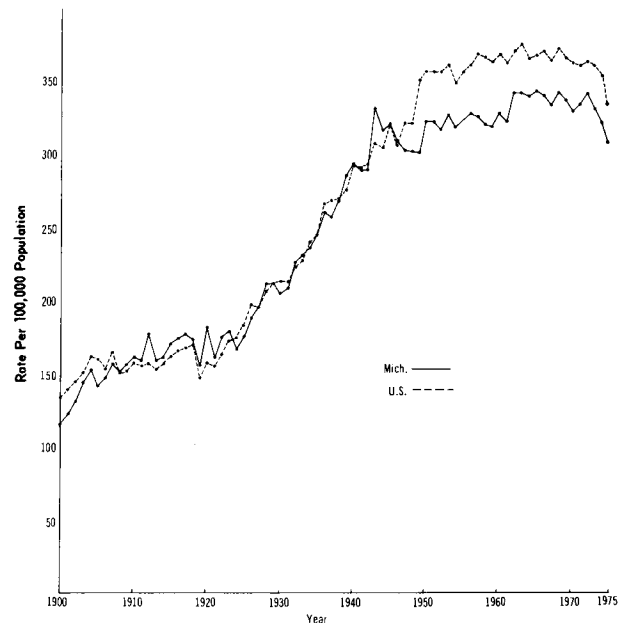


¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

In 1900 the crude heart disease death rate in Michigan was 117.1, the lowest rate of this century. In 1975, this rate was 309.0. The highest observed rate of death due to heart disease was 342.9 in 1962. The heart disease death rate rose through the time period 1900-1950. This rate has remained relatively stable

over the last twenty-five years. While the 1975 rate marks the third consecutive decline in the annual rate, historical declines in three or more consecutive years have been observed twice before in this century (1946-1949 and 1957-1959). Neither instance heralded a long range reduction in rate. The rate for Michigan was consistently close to the national rates until 1946. Since that time the Michigan rate has been well below national rates. In 1975, the national rate was 336.2, about 10 percent above the Michigan rate of death due to heart disease. Michigan's rate in 1975 was the lowest in twenty-six years while the national rate was the lowest since 1948.

FIGURE 2.5—Heart Disease Death Rates, Michigan and United States Residents, 1900-1975²



²National rates are from death registration states for 1900-1932 and the United States for 1933-1975.

³Heart Disease death rates since 1900 are suitable for general comparison over time but detailed study (such as time series) requires special consideration. See Technical Notes.

The most prevalent condition of heart disease death is acute myocardial infarction (13,714 deaths in 1975) commonly referred to as a "coronary" (Table 2.3). Almost as frequent is chronic ischemic heart disease. In 1975, there were 11,954 deaths attributed to this cause. Together, acute myocardial infarction and chronic ischemic heart disease are the underlying cause in 90.7 percent of all Michigan heart disease deaths. The remaining 9.3 percent of the deaths, if considered separately, would comprise the 5th leading cause of death. These deaths are distributed among the 21 other types of heart disease. Just over half of the remaining 2,630 deaths can be attributed to two causes: symptomatic heart disease and hypertensive heart disease (1,175 and 315 deaths, respectively).

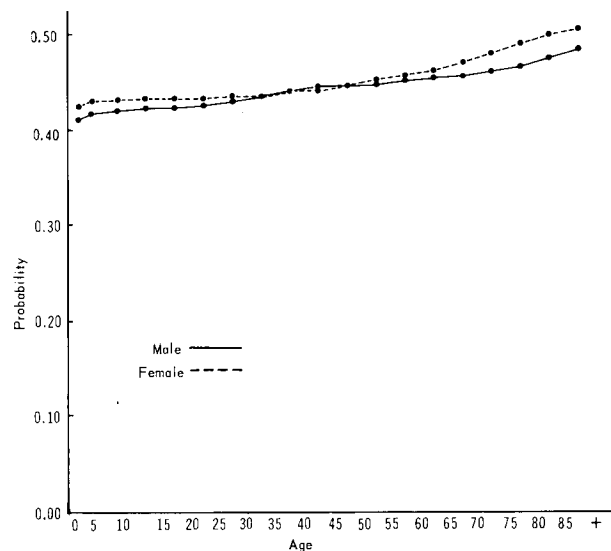
TABLE 2.8—Deaths Due to Diseases of the Heart by Detailed Cause, Michigan Residents, 1975

ICDA LIST NO.	CAUSE OF DEATH	NO. OF DEATHS	PER-CENT
410	Acute Myocardial Infarction	13,714	48.5
412	Chronic Ischemic Heart Disease	11,954	42.2
427	Symptomatic Heart Disease	1,175	4.2
402	Hypertensive Heart Disease	315	1.1
425	Cardiomyopathy	149	0.5
398	Other Heart Disease, Specified as Rheumatic	139	0.5
394	Disease of Mitral Valve	137	0.5
395	Disease of Aortic Valve	129	0.5
404	Hypertensive Heart and Renal Disease	96	0.3
429	Ill-Defined Heart Disease	91	0.3
428	Other Myocardial Insufficiency	80	0.3
411	Other Acute and Subacute Forms of Ischemic Heart Disease	67	0.2
426	Pulmonary Heart Disease	67	0.2
424	Chronic Disease of Endocardium	37	0.1
396	Diseases of Mitral and Aortic Valves	32	0.1
397	Diseases of Other Endocardial Structures	29	0.1
421	Acute and Subacute Endocarditis	26	0.1
423	Chronic Disease of Pericardium, Non-Rheumatic	23	0.1
422	Acute Myocarditis	16	0.1
391	Rheumatic Fever with Heart Involvement	13	0.0
413	Angina Pectoris	6	0.0
420	Acute Pericarditis, Non-Rheumatic	2	0.0
393	Diseases of Pericardium	1	0.0
	TOTAL	28,298	99.9

The probability of eventually dying from heart disease, based on death data from 1973, 1974 and 1975, is 0.41 for males and 0.42 for females at birth. Males displayed a slightly greater propensity to die from other causes. The chance associated with dying from heart disease increases steadily with advancing age as certain competing causes of death become less likely. By age 85, the observed probability was 0.49 for males and 0.50 for females in 1973-1975. Males are generally less likely to die from heart disease, however, in the ages of 35 through about 55, females displayed a slightly lower probability. The higher risk for females across most age intervals reflects smaller chances of death due to some cause other than heart disease.

An apparent inconsistency can be noted by review of Figure 2.4 and Figure 2.6. The heart disease mortality rate for males is higher than that for females over all ages, yet the chance of death due to heart disease is slightly greater for females over most ages. This paradox is explained by a comparison of these two measures. Mortality rates, whether cause-specific or not, measure the frequency of death as it relates to population, while the probability of eventual death due to a given cause is related to the frequency of death not from that cause. Where the heart disease mortality rates for 1974 indicate that males die from heart disease more frequently than females, the probabilities state that males die less frequently from heart disease than from other causes when compared to females.

FIGURE 2.6—Probability of Eventually Dying from Heart Disease by Age and Sex, Michigan Residents, 1973-1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

CANCER

Of 74,522 Michigan resident deaths, 14,445 persons died from cancer in 1975. Although not the leading cause of death in Michigan and the United States, cancer affects all the human body's major systems and persons of all ages.

Of the 14,445 cancer deaths in 1975 occurring to Michigan residents, 7,984 were males while 6,461 occurred to females. The median age at death for both

sexes was 67 years (Table 2.9). Median ages for males by race are slightly older than females of the same race category. White male median age observed in 1975 was 68 years compared to 67 years for white females. Black males with a median of 64 years exceeded the black female median age by 3 years.

Cancer death rates are higher overall for males (177.4) than for females (138.7). Age-specific rates for males are higher than females in thirteen of the eighteen age groups. The male mortality rate due to

TABLE 2.9—Deaths Due to Cancer by Age, Race, and Sex, Michigan Residents, 1975

AGE	ALL RACES			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year..	8	3	5	8	3	5	—	—	—	—	—	—
1-4 Years. . . .	35	19	16	32	17	15	3	2	1	—	—	—
5-9 Years. . . .	44	30	14	38	25	13	5	5	—	1	—	1
10-14 Years. . .	31	20	11	30	20	10	1	—	1	—	—	—
15-19 Years. . .	63	36	27	53	30	23	10	6	4	—	—	—
20-24 Years. . .	67	40	27	62	38	24	5	2	3	—	—	—
25-29 Years. . .	84	48	36	66	36	30	18	12	6	—	—	—
30-34 Years. . .	119	52	67	103	45	58	16	7	9	—	—	—
35-39 Years. . .	184	78	106	159	67	92	25	11	14	—	—	—
40-44 Years. . .	300	125	175	240	99	141	57	25	32	3	1	2
45-49 Years. . .	669	315	354	553	261	292	112	51	61	4	3	1
50-54 Years. . .	1,152	599	553	963	478	485	186	118	68	3	3	—
55-59 Years. . .	1,559	848	711	1,319	708	611	231	135	96	9	5	4
60-64 Years. . .	1,900	1,116	784	1,665	954	711	231	160	71	4	2	2
65-69 Years. . .	2,048	1,216	832	1,825	1,068	757	220	146	74	3	2	1
70-74 Years. . .	2,038	1,209	829	1,815	1,066	749	219	139	80	4	4	—
75-79 Years. . .	1,739	985	754	1,563	873	690	170	108	62	6	4	2
80-84 Years. . .	1,392	747	645	1,300	693	607	90	52	38	2	2	—
85-89 Years. . .	755	385	370	718	365	353	37	20	17	—	—	—
90 and Over. . .	258	113	145	246	107	139	12	6	6	—	—	—
Not Stated. . . .	—	—	—	—	—	—	—	—	—	—	—	—
Total.	14,445	7,984	6,461	12,758	6,953	5,805	1,648	1,005	643	39	26	13
Median Age. . .	67	67	67	67	68	67	63	64	61	59	62	58

cancer is 70 to 90 percent higher than female rates at ages 65 and over. Only in the age groups 30-34, 35-39, 40-44, and 45-49 are female cancer rates higher. In the first of these age groups (30-34), female cancer mortality is 35 percent above the 16.4 rate for males. The relative differences of male and female rates for ages 35-39 and 40-44 are 47 percent and 42 percent, respectively.

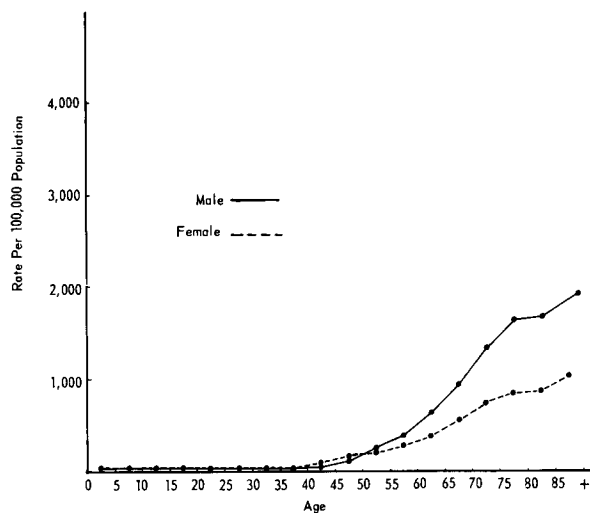
TABLE 2.10—Cancer Death Rates by Age and Sex, Michigan Residents, 1975

AGE	TOTAL	MALE	FEMALE
All Ages.....	157.7	177.4	138.7
0-4 Years.....	5.7	5.7	5.7
5-9 Years.....	5.4	7.2	3.5
10-14 Years.....	3.3	4.2	2.4
15-19 Years.....	6.5	7.3	5.7
20-24 Years.....	8.1	9.7	6.6
25-29 Years.....	13.9	18.3	10.5
30-34 Years.....	19.2	16.4	22.2
35-39 Years.....	36.7	30.0	44.0
40-44 Years.....	65.5	54.2	77.1
45-49 Years.....	129.9	122.6	137.3
50-54 Years.....	222.6	240.1	206.4
55-59 Years.....	343.2	392.4	298.6
60-64 Years.....	507.6	626.3	399.8
65-69 Years.....	716.6	918.8	542.2
70-74 Years.....	992.3	1,335.7	721.7
75-79 Years.....	1,189.2	1,661.4	867.3
80-84 Years.....	1,181.6	1,691.7	875.7
85 and Over.....	1,362.0	1,934.8	1,058.9

The cancer death rates displayed in Figure 2.7 show a strong increase in mortality due to cancer with advancing age. Males demonstrated higher rates from birth to age 30 than females. From 30 years of age through about age 50 female cancer death rates are slightly above those of males. Male rates then pass those for females and rise much faster from 50 years of age through to age 80, whereupon the rates for both sexes display some convergence.

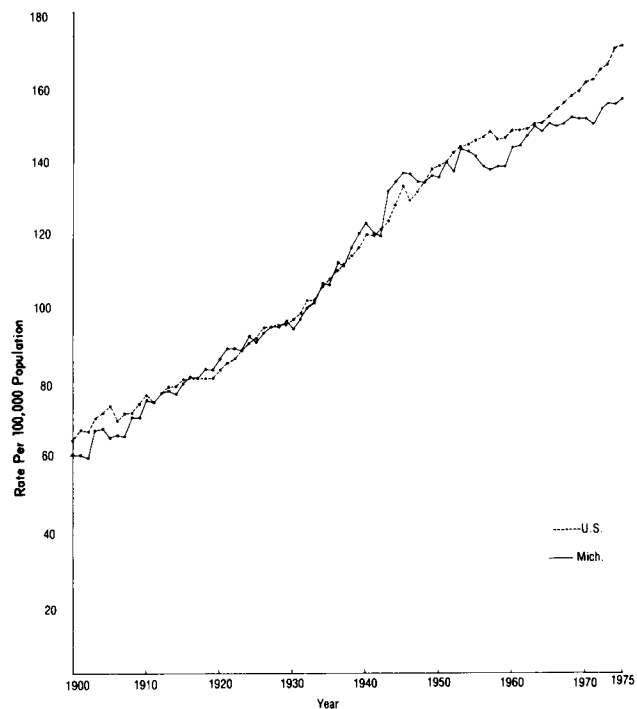
Cancer death rates have risen steadily since 1900 (Figure 2.8). The overall rate in Michigan was 60.3 in 1900. In 1975 the rate was 157.7, the highest observed in this century. The 1975 rate surpassed the previous high rate of 156.9 in 1973. The lowest observed rate for Michigan was 59.3 in 1902. Michigan's cancer death rate was below the national rate from 1900 through 1915. During the period 1916 through 1946 Michigan was generally at the national rate. Since 1947, the state rate has been consistently below national cancer death rates. Over the last 11 years, the national rate has been rising faster than the rate observed in Michigan. The national cancer death rate in 1975 was 171.7. This is 8.9 percent above the state rate.

FIGURE 2.7—Cancer Death Rates by Age and Sex, Michigan Residents, 1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

FIGURE 2.8—Cancer Death Rates, Michigan and United States Residents,¹ 1900-1975²



¹National rates are from Death Registration States for 1900-1932 and the United States for 1933-1975.

²Cancer death rates since 1900 are suitable for general comparison over time but detailed study (such as time series) requires special consideration. See Technical notes.

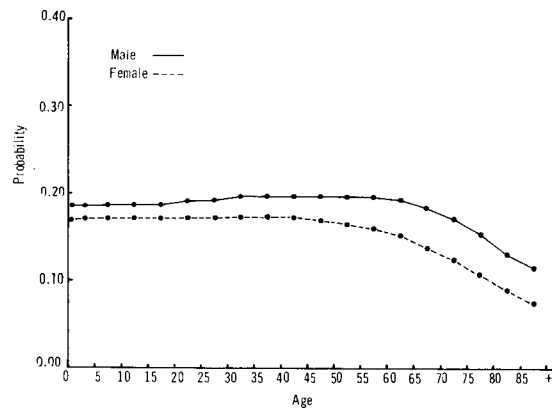
Deaths from cancer for 59 different causes and sites are presented in Table 2.11. The most common underlying cause of cancer mortality is malignant neoplasm of the trachea, bronchus, and lung. In 1975, 22.4 percent of all cancer deaths are attributed to this cause. The second most frequent cause of cancer mortality is cancer of the large intestine (1,514 deaths). Breast cancer (1,380 deaths) is third while malignant neoplasms of the pancreas and prostate are fourth and fifth. These first five of the 59 causes listed constitute 53.1 percent of all cancer deaths in Michigan. Of the remaining 54 causes, 22 resulted in 100 or more deaths in 1975.

Based upon 1973 through 1975 death data, the probability of death due to malignant neoplasm is 0.184 for males and 0.167 for females at birth (Figure 2.9). The male probability rises slowly to a peak of 0.197 for ages 50-54 then drops rapidly to approximately 0.112 at ages 85 and over. Female probabilities are more stable, displaying little change from birth to ages 45-49 then diminishing to 0.075 at age 85 and up. This falling probability beyond age 50, noting the high cancer mortality rates of older age (Figure 2.7), indicates that age-specific rates of competing causes are rising relatively faster with advancing age.

TABLE 2.11—Malignant Neoplasms by Site Affected, Michigan Residents, 1975

ICDA LIST NO.	CAUSE AND SITE	NO. OF DEATHS	PER-CENT
162	Malignant Neoplasm of Trachea, Bronchus and Lung	3,232	22.4
153	Malignant Neoplasm of Large Intestine, Except Rectum	1,514	10.5
174	Malignant Neoplasm of Breast	1,380	9.6
157	Malignant Neoplasm of Pancreas	766	5.3
185	Malignant Neoplasm of Prostate	759	5.3
199	Malignant Neoplasm without Specification of Site	599	4.1
151	Malignant Neoplasm of Stomach	565	3.9
183	Malignant Neoplasm of Ovary, Fallopian Tube, and Broad Ligament	441	3.1
188	Malignant Neoplasm of Bladder	433	3.0
154	Malignant Neoplasm of Rectum and Rectosigmoid Junction	326	2.3
150	Malignant Neoplasm of Esophagus	302	2.1
189	Malignant Neoplasm of Other and Unspecified Urinary Organs	291	2.0
191	Malignant Neoplasm of Brain	286	2.0
197	Secondary Malignant Neoplasm of Respiratory and Digestive Systems	241	1.7
205	Myeloid Leukemia	238	1.6
203	Multiple Myeloma	238	1.6
180	Malignant Neoplasm of Cervix Uteri	217	1.5
182	Other Malignant Neoplasm of Uterus	214	1.5
202	Other Neoplasms of Lymphoid Tissue	212	1.5
200	Lymphosarcoma and Reticulum-Cell Sarcoma	209	1.4
156	Malignant Neoplasm of Gall Bladder and Bile Ducts	174	1.2
204	Lymphatic Leukemia	166	1.1
207	Other and Unspecified Leukemia	158	1.1
161	Malignant Neoplasm of Larynx	123	0.9
201	Hodgkin's Disease	121	0.8
172	Malignant Neoplasm of Skin	111	0.8
195	Malignant Neoplasm of Ill-Defined Sites	111	0.8

FIGURE 2.9—Probability of Eventually Dying from Cancer by Age and Sex, Michigan Residents, 1973-1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

ICDA LIST NO.	CAUSE AND SITE	NO. OF DEATHS	PER-CENT
155	Malignant Neoplasm of Liver and Intra-Hepatic Bile Ducts, Specified as Primary	86	0.6
198	Other Secondary Malignant Neoplasm	81	0.6
171	Malignant Neoplasm of Connective and Other Soft Tissue	66	0.5
141	Malignant Neoplasm of Tongue	62	0.4
170	Malignant Neoplasm of Bone	58	0.4
173	Other Malignant Neoplasm of Skin	58	0.4
192	Malignant Neoplasm of Other Parts of Nervous System	50	0.3
149	Malignant Neoplasm of Pharynx, Unspecified	44	0.3
209	Myelofibrosis	39	0.3
146	Malignant Neoplasm of Oropharynx	38	0.3
186	Malignant Neoplasm of Testis	38	0.3
184	Malignant Neoplasm of Other and Unspecified Female Genital Organs	36	0.2
152	Malignant Neoplasm of Small Intestine, Including Duodenum	33	0.2
145	Malignant Neoplasm of Other and Unspecified Parts of the Mouth	32	0.2
158	Malignant Neoplasm of Peritoneum and Retroperitoneal Tissue	28	0.2
163	Malignant Neoplasm of Other and Unspecified Respiratory Organs	27	0.2
193	Malignant Neoplasm of Thyroid Gland	26	0.2
147	Malignant Neoplasm of Nasopharynx	26	0.2
142	Malignant Neoplasm of Salivary Gland	22	0.2
159	Malignant Neoplasm of Unspecified Digestive Organs	22	0.2
208	Polycythemia Vera	22	0.2
160	Malignant Neoplasm of Nose, Nasal Cavities, Middle Ear, and Accessory Sinuses	22	0.2
206	Monocytic Leukemia	21	0.1
148	Malignant Neoplasm of Hypopharynx	17	0.1
144	Malignant Neoplasm of Floor of Mouth	16	0.1
194	Malignant Neoplasm of Other Endocrine Glands	13	0.1
187	Malignant Neoplasm of Other and Unspecified Male Genital Organs	11	0.1
143	Malignant Neoplasm of Gum	6	0.0
196	Secondary and Unspecified Malignant Neoplasm of Lymph Nodes	6	0.0
140	Malignant Neoplasm of Lip	5	0.0
190	Malignant Neoplasm of Eye	4	0.0
181	Chorinepithelioma	3	0.0
	TOTAL	14,445	100.2

CEREBROVASCULAR DISEASE

Deaths due to cerebrovascular diseases (stroke) numbered 7,262 among Michigan resident deaths in 1975 or 9.7 percent of the 74,522 total resident deaths. This is the lowest number of stroke deaths for Michigan in 21 years (6,964 deaths in 1954). Of the total in 1975, 3,258 were male deaths and 4,004 were female.

The median age at death for stroke victims was 78. The median age for females was 80 years or 4 years higher than that for males. Deaths to whites that were due to cerebrovascular disease displayed median ages several years higher than those for black persons. The median age for black males of 68 years contrasts with the white male median of 76. The black female median of 71 years is 9 years less than that of white females (Table 2.12).

The cerebrovascular disease death rate was 79.3 in 1975. The female rate of 86.0 was significantly higher than the rate for males (72.4). The age-specific death rates in Table 2.13 shows male and female rates reasonably similar prior to age 55. Male rates were above those of females from the 55-59 age group through age group 80-84. In the 85 and over age interval the female rate is 19 percent above the male rate.

Cerebrovascular diseases are much more frequent among older age groups. As can be seen in Figure 2.10, mortality rates specific to these conditions begin a marked rise above age 50 for males and age 55 for

females. Female rates were just below male rates for most age intervals (10 of 15 age intervals with a sufficient number of deaths).

TABLE 2.13—Cerebrovascular Disease Death Rates by Age and Sex, Michigan Residents, 1975

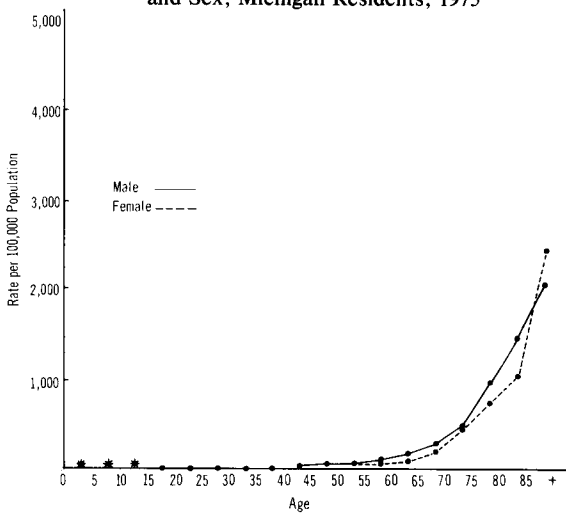
AGE	TOTAL	MALE	FEMALE
All Ages.....	79.3	72.4	86.0
0-4 Years.....	*	*	*
5-9 Years.....	*	*	*
10-14 Years.....	*	*	*
15-19 Years.....	1.5	1.4	1.7
20-24 Years.....	1.7	1.9	1.5
25-29 Years.....	3.8	4.9	2.9
30-34 Years.....	4.0	3.2	5.0
35-39 Years.....	7.4	7.7	7.1
40-44 Years.....	14.6	10.0	19.4
45-49 Years.....	25.6	23.3	27.9
50-54 Years.....	38.3	39.3	37.3
55-59 Years.....	68.0	82.4	55.0
60-64 Years.....	115.7	153.8	81.1
65-69 Years.....	228.5	274.3	189.0
70-74 Years.....	450.9	488.3	421.4
75-79 Years.....	836.4	981.7	737.3
80-84 Years.....	1,258.8	1,453.9	1,141.8
85 and Over.....	2,297.8	2,043.6	2,432.3

The historic pattern of cerebrovascular disease death rates has been one of strong variation (Figure 2.11). During the time period 1900-1949, the rates in Michigan ranged from a low of 83.9 in 1902 to a high of 110.0 eight years later. The national high and low for the years 1900-1948 are 108.6 in 1904 and 84.1 in 1933. The 6th revision to ICDA cause of death coding was adopted in the year 1949 nationally and 1950 in Michigan. This resulted in a lack of direct comparability between rates prior to these dates and rates after adoption. Michigan was below national rates from

TABLE 2.12—Deaths Due to Cerebrovascular Disease by Age, Race, and Sex, Michigan Residents, 1975

AGE	ALL RACES			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year..	7	6	1	6	5	1	1	1	—	—	—	—
1-4 Years....	1	1	—	1	1	—	—	—	—	—	—	—
5-9 Years....	3	1	2	2	1	1	1	—	1	—	—	—
10-14 Years..	4	4	—	4	4	—	—	—	—	—	—	—
15-19 Years..	15	7	8	11	6	5	3	—	3	1	1	—
20-24 Years..	14	8	6	11	7	4	2	1	1	—	—	1
25-29 Years..	23	13	10	18	11	7	5	2	3	—	—	—
30-34 Years..	25	10	15	19	6	13	6	4	2	—	—	—
35-39 Years..	37	20	17	29	13	16	8	7	1	—	—	—
40-44 Years..	67	23	44	51	16	35	16	7	9	—	—	—
45-49 Years..	132	60	72	95	43	52	36	17	19	1	—	1
50-54 Years..	198	98	100	145	67	78	51	30	21	2	1	1
55-59 Years..	309	178	131	254	151	103	55	27	28	—	—	—
60-64 Years..	433	274	159	362	226	136	69	46	23	2	2	—
65-69 Years..	653	363	290	553	310	243	98	52	46	2	1	1
70-74 Years..	926	442	484	818	386	432	104	55	49	4	1	3
75-79 Years..	1,223	582	641	1,112	527	585	106	54	52	5	1	4
80-84 Years..	1,483	642	841	1,399	607	792	79	33	46	5	2	3
85-89 Years..	1,079	368	711	1,037	351	686	41	16	25	1	1	—
90 and Over..	630	158	472	602	150	452	27	7	20	1	1	—
Not Stated...	—	—	—	—	—	—	—	—	—	—	—	—
Total.....	7,262	3,258	4,004	6,529	2,888	3,641	708	359	349	25	11	14
Median Age..	78	76	80	78	76	80	70	68	71	74	72	75

FIGURE 2.10—Cerebrovascular Disease Death Rates by Age and Sex, Michigan Residents, 1975¹

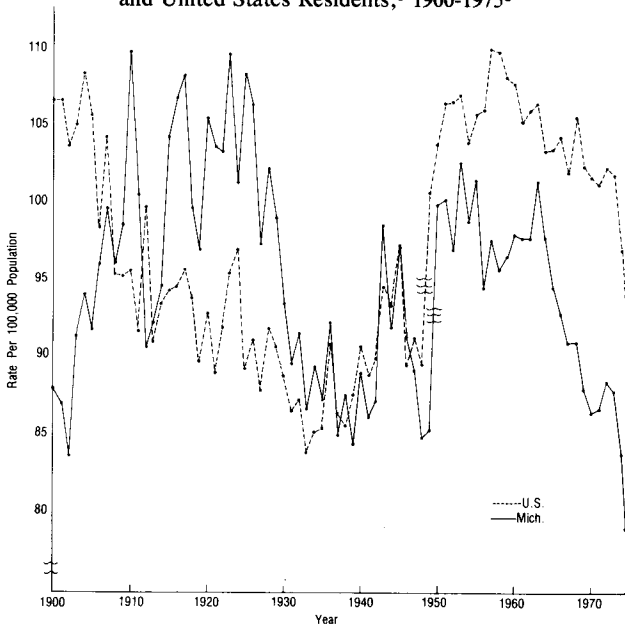


¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

1900 through 1907 but was generally, and sometimes markedly, higher from 1908 to 1938. Michigan and national rates were very similar over the next 8 years, whereupon the Michigan rate slipped below the national rate and has remained there since 1946.

Since the significant change in coding procedures in 1950, the cerebrovascular disease death rate in Michigan has ranged from 102.8 in 1958 to 79.3 in 1975. Recent rates over the last twelve years have shown a clear downward tendency both nationally and in Michigan. In 1975, the Michigan rate was 13.0 percent less than the United States rate of 91.1 (Figure 2.11).

FIGURE 2.11—Cerebrovascular Disease Death Rates Michigan and United States Residents,¹ 1900-1975²



¹National rates are from death registration states for 1900-1932 and the United States for 1933-1975.

²The comparability of cerebrovascular disease death rates from the 5th revision of I.C.D.A coding procedures with those of the 6th revision is considered weak. The comparability ratio is estimated to be 1.16. The 6th revision was adopted in 1949 for national cause-of-death statistics and in 1950 for Michigan Statistics. The comparability of cerebrovascular disease death rates through the 6th, 7th, and 8th revisions (1949 to date nationally and 1950 to date in Michigan) is high.

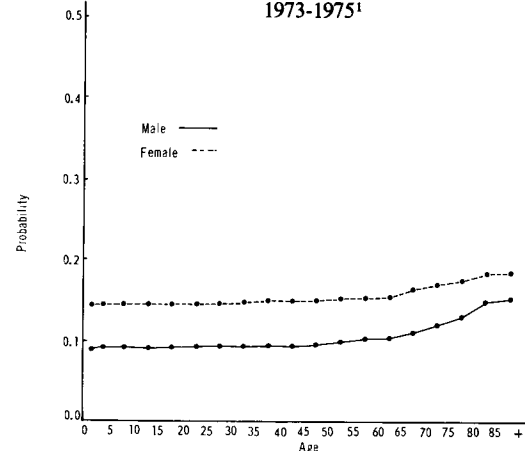
Acute but ill-defined cerebrovascular disease was most frequently given as the type of cerebrovascular disease causing death (Table 2.14). Of almost equal frequency was cerebral thrombosis which caused 2,084 deaths in 1975. These two cause of death categories comprise 61.8 percent of all stroke deaths. Generalized ischemic cerebrovascular disease and cerebral hemorrhage are the third and fourth most frequent conditions causing these deaths. Together the top four causes of cerebrovascular disease deaths accounted for 91.6 percent of all such deaths in Michigan.

TABLE 2.14—Deaths Due to Cerebrovascular Disease by Detailed Cause, Michigan Residents, 1975

ICDA LIST NO.	CAUSE OF DEATH	NO. OF DEATHS	PER-CENT
436	Acute but Ill-Defined Cerebrovascular Disease	2,404	33.1
433	Cerebral Thrombosis	2,084	28.7
437	Generalized Ischemic Cerebrovascular Disease	1,194	16.4
431	Cerebral Hemorrhage	976	13.4
430	Subarachnoid Hemorrhage	353	4.9
438	Other and Ill-Defined Cerebrovascular Disease	114	1.6
432	Occlusion of Precerebral Arteries	105	1.4
434	Cerebral Embolism	30	0.4
435	Transient Cerebral Ischemia	2	0.0
TOTAL		7,262	99.9

At birth, a Michigan male faces a 0.090 chance of dying from cerebrovascular disease while the probability associated with a female at birth is 0.144, based upon the mortality experience of 1973 through 1975 in Michigan. Females are consistently more likely to die from this cause than males through all age intervals, according to the 1973-1975 data (Figure 2.12). This results primarily from the higher risks of competing causes for males. At age 60 male chances start rising appreciably with advancing age, reaching 0.142 by age 85. Female data reveals a similar increasing tendency later in life, though it starts at somewhat older ages and displays slower acceleration. The peak probability for females was 0.187 for the age interval 85 and over.

FIGURE 2.12—Probability of Eventually Dying from Cerebrovascular Disease by Age and Sex, Michigan Residents, 1973-1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

ACCIDENTS

About 5.4 percent of all Michigan resident deaths were caused by accidents. Of the total 4,002 accidental deaths, 2,788 were males while 1,214 were females.

The median age at death among accident victims was 32 years (Table 2.15). Median age among males was 29, fifteen years lower than the 44 year median for

females. This differential is predominantly traceable to the relatively high number of accidental deaths for the white females in the older age intervals. The median age of accidental deaths for white males was 29 years compared to 46 years for white females. The age disparity for the sexes among blacks was 1 year with medians of 32 for males and 33 for females.

The high female median age at death for deaths due

TABLE 2.15—Deaths Due to Accidents by Age, Race, and Sex, Michigan Residents, 1975

AGE	ALL RACES			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year..	66	30	36	47	22	25	19	8	11	—	—	—
1-4 Years. . . .	150	88	62	121	73	48	26	14	12	3	1	2
5-9 Years. . . .	145	98	47	116	79	37	28	18	10	1	1	—
10-14 Years. . .	158	103	55	140	89	51	17	14	3	1	—	1
15-19 Years. . .	561	441	120	527	413	114	30	24	6	4	4	—
20-24 Years. . .	516	412	104	462	367	95	45	36	9	9	9	—
25-29 Years. . .	312	244	68	260	203	57	48	38	10	4	3	1
30-34 Years. . .	218	169	49	173	138	35	39	29	10	6	2	4
35-39 Years. . .	166	138	28	141	117	24	20	16	4	5	5	—
40-44 Years. . .	165	118	47	125	92	33	35	22	13	5	4	1
45-49 Years. . .	180	136	44	151	114	37	28	22	6	1	—	1
50-54 Years. . .	186	130	56	147	101	46	35	26	9	4	3	1
55-59 Years. . .	173	126	47	148	106	42	21	16	5	4	4	—
60-64 Years. . .	163	117	46	140	99	41	20	15	5	3	3	—
65-69 Years. . .	140	92	48	122	81	41	18	11	7	—	—	—
70-74 Years. . .	136	66	70	124	59	65	10	7	3	2	—	2
75-79 Years. . .	163	88	75	152	82	70	10	5	5	1	1	—
80-84 Years. . .	185	96	89	172	88	84	11	7	4	2	1	1
85-90 Years. . .	130	62	68	128	61	67	2	1	1	—	—	—
90 and Over. . .	89	34	55	86	32	54	3	2	1	—	—	—
Not Stated. . . .	—	—	—	—	—	—	—	—	—	—	—	—
Total.	4,002	2,788	1,214	3,482	2,416	1,066	465	331	134	55	41	14
Median Age. . .	32	29	44	31	29	46	32	32	33	34	35	33

to accidents in 1975 can be attributed to the relatively even distribution of female deaths across all age groups. The numbers of deaths for all other race and sex groups rise to a peak number of deaths in the age group 15-19 with frequencies remaining high through the 30-35 age group then tapering off with advancing age. White females experienced their highest number of accidental deaths in the 15-19 year age group. However, the numbers of deaths remained relatively constant through the older age intervals.

The death rate as the result of accidents for males are more than twice as large as that for females. Male accidental death rates are greater than female accidental death rates for all age groups. The differential between male and female rates is greatest at age 15-19, 20-24, and 25-29. In these age groups male rates are 3.9, 4.7, and 3.5 times corresponding female rates, respectively (Table 2.16).

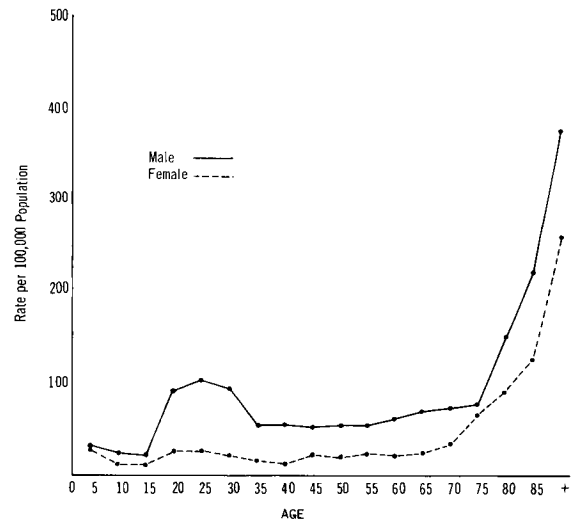
TABLE 2.16—Accident Death Rates by Age and Sex, Michigan Residents, 1975

AGE	TOTAL	MALE	FEMALE
All Ages.....	43.7	62.0	26.1
0-4 Years.....	28.8	30.7	26.7
5-9 Years.....	17.8	23.6	11.7
10-14 Years.....	17.0	21.8	12.1
15-19 Years.....	57.9	89.2	25.3
20-24 Years.....	62.8	99.9	25.4
25-29 Years.....	51.5	92.8	19.8
30-34 Years.....	35.2	53.4	16.2
35-39 Years.....	33.2	53.2	11.6
40-44 Years.....	36.1	51.2	20.7
45-49 Years.....	35.0	52.9	17.1
50-54 Years.....	35.9	52.1	20.9
55-59 Years.....	38.1	58.3	19.7
60-64 Years.....	43.6	65.7	23.5
65-69 Years.....	49.0	69.5	31.3
70-74 Years.....	66.2	72.9	60.9
75-79 Years.....	111.5	148.4	86.3
80-84 Years.....	157.0	217.4	120.8
85 and Over.....	294.4	373.0	252.9

The mortality rates contained in Table 2.16 are displayed graphically in Figure 2.13. Both sexes experienced greater mortality due to accidents in the age groups 15-19 and 20-24, while a relatively high rate was seen for males in the age interval 25-29. With increasing age, the age-specific accidental death rates of both sexes increase sharply at ages over 60 while the differential between the sexes diminishes with advancing age. The highest mortality due to accidents is the age interval 85 and over for both sexes.

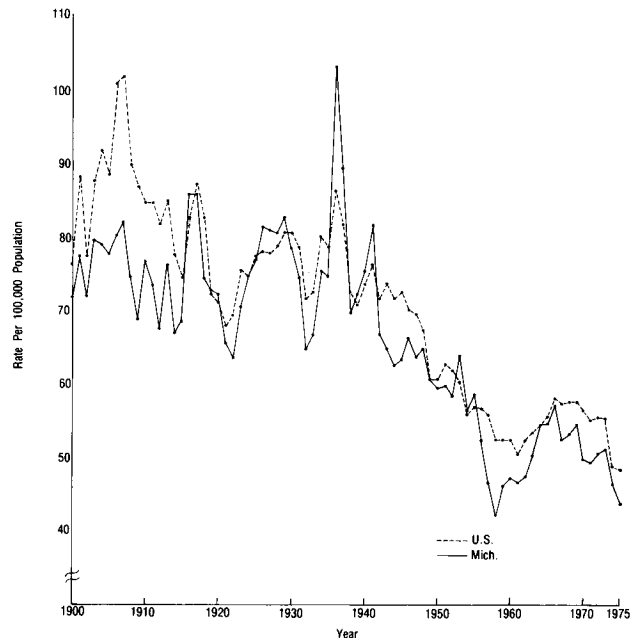
Michigan's accidental death rate in 1900 was 71.9. The lowest rate observed in the last 76 years through 1975 was 42.0 in 1950. The highest rate over this time period was in 1936 when 103.1 persons per 100,000 died from accidental causes. National rates have varied from 101.8 in 1907 to 48.4 in 1975. Michigan's rates have been below national rates fairly consistently since 1900. The last time the Michigan rate was above the United States rate was in 1955. The accidental death rate for Michigan in 1975 was 43.7 (Figure 2.14).

FIGURE 2.13—Accident Death Rates by Age and Sex, Michigan Residents, 1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

FIGURE 2.14—Accident Death Rates, Michigan and United States Residents,¹ 1900-1975²



¹National rates are from death registration states for 1900-1932 and the United States for 1933-1975.

²Accidental death rates since 1900 are suitable for general comparison over time but detailed study (such as time series) requires special consideration. See Technical Notes.

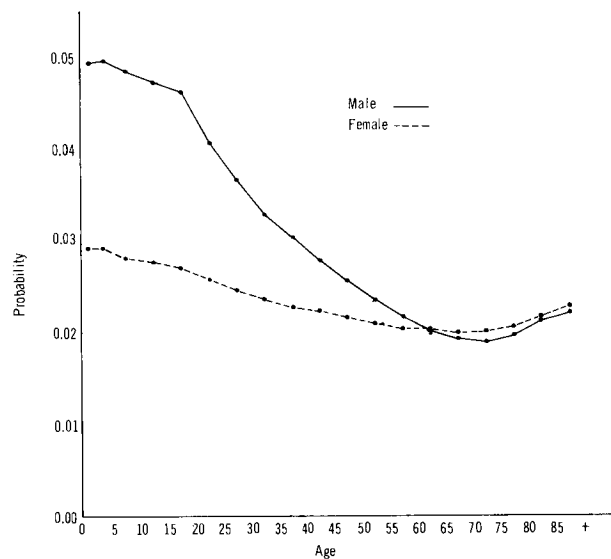
Motor vehicle accidents accounted for 1,808 deaths or 45.2 percent of all accidental deaths in 1975. The category "other Accidents", comprised primarily of accidental drownings, suffocation from inhalation and ingestion of food or other objects, and industrial accidents, was the second most frequent category with 821 deaths. Accidental falls was the second most frequent specific type of accident rather than a general category. This cause of death resulted in 618 deaths in 1975. These three combined accounted for 81.1 percent of all accidental deaths (Table 2.17).

TABLE 2.17—Accidental Deaths by Type of Accidents, Michigan Residents, 1975

ICDA LIST NO.	TYPE OF ACCIDENT	NO. OF DEATHS	PER-CENT
E810-E819	Motor Vehicle Traffic Accidents	1,808	45.2
E910-E928	Other Accidents	821	20.5
E880-E887	Accidental Falls	618	15.4
E890-E899	Accidents Caused by Fire and Flames	260	6.5
E850-E859	Accidental Poisonings by Drugs and Medicaments	125	3.1
E870-E877	Accidental Poisoning by Gases and Vapors	75	1.9
E830-E838	Water Transport Accidents	56	1.4
E840-E845	Air and Space Transport Accidents	50	1.2
E930-E936	Surgical and Medical Complications and Misadventures	46	1.1
E860-E869	Accidental Poisonings by Other Solid or Liquid Substances	46	1.1
E820-E823	Motor Vehicle Non-Traffic Accidents	33	0.8
E900-E909	Accidents Due to Natural and Environmental Factors	33	0.8
E940-E949	Late Effects of Accidental Injury	17	0.4
E800-E807	Railway Accidents	10	0.2
E825-E827	Other Road Vehicle Accidents	4	0.1
	TOTAL	4,002	99.7

It can be seen from Figure 2.15 that the risk of suffering accidental death is greater in the younger age groups than later in life. The probability of eventually dying from accidental causes is 0.049 for males and 0.030 for females at birth, according to Michigan mortality data from the years 1973 through 1975. Male probabilities by age continue to be much higher than females to about age 60-65. Male probabilities decline rather rapidly while those for females decline only slightly. At age interval 60-65, male and female probabilities are about equal. After age 65, male chances of accidental death decline then rise very slightly, whereas female chances gradually rise with advancing age to the terminal age group 85 and over, exceeding male probabilities by a small margin.

FIGURE 2.15—Probability of Eventually Dying from Accidental Causes by Age and Sex, Michigan Residents, 1973-1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

INFLUENZA AND PNEUMONIA

One of every 41 deaths that occurred in Michigan in 1975 was due to influenza and pneumonia. There were a total of 1,825 such deaths of which 1,008 were male and 817 were female.

The overall median age at death for those dying from influenza and pneumonia was 77 in 1975 (Table 2.18). This is well above the median age for all deaths

of 70 years. The median age for males was less than that for females by 4 years for whites and by eleven years for blacks. White medians were higher than those for blacks by as much as 16 years. The median age at death for white males was 76 and for white females 80 years. Deaths for black males were distributed such that the median age was 60 years when death was due to influenza and pneumonia. Black females dying from influenza and pneumonia had a

TABLE 2.18—Deaths Due to Influenza and Pneumonia by Age, Race, and Sex, Michigan Residents, 1975

AGE	ALL RACES			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year..	76	51	25	52	33	19	22	16	6	2	2	—
1-4 Years . . .	13	6	7	10	5	5	3	1	2	—	—	—
5-9 Years . . .	9	4	5	8	4	4	1	—	1	—	—	—
10-14 Years . .	8	6	2	4	4	—	4	2	2	—	—	—
15-19 Years . .	9	7	2	8	6	2	1	1	—	—	—	—
20-24 Years . .	17	12	5	15	10	5	2	2	—	—	—	—
25-29 Years . .	9	6	3	5	3	2	4	3	1	—	—	—
30-34 Years . .	24	10	14	15	6	9	9	4	5	—	—	—
35-39 Years . .	15	7	8	11	4	7	4	3	1	—	—	—
40-44 Years . .	23	14	9	14	8	6	9	6	3	—	—	—
45-49 Years . .	53	38	15	37	26	11	14	10	4	2	2	—
50-54 Years . .	58	30	28	43	21	22	14	9	5	1	—	1
55-59 Years . .	82	46	36	62	31	31	19	14	5	1	1	—
60-64 Years . .	107	72	35	87	57	30	20	15	5	—	—	—
65-69 Years . .	116	73	43	99	62	37	17	11	6	—	—	—
70-74 Years . .	189	108	81	173	102	71	16	6	10	—	—	—
75-79 Years . .	250	142	108	221	124	97	29	18	11	—	—	—
80-84 Years . .	320	174	146	297	162	135	21	10	11	2	2	—
85-89 Years . .	269	121	148	251	113	138	17	7	10	1	1	—
90 and Over . .	178	81	97	164	76	88	14	5	9	—	—	—
Not Stated . . .	—	—	—	—	—	—	—	—	—	—	—	—
Total	1,825	1,008	817	1,576	857	719	240	143	97	9	8	1
Median Age . . .	77	75	79	78	76	80	63	60	71	*	*	*

median age of 71.

The influenza and pneumonia death rate was higher for males than females in 1975. The overall rate was 19.9 while males and females had rates of 22.4 and 17.5 respectively. The age specific rates for males were above those for females for most age groups. Female rates exceeded those of males for only two of the fifteen age groups containing a sufficient number of deaths to prepare rates (Table 2.19).

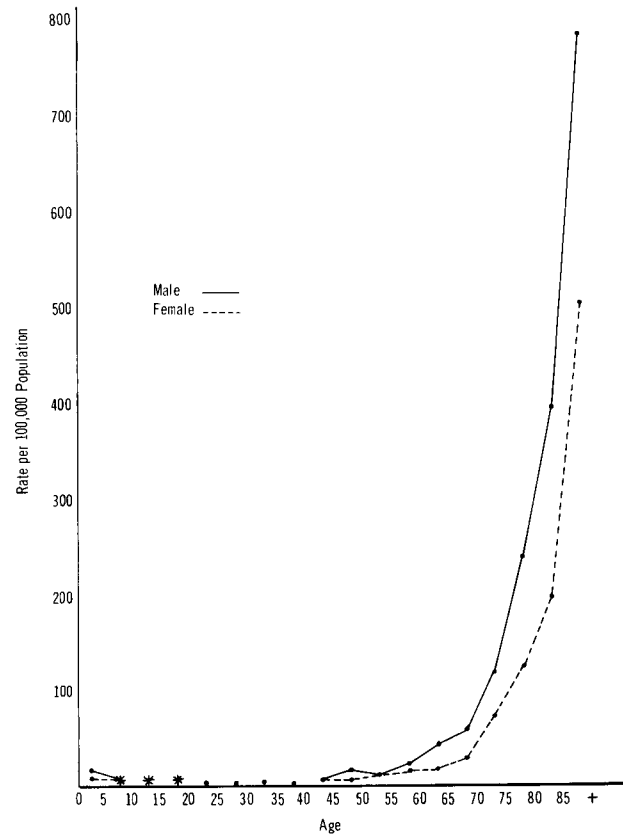
TABLE 2.19—Influenza and Pneumonia Death Rates by Age and Sex, Michigan Residents, 1975

AGE	TOTAL	MALE	FEMALE
All Ages.....	19.9	22.4	17.5
0-4 Years.....	11.9	14.8	8.7
5-9 Years.....	*	*	*
10-14 Years.....	*	*	*
15-19 Years.....	*	*	*
20-24 Years.....	2.1	2.9	1.2
25-29 Years.....	1.5	2.3	0.9
30-34 Years.....	3.9	3.2	4.6
35-39 Years.....	3.0	2.7	3.3
40-44 Years.....	5.0	6.1	4.0
45-49 Years.....	10.3	14.8	5.8
50-54 Years.....	11.2	12.0	10.5
55-59 Years.....	18.1	21.3	15.1
60-64 Years.....	28.6	40.4	17.9
65-69 Years.....	40.6	55.2	28.0
70-74 Years.....	92.0	119.3	70.5
75-79 Years.....	171.0	239.5	124.2
80-84 Years.....	271.6	394.0	198.2
85 and Over.....	601.0	784.8	503.7

The rate of death due to influenza and pneumonia for the 0-4 year age group is the highest rate observed for the younger ages. The rate for this group is not exceeded by any age group below ages 55-59. At ages 55-59 the strong association between influenza and pneumonia death and advancing age becomes apparent. Rates from that point nearly double with each successive five year interval. The higher frequency of male deaths from influenza and pneumonia is also increasingly prominent from ages 55-59 through age 85 and over (Figure 2.16). In the oldest age group the male rate is 55.8 percent higher than the female rate.

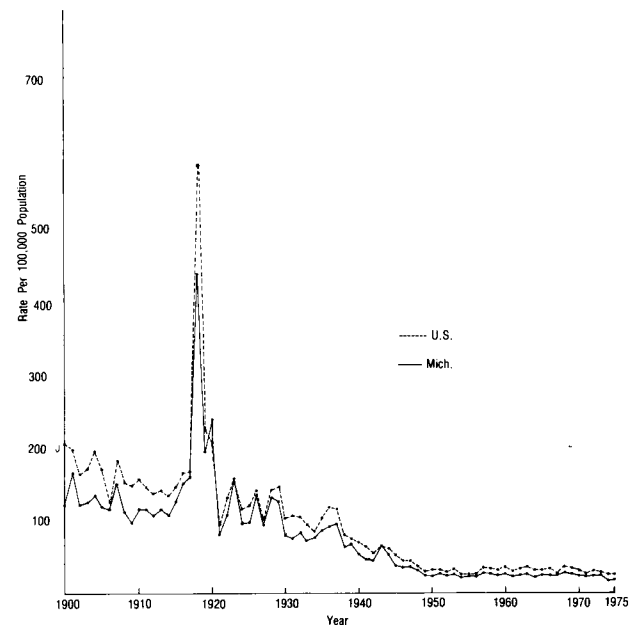
The pattern of influenza and pneumonia death rates has been generally downward since 1900 both nationally and in Michigan (Figure 2.17). The annual rate is seen to be quite erratic from 1900 through 1940 or 1945. Since that time, the rate has been stable in terms of year to year variation as well as trendline. Michigan's rate of death due to this cause has been below the national rate almost without exception throughout this century. In 1900, the Michigan rate was 120.3 while the national statistic was 202.1. The peak year for both was 1917 when the United States and the Michigan rate were 588.5 and 439.0 respectively. Michigan registered the lowest rate of the century in 1974 (18.7). In 1954, the influenza and pneumonia death rate for the country was the lowest in this century at 25.5. The national rate in 1975 was 26.1, about 31 percent above the Michigan rate of 19.9.

FIGURE 2.16—Influenza and Pneumonia Death Rates by Age and Sex, Michigan Residents, 1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

FIGURE 2.17—Influenza and Pneumonia Death Rates, Michigan and United States Residents,¹ 1900-1975²



¹National rates are from death registration states for 1900-1932 and the United States for 1933-1975.

²Influenza and pneumonia death rates since 1900 are suitable for general comparison over time but detailed study (such as time series) requires special consideration. See Technical Notes.

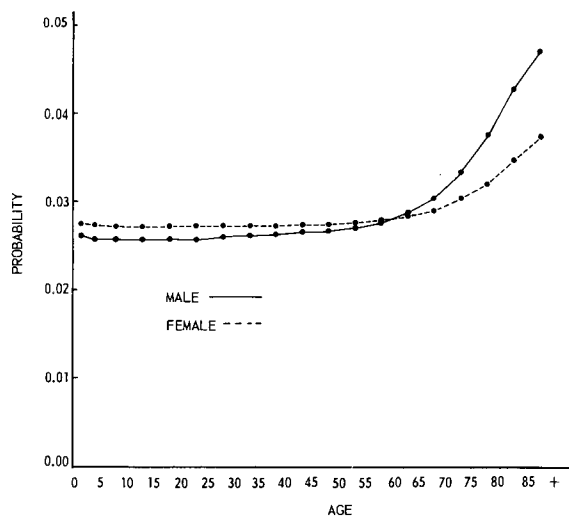
Pneumonia unspecified caused 1,047 or 57.4 percent of all influenza and pneumonia deaths in 1975. Another 21.8 percent of these deaths were due to bronchopneumonia unspecified. Combined with the 138 deaths due to pneumococcal pneumonia, the top three types of influenza and pneumonia deaths account for 86.8 percent of all such deaths. Influenza was directly involved in 7.4 percent of all influenza and pneumonia deaths in 1975, compared to 3.7 percent in 1974.

TABLE 2.20—Influenza and Pneumonia Deaths by Detailed Cause, Michigan Residents, 1975

ICDA LIST NO.	CAUSE OF DEATH	NO.	PERCENT
486	Pneumonia Unspecified	1,047	57.4
485	Bronchopneumonia Unspecified	397	21.8
481	Pneumococcal Pneumonia	138	7.6
471	Influenza with Pneumonia	71	3.9
470	Influenza Unqualified	53	2.9
482	Other Bacterial Pneumonia	44	2.4
480	Viral Pneumonia	44	2.4
484	Acute Interstitial Pneumonia	19	1.0
472	Influenza with Other Respiratory Manifestations	9	0.5
473	Influenza with Digestive Manifestations	2	0.1
483	Pneumonia Due to Other Specified Organisms	1	0.1
	TOTAL	1,825	100.1

The likelihood of eventual death being caused by influenza and pneumonia is a stable 0.027 for females from birth to age 50. Male chances are 0.026 through age 40, and 0.027 through 55. The calculated probabilities for each sex begin a slow increase at these ages, with male chances rising more rapidly than those for females. By ages 85 and over, the chances of eventually dying from influenza and pneumonia are 0.047 for males and 0.038 for females, based on the Michigan mortality experience of 1973-1975 (Figure 2.18).

FIGURE 2.18—Probability of Eventually Dying from Influenza and Pneumonia by Age and Sex Michigan Residents, 1973-1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

DIABETES MELLITUS

In 1975, diabetes mellitus caused the death of 1,819 Michigan residents. Deaths to females amounted to 1,059 or about 58 percent of all diabetes mellitus deaths. There were 760 male deaths in 1975.

The median age at death for persons dying from diabetes mellitus was 73 years (Table 2.21), just above the median for all deaths (70 Years). Males dying from this disease were slightly younger than females for both the white and black races. The white male median age at death was 5 years less than that of white females, while the black male median was 3 years less than that of their female counterparts. The white male median was 71 years compared to 64 for black males. The white female statistic was 76 years and the black female median age at death was 67 years.

The diabetes mellitus death rate was 19.9 in 1975 (Table 2.22). The rate for female deaths due to this cause was 22.7, or 134 percent of the 16.9 rate for males. Age-specific diabetes death rates for persons under age 65 are similar for both sexes. While male rates are above those for females seven of eight times for the age intervals calculated prior to age 65, the differences are slight. Female rates are above those of males from age interval 65-69 through to the last age group. In these last five age groups, female rates range from 6.5 percent above male rates for age group 65-69, to 14.9 percent, for age group 75-79.

Figure 2.19 contains a graphic display of the age-specific mortality rates in Table 2.22. This graph re-

TABLE 2.22—Diabetes Mellitus Death Rates by Age and Sex, Michigan Residents, 1975

AGE	TOTAL	MALE	FEMALE
All Ages.....	19.9	16.9	22.7
0-4 Years.....	*	*	*
5-9 Years.....	*	*	*
10-14 Years.....	*	*	*
15-19 Years.....	*	*	*
20-24 Years.....	*	*	*
25-29 Years.....	1.8	1.9	1.8
30-34 Years.....	1.6	1.6	1.7
35-39 Years.....	3.6	4.2	2.9
40-44 Years.....	4.2	4.8	3.5
45-49 Years.....	8.7	10.9	6.6
50-54 Years.....	15.5	16.0	14.9
55-59 Years.....	25.1	27.3	23.1
60-64 Years.....	51.0	52.8	49.5
65-69 Years.....	79.8	77.1	82.1
70-74 Years.....	126.1	118.2	132.3
75-79 Years.....	214.7	197.3	226.6
80-84 Years.....	215.6	203.8	222.7
85 and Over.....	335.0	338.0	363.9

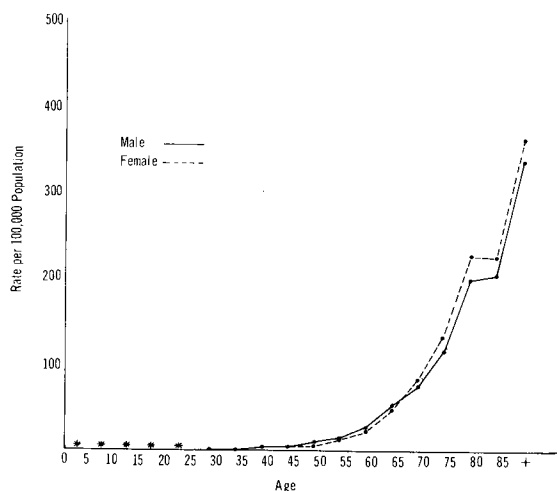
veals the strong association between diabetes caused death and advancing age. Prior to age 45 the death rates associated to this cause are relatively low. From the 45-49 year age group to the 85 and over age group, rates for 1975 show an almost linear pattern of increase between each interval.

The rate of death due to diabetes mellitus for males aged 65-69 is 7 times higher than the similar rate for males 45-49. The female diabetes mellitus rate for ages 65-69 is 12 times higher than for 45-49 year old women. The age-specific mortality rates of both sexes for the 85 and over interval are 4.4 times the rates

TABLE 2.21—Deaths Due to Diabetes Mellitus by Age, Race, and Sex, Michigan Residents, 1975

AGE	ALL RACES			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year..	—	—	—	—	—	—	—	—	—	—	—	—
1-4 Years....	—	—	—	—	—	—	—	—	—	—	—	—
5-9 Years....	2	—	2	1	—	1	1	—	1	—	—	—
10-14 Years..	1	1	—	1	1	—	—	—	—	—	—	—
15-19 Years..	2	1	1	2	1	1	—	—	—	—	—	—
20-24 Years..	7	2	5	4	—	4	3	2	1	—	—	—
25-29 Years..	11	5	6	11	5	6	—	—	—	—	—	—
30-34 Years..	10	5	5	8	4	4	2	1	1	—	—	—
35-39 Years..	18	11	7	12	8	4	6	3	3	—	—	—
40-44 Years..	19	11	8	12	7	5	7	4	3	—	—	—
45-49 Years..	45	28	17	36	23	13	9	5	4	—	—	—
50-54 Years..	80	40	40	61	29	32	19	11	8	—	—	—
55-59 Years..	114	59	55	87	50	37	27	9	18	—	—	—
60-64 Years..	191	94	97	164	81	83	27	13	14	—	—	—
65-69 Years..	228	102	126	195	86	109	32	15	17	1	1	—
70-74 Years..	259	107	152	227	98	129	31	9	22	1	—	1
75-79 Years..	314	117	197	283	105	178	28	11	17	3	1	2
80-84 Years..	254	90	164	240	87	153	13	2	11	1	1	—
85-90 Years..	191	65	126	184	60	124	7	5	2	—	—	—
90 and Over..	73	22	51	68	21	47	5	1	4	—	—	—
Not Stated...	—	—	—	—	—	—	—	—	—	—	—	—
Total.....	1,819	760	1,059	1,596	666	930	217	91	126	6	3	3
Median Age..	73	70	75	74	71	76	66	64	67	*	*	*

FIGURE 2.19—Diabetes Mellitus Death Rates by Age and Sex, Michigan Residents, 1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

observed for 65-69 year olds.

Diabetes mellitus death rates in Michigan rose steadily from a low of 9.3 in 1900 to a peak of 29.7 in 1949 (Figure 2.20). Adoption of the 6th revision of the International Classification of Diseases in 1950 caused a significant change in Michigan diabetes death rates. Over the last twenty-six years the Michigan rate has ranged from 19.2 in 1956 to 26.5 in 1968. The national ranges in this century are from 11.0 in 1900 to 18.3 in 1948 (the year of the adoption of the 6th revision nationally was 1949), and 15.5 in 1955 to 19.2 in 1968.

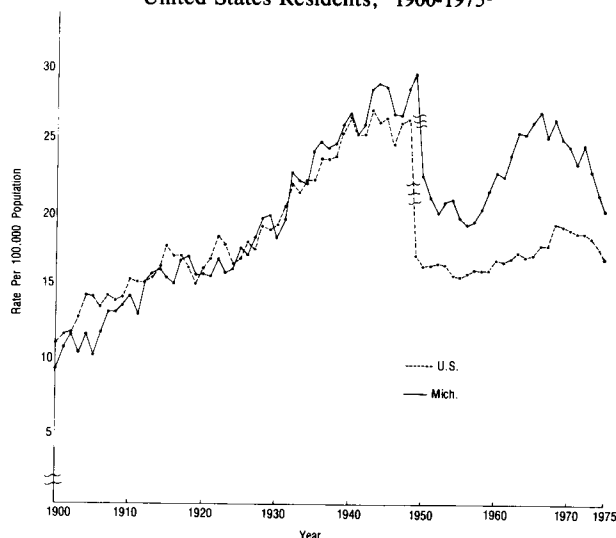
The national diabetes mellitus death rate was generally above the Michigan rate for the first 25 or so years in this century. Michigan's rate of death to this cause gradually surpassed national rates over the next 15 years. Since 1942, the Michigan rate has been above that of the nation. Through the 1960's the differential between Michigan and the United States figures became quite large. This has only recently started to diminish. In 1975 the United States diabetes death rate was 16.5. Michigan's rate was 21 percent above that statistic at 19.9.

In 1975, 92.1 percent of all diabetes mellitus deaths did not involve acidosis or coma. This is 0.6 percent above the same percentage in 1974. There were 14.3 deaths in 1975, where acidosis or coma was mentioned with the disease. These are deaths where a diabetic crisis was involved (Table 2.23).

TABLE 2.23—Diabetes Mellitus Deaths by Presence of Acidosis or Coma, Michigan Residents, 1975

ICDA LIST NO.	CAUSE	NO.	PERCENT
250.0	With Mention of Acidosis or Coma	143	7.9
250.9	Without Mention of Acidosis or Coma	1,676	92.1
	TOTAL	1,819	100.0

FIGURE 2.20—Diabetes Mellitus Death Rates, Michigan and United States Residents,¹ 1900-1975²

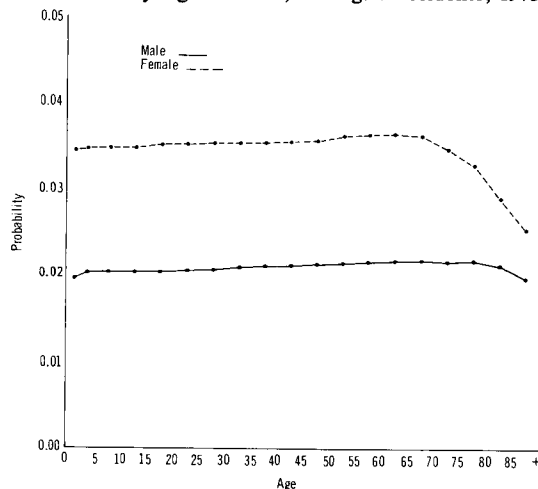


¹National rates are from death registration states for 1900-1932 and the United States for 1933-1975

²The comparability of diabetes mellitus death rates from the 5th revision of the ICDA coding procedures with those of the 6th revision is considered weak. The comparability ratio is estimated to be .55. The 6th revision was adopted in 1949 for national cause-of-death statistics and in 1950 for Michigan statistics. The comparability of diabetes mellitus disease death rates through the 6th, 7th, and 8th revisions (1949 to date nationally and 1950 to date in Michigan) is high. General comparison before and after these dates of adoption can be made but detailed study requires special consideration. See Technical Notes.

At birth, the probability of eventual death due to diabetes mellitus is 0.020 for males and 0.034 for females (Figure 2.21). Death from diabetes mellitus has a pattern of gradually increasing probability from birth to age 65 for males and to age 60 for females. The maximum probability of dying from diabetes occurs in the age group 65-69 for males and age group 60-64 for females. Beyond these ages both sexes face decreasing chances of dying from diabetes mellitus and are less likely to die from this cause at ages 85 and over than when they were born. The female probabilities are above those of males, throughout life, based on mortality data from Michigan in the years 1973 through 1975.

FIGURE 2.21—Probability of Eventually Dying from Diabetes Mellitus by Age and Sex, Michigan Residents, 1973-1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

CIRRHOSIS OF THE LIVER

The sixth leading cause of Michigan resident deaths in 1975 was cirrhosis of the liver. This condition caused 1,574 deaths. There were 1,041 male and 533 female cirrhosis of the liver deaths in 1975.

The median age at death for deaths due to cirrhosis of the liver was 15 years below the median of deaths from all causes (Table 2.24). There was little difference between the median ages of each sex. The distribution of death frequencies across age groups was similar for both white males and females with median ages of 58 and 57 respectively. Black male and female deaths had identical 47 year median ages.

The cirrhosis of the liver death rates presented in Table 2.25 reveal a greater frequency of male over female deaths. The overall male rate of 23.1 is more than double the female incidence of 11.4. The age-specific rates for males dying from cirrhosis of the liver are more than twice the female rates for 10 of the 13 age groups calculated.

The differential between male and female mortality due to cirrhosis of the liver in 1975 is quite large, as can be seen in Figure 2.22. Also apparent from this graph is the relative infrequency of death from this cause prior to age 35. Mortality rates rise with age to a peak rate at ages 60-64, whereupon the rates drop off. By ages 85 and over, the mortality rate for both sexes drop substantially.

Cirrhosis of the liver was the cause of death for 7.9 of every 100,000 Michigan residents in 1900. Mortality rates specific to this cause of death rose to a peak

TABLE 2.25—Cirrhosis of the Liver Death Rates by Age and Sex, Michigan Residents, 1975

AGE	TOTAL	MALE	FEMALE
All Ages.....	17.2	23.1	11.4
0-4 Years.....	*	*	*
5-9 Years.....	*	*	*
10-14 Years.....	*	*	*
15-19 Years.....	*	*	*
20-24 Years.....	*	*	*
25-29 Years.....	4.5	7.2	2.3
30-34 Years.....	7.8	10.7	4.6
35-39 Years.....	13.8	18.9	8.3
40-44 Years.....	29.7	36.4	22.9
45-49 Years.....	43.9	55.2	32.6
50-54 Years.....	44.6	61.7	28.7
55-59 Years.....	53.1	73.1	34.9
60-64 Years.....	63.1	92.6	36.2
65-69 Years.....	56.3	82.4	33.9
70-74 Years.....	45.3	71.8	24.4
75-79 Years.....	36.9	54.0	25.3
80-84 Years.....	25.5	52.1	9.5
85 and Over.....	12.1	7.8	14.4

of 13.1 in 1916. The relative frequency of cirrhosis of the liver then fell sharply, dropping to 7.4 in 1919. The Michigan rates held stable from this point until 1936 when they began increasing slowly. A peak of 12.4 was reached by 1948.

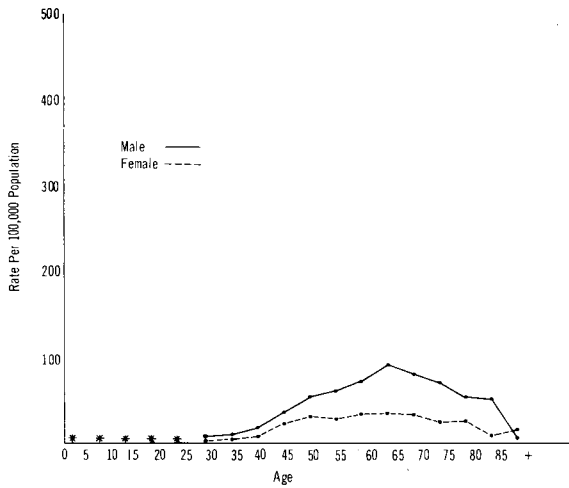
The statistics shown in Figure 2.23 after 1948 are not comparable with preceding years, due to a revision of cause of death determination. By isolating the period 1949 to 1975, this problem can be ignored. A trend of increase can be seen through this most recent period.

The United States rates of death due to cirrhosis of the liver were well above Michigan rates early in this century. The highest national rate observed during

TABLE 2.24—Deaths Due to Cirrhosis of the Liver by Age, Race, and Sex, Michigan Residents, 1975

AGE	ALL RACES			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year..	2	—	2	1	—	1	1	—	1	—	—	—
1-4 Years...	—	—	—	—	—	—	—	—	—	—	—	—
5-9 Years...	—	—	—	—	—	—	—	—	—	—	—	—
10-14 Years..	1	—	1	1	—	1	—	—	—	—	—	—
15-19 Years..	2	—	2	2	—	2	—	—	—	—	—	—
20-24 Years..	8	5	3	5	2	3	3	3	—	—	—	—
25-29 Years..	27	19	8	9	7	2	18	12	6	—	—	—
30-34 Years..	48	34	14	21	15	6	27	19	8	—	—	—
35-39 Years..	69	49	20	37	29	8	30	18	12	2	2	—
40-44 Years..	136	84	52	76	48	28	60	36	24	—	—	—
45-49 Years..	226	142	84	154	94	60	70	47	23	2	1	1
50-54 Years..	231	154	77	174	116	58	56	38	18	1	—	1
55-59 Years..	241	158	83	211	137	74	30	21	9	—	—	—
60-64 Years..	236	165	71	205	144	61	28	19	9	3	2	1
65-69 Years..	161	109	52	136	94	42	24	15	9	1	—	1
70-74 Years..	93	65	28	88	64	24	4	1	3	1	—	1
75-79 Years..	54	32	22	51	29	22	3	3	—	—	—	—
80-84 Years..	30	23	7	30	23	7	—	—	—	—	—	—
85-89 Years..	9	2	7	8	2	6	1	—	1	—	—	—
90 and Over..	—	—	—	—	—	—	—	—	—	—	—	—
Not Stated..	—	—	—	—	—	—	—	—	—	—	—	—
Total.....	1,574	1,041	533	1,209	804	405	355	232	123	10	5	5
Median Age..	55	56	55	57	58	57	47	47	47	*	*	*

FIGURE 2.22—Cirrhosis of the Liver Death Rates by Age and Sex, Michigan Residents, 1975¹

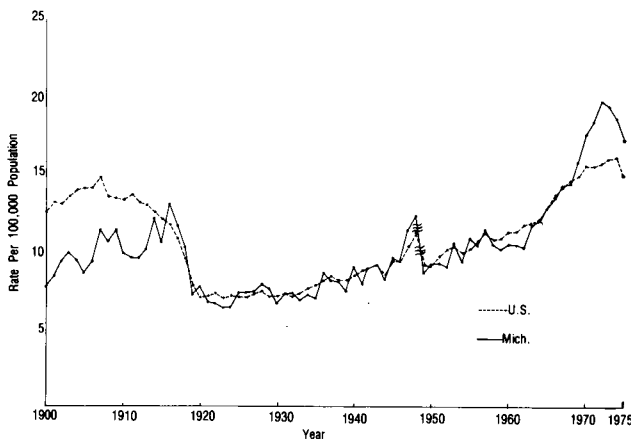


¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

the 1900-1948 period occurred in 1907. Michigan rates were consistently similar to national rates from about 1916 through 1948.

Following a revision of ICDA coding procedures in 1949, the rates for both Michigan and the nation dropped slightly. In 1969, the Michigan rate rose above the national cause-specific rate for that year. From 1969 through 1975, cirrhosis of the liver death rates of Michigan residents have been well above corresponding national rates. In 1975, the Michigan rate was 17.2 while the national rate was 14.8. Since 1972, the rate in Michigan has dropped substantially, while the national rate has held fairly stable.

FIGURE 2.23—Cirrhosis of the Liver Death Rates, Michigan and United States Residents,¹ 1900-1975²



¹National rates are from death registration states for 1900-1932 and the United States for 1932-1975.

²The comparability of cirrhosis of the liver death rates from the 5th revision of the ICDA coding procedures with those of the 6th revision is considered weak. The comparability ratio is estimated to be .80. The 6th revision was adopted in 1949 for national cause-of-death statistics and in 1950 for Michigan statistics. The comparability of cirrhosis of the liver death rates through the 6th, 7th, and 8th revisions (1949 to date nationally and 1950 to date in Michigan) is high. General comparison before and after these dates of adoption can be made but detailed study require special consideration. See Technical Notes.

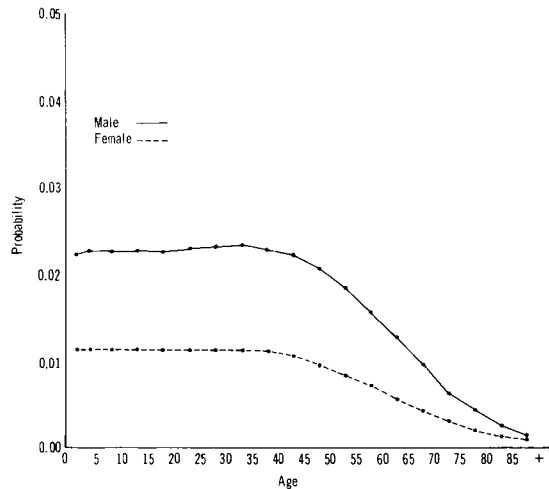
The contributing factor of alcoholism was mentioned on 495 or 31.4 percent of the cirrhosis of the liver deaths in 1975. There were 1,079 deaths due to this cause with no mention of alcoholism (Table 2.26).

TABLE 2.26—Deaths Due to Cirrhosis of the Liver by Mention of Alcoholism, Michigan Residents, 1975

ICDA LIST NO.	CAUSE OF DEATH	NO.	PERCENT
571.0	With Mention of Alcoholism	495	31.4
571.8, 571.9	Without Mention of Alcoholism	1,079	68.6
	TOTAL	1,574	100.0

The probability of eventually dying from cirrhosis of the liver, based upon Michigan mortality data from the years 1973-1975, is displayed in Figure 2.24 by age and sex. This graph reveals that the risk associated with this condition is much greater for males than females. At birth males demonstrate a probability of 0.022 as compared to 0.011 for females. Death from cirrhosis of the liver displays a constant level of risk for both sexes from birth to ages 40 to 45, whereupon, the threat of death due to this condition diminishes with advancing age. By age 85, the risk indicated by mortality data is 0.001 for both sexes.

FIGURE 2.24—Probability of Eventually Dying from Cirrhosis of the Liver by Age and Sex, Michigan Residents, 1973-1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

HOMICIDE

There were 1,158 deaths as the result of homicide among Michigan residents in 1975. Of these 901 or 78 percent were male deaths compared to 257 female homicides. Over 63 percent of all homicides were to blacks. The 143 black female deaths constituted 56 percent of all female homicide victims. Black male deaths comprised 66 percent of all male deaths attributed to homicide.

The median age at death among homicide victims in 1975 was only 29 years. White males were 1 year older than white females at the median with statistics of 30 and 29 years respectively. Black male homicide victims were older than black females by 2 years at the median (Table 2.27).

There were 12.6 homicide deaths for every 100,000 Michigan residents in 1975 (Table 2.28). The overall male rate of death due to homicide was 20.0 or 3.6 times the female rate of 5.5. Age-specific homicide rates for males were above those for females at all ages in 1975. Major differences between male and female rates are first evident in the age interval 15-19 where the male rate is 3 times that for females. This differential is equaled or exceeded in succeeding age groups through 60-64 years.

The disparity between the male and female age-specific rates is also evident from Figure 2.25. The 1975 rates were not calculated for the age interval 5-9. The female rate peaks in age group 20-24 then declines to the 60-64 year age group. At that point it rises and

TABLE 2.28—Homicide Death Rates by Age and Sex, Michigan Residents, 1975

AGE	TOTAL	MALE	FEMALE
All Ages.....	12.6	20.0	5.5
0-4 Years.....	3.7	4.4	3.0
5-9 Years.....	*	*	*
10-14 Years.....	1.9	2.3	1.5
15-19 Years.....	12.7	19.2	5.9
20-24 Years.....	28.5	43.9	12.9
25-29 Years.....	32.8	62.4	10.2
30-34 Years.....	22.3	34.5	9.6
35-39 Years.....	17.0	27.0	6.2
40-44 Years.....	17.7	27.3	7.9
45-49 Years.....	15.0	22.2	7.8
50-54 Years.....	8.7	15.6	2.2
55-59 Years.....	9.9	16.7	3.8
60-64 Years.....	6.7	11.8	2.0
65-69 Years.....	5.2	8.3	2.6
70-74 Years.....	7.8	13.3	3.5
75-79 Years.....	5.5	8.4	3.5
80-84 Years.....	5.9	11.3	2.7
85 and Over.....	8.1	11.7	6.2

peaks again in the age group 85 and over. Male rates rise markedly from ages 10-14 to 25-29. The rate drops sharply for ages 30-34 then declines through age group 65-69. Male rates for all persons age 65 years and over are relatively similar.

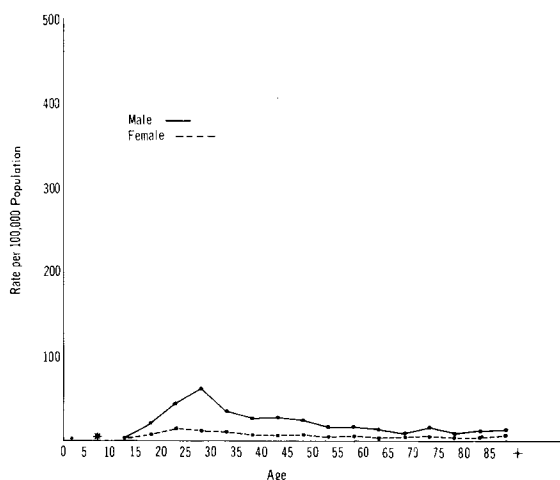
Homicide in Michigan was negligible in 1900 when compared to today. The rate at the turn of the century was 0.6, the lowest rate observed over the 76 years from 1900 to 1975. The highest rate for this period was 13.6, observed in 1974.

The homicide rate in Michigan rose in the early part of this century to a peak of 10.6 in 1926 whereupon

TABLE 2.27—Deaths Due to Homicide by Age, Race, and Sex, Michigan Residents, 1975

AGE	ALL RACES			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year..	11	5	6	5	3	2	6	2	4	—	—	—
1-4 Years....	17	12	5	11	8	3	6	4	2	—	—	—
5-9 Years....	5	2	3	1	1	—	4	1	3	—	—	—
10-14 Years..	18	11	7	11	7	4	7	4	3	—	—	—
15-19 Years..	123	95	28	51	39	12	72	56	16	—	—	—
20-24 Years..	234	181	53	68	49	19	165	131	34	1	1	—
25-29 Years..	199	164	35	60	44	16	139	120	19	—	—	—
30-34 Years..	138	109	29	42	32	10	96	77	19	—	—	—
35-39 Years..	85	70	15	29	22	7	56	48	8	—	—	—
40-44 Years..	81	63	18	25	20	5	55	43	12	1	—	1
45-49 Years..	77	57	20	28	19	9	49	38	11	—	—	—
50-54 Years..	45	39	6	16	15	1	28	24	4	1	—	1
55-59 Years..	45	36	9	21	14	7	23	21	2	1	1	—
60-64 Years..	25	21	4	14	11	3	11	10	1	—	—	—
65-69 Years..	15	11	4	11	7	4	4	4	—	—	—	—
70-74 Years..	16	12	4	8	5	3	7	6	1	1	1	—
75-79 Years..	8	5	3	6	3	3	2	2	—	—	—	—
80-84 Years..	7	5	2	6	5	1	1	—	1	—	—	—
85-89 Years..	4	2	2	3	2	1	1	—	1	—	—	—
90 and Over..	2	1	1	1	1	—	1	—	1	—	—	—
Not Stated..	3	—	3	2	—	2	1	—	1	—	—	—
Total.....	1,158	901	257	419	307	112	734	591	143	5	3	2
Median Age..	29	29	28	30	30	29	28	29	27	*	*	*

FIGURE 2.25—Homicide Death Rates by Age and Sex, Michigan Residents, 1975¹

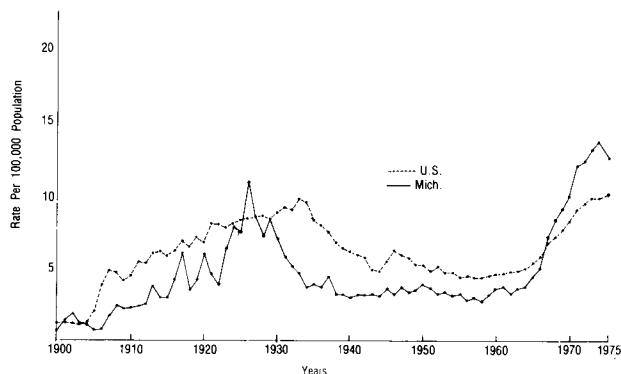


¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

it then declined. It was relatively stable from 1934 through 1964. In the years 1965 through 1974 the Michigan rate rose from 3.7 homicides per 100,000 in 1965 to the century high mark of 13.6 reached in 1974. The statistic for 1975 of 12.6 is the first decline since 1962.

From 1900 to 1964, the homicide rate in Michigan was above the national rate only 5 times. In the last nine years from 1967-1975 the Michigan rate has been higher than that observed nationally, without exception. In 1975, the Michigan rate of death due to homicide was 26 percent above the 10.0 rate observed nationally (Figure 2.26).

FIGURE 2.26—Homicide Death Rates, Michigan and United States Residents,¹ 1900-1975²



¹National rates are from death registration states for 1900-1932 and the United States for 1933-1975.

²Homicide death rates since 1900 are suitable for general comparison over time but detailed study (such as time series) requires special consideration. See Technical Notes.

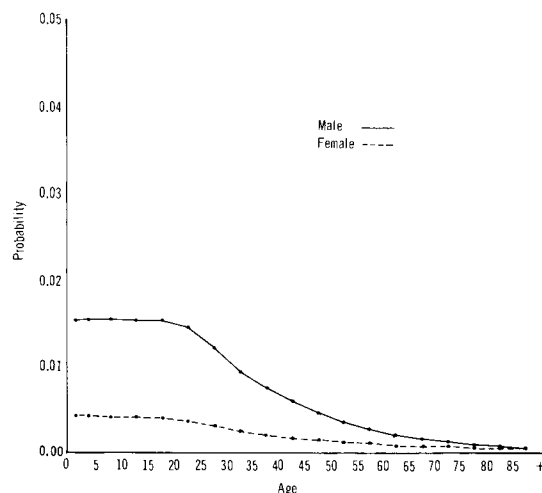
The methods used in 1975 for the commission of homicide are listed in Table 2.29. Assault by firearms and explosives resulted in 816 deaths. This was the most frequent type of homicide. Next most frequent was assault by cutting and piercing instruments. These two methods when combined constitute 84.6 percent of all methods. Another 2.1 percent of these deaths were the result of legal interventions in 1975.

TABLE 2.29—Deaths Due to Homicide by Detailed Cause, Michigan Residents, 1975

ICDA LIST NO.	CAUSE OF DEATH	NO.	PERCENT
965	Assault by Firearms and Explosives	816	70.5
966	Assault by Cutting and Piercing Instruments	163	14.1
968	Assault by Other Unspecified Means	105	9.1
963	Assault by Hanging and Strangulation	45	3.9
970	Injury Due to Legal Interventions by Firearms	24	2.1
964	Assault by Submersion	4	0.3
960	Fight, Brawl or Rape	1	0.1
	TOTAL	1,158	100.1

With homicide most prevalent at younger ages, the probability of eventual death due to homicide is as high at birth as at any other age, according to Michigan death data by cause in 1973-1975 (Figure 2.27). The chance of a male eventually dying from this cause is 0.015 at birth. The risk for females is 0.004. The risk for both sexes stays about at these levels until the late 20's. With advancing age, the probability of eventually dying from homicide declines, becoming negligible for ages over 85.

FIGURE 2.27—Probability of Eventually Dying from Homicide, by Age and Sex, Michigan Residents, 1973-1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

SUICIDE

There were nearly as many suicides as homicides in Michigan in 1975. There were a total of 1,136 suicides making suicide the 9th leading cause of death. Deaths resulting from suicide were 73 percent male, with 834 male and 302 female deaths in 1975. This is similar to the 78 percent male deaths observed for homicides. There is no similarity to homicide associated with racial proportions as 90 percent of all suicide deaths were to white persons.

Approximately 50 percent of all suicide deaths were under the age of 39. The male median age of 36 was 7 years below that for females. White males and females had medians of 38 and 45 respectively. The 50th percentile of the black male age distribution was 29 and for black females 35 (Table 2.30).

The suicide death rate in 1975 was 12.4. Suicide by males had a relative frequency nearly triple that of females with rates of 18.5 and 6.5 respectively. Age-specific rates were higher for males than females across all age groups (Table 2.31). The greatest differential between males and females was observed in the age intervals 75-79, 80-84, and 85 and over.

Suicide first becomes prevalent between the ages of 15 and 19. The age-specific mortality rates for suicide are displayed graphically in Figure 2.28. In 1975, male

TABLE 2.31—Suicide Death Rates by Age and Sex, Michigan Residents, 1975

AGE	TOTAL	MALE	FEMALE
All Ages.....	12.4	18.5	6.5
0-4 Years.....	*	*	*
5-9 Years.....	*	*	*
10-14 Years.....	*	*	*
15-19 Years.....	9.2	16.8	1.3
20-24 Years.....	19.2	31.5	6.8
25-29 Years.....	22.0	36.1	11.1
30-34 Years.....	17.1	26.2	7.6
35-39 Years.....	16.0	20.0	11.6
40-44 Years.....	21.6	26.9	16.3
45-49 Years.....	16.7	25.3	8.1
50-54 Years.....	18.0	23.2	13.1
55-59 Years.....	19.8	26.8	13.4
60-64 Years.....	17.6	24.1	11.7
65-69 Years.....	16.1	23.4	9.8
70-74 Years.....	15.1	23.2	8.7
75-79 Years.....	19.8	43.9	3.5
80-84 Years.....	8.5	18.1	2.7
85 and Over.....	18.8	50.5	2.1

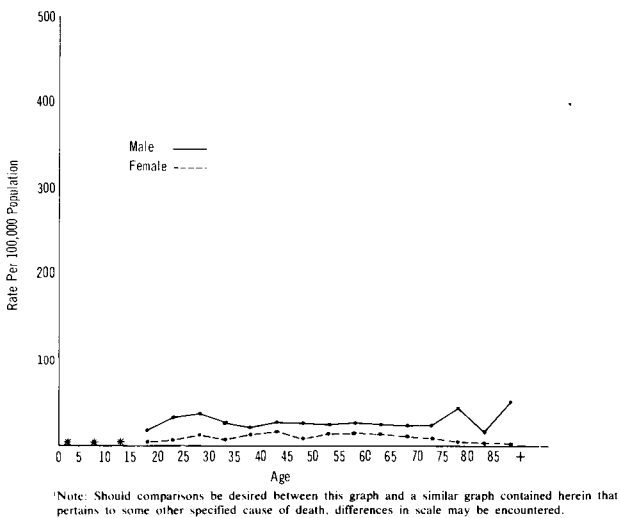
suicides were a more frequent cause of death among men in their twenties and at ages over 75. The highest female rate was for the age group 40-44.

The suicide death rates of Michigan and the United States followed a cyclical path from 1900 to 1944. There were two complete cycles of rising then falling rates in that time period. The rates since 1943 held fairly stable for several years then began a slow in-

TABLE 2.30—Deaths Due to Suicide by Age, Race, and Sex, Michigan Residents, 1975

AGE	ALL RACES			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year..	—	—	—	—	—	—	—	—	—	—	—	—
1-4 Years....	—	—	—	—	—	—	—	—	—	—	—	—
5-9 Years....	—	—	—	—	—	—	—	—	—	—	—	—
10-14 Years..	6	6	—	6	6	—	—	—	—	—	—	—
15-19 Years..	89	83	6	76	71	5	13	12	1	—	—	—
20-24 Years..	158	130	28	135	112	23	22	18	4	1	—	1
25-29 Years..	133	95	38	114	82	32	18	13	5	1	—	1
30-34 Years..	106	83	23	90	69	21	16	14	2	—	—	—
35-39 Years..	80	52	28	72	47	25	8	5	3	—	—	—
40-44 Years..	99	62	37	95	60	35	4	2	2	—	—	—
45-49 Years..	86	65	21	82	61	21	4	4	—	—	—	—
50-54 Years..	93	58	35	84	52	32	9	6	3	—	—	—
55-59 Years..	90	58	32	89	57	32	1	1	—	—	—	—
60-64 Years..	66	43	23	61	42	19	5	1	4	—	—	—
65-69 Years..	46	31	15	44	30	14	2	1	1	—	—	—
70-74 Years..	31	21	10	29	19	10	2	2	—	—	—	—
75-79 Years..	29	26	3	28	25	3	1	1	—	—	—	—
80-84 Years..	10	8	2	9	7	2	1	1	—	—	—	—
85-89 Years..	11	11	—	11	11	—	—	—	—	—	—	—
90 and Over..	3	2	1	3	2	1	—	—	—	—	—	—
Not Stated...	—	—	—	—	—	—	—	—	—	—	—	—
Total.....	1,136	834	302	1,028	753	275	106	81	25	2	—	2
Median Age..	39	36	43	41	38	45	30	29	35	*	*	*

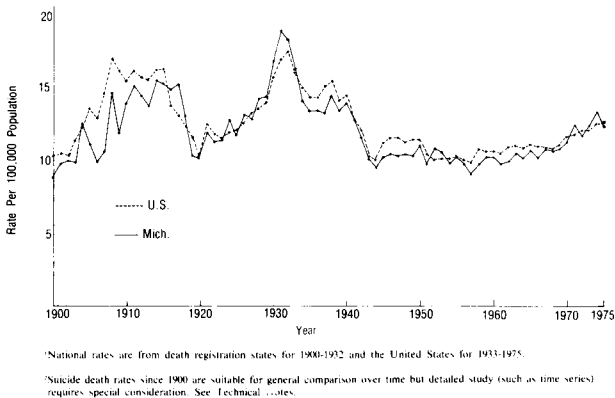
FIGURE 2.28—Suicide Death Rates by Age and Sex, Michigan Residents, 1975¹



crease in both Michigan and the United States. There has been strong similarity in both the trend and extent of Michigan and national rates in this century (Figure 2.29).

In 1900 the Michigan rate was 8.8, the lowest rate observed. The highest Michigan rate was 18.8 in 1931. National high and low rates were 17.4 in 1932 and 10.0 in 1944 and 1952. In 1975 the United States rate was 12.7, just above the Michigan rate of 12.4. This national rate is the highest since 1941, while this state rate was exceeded in 1974 and equaled in 1971.

FIGURE 2.29—Suicide Death Rates, Michigan and United States Residents,¹ 1900-1975²



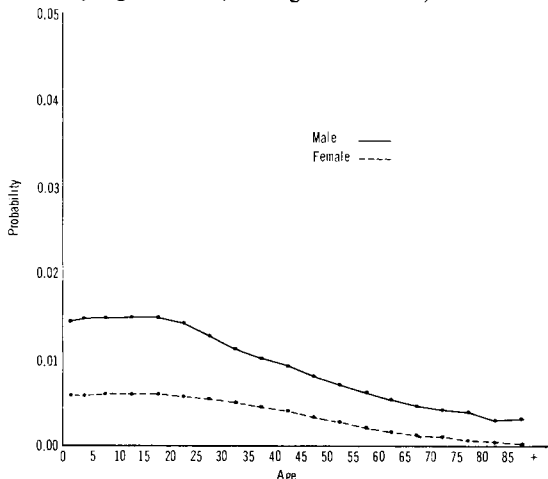
Suicides in Michigan were predominantly the result of one of four types of self-inflicted injury. Self-inflicted injury by firearms and explosives caused 570 deaths in 1975. Self-inflicted poisoning by non-domestic gases resulted in 190 deaths. Hanging, strangulation and suffocation resulted in another 173 deaths. Combined with 134 deaths due to poisoning by solids and liquids, these four types of suicide accounted for 93.9 percent of all suicidal deaths to Michigan residents in 1975 (Table 2.32).

TABLE 2.32—Deaths Due to Suicide by Method, Michigan Residents, 1975

ICDA LIST NO.	CAUSE OF DEATH	NO.	PERCENT
955	Suicide and Self-inflicted Injury by Firearms and Explosives	570	50.2
952	Suicide and Self-Inflicted Poisoning by Other Gases	190	16.7
953	Suicide and Self-Inflicted Injury by Hanging, Strangulation and Suffocation	173	15.2
950	Suicide and Self-Inflicted Poisoning by Solid or Liquid Substances	134	11.8
954	Suicide and Self-Inflicted Injury by Submersion (Drowning)	22	1.9
957	Suicide and Self-Inflicted Injury by Jumping From High Place	22	1.9
958	Suicide and Self-Inflicted Injury by Other and Unspecified Means	12	1.1
956	Suicide and Self-Inflicted Injury by Cutting and Piercing Instruments	11	1.0
951	Suicide and Self-Inflicted Poisoning by Gases in Domestic Use	1	0.1
959	Late Effect of Self-Inflicted Injury	1	0.1
	TOTAL	1,136	100.0

Using the Michigan mortality experience of 1973 through 1975, the chance of a male eventually dying from suicide is 0.015 at birth. The risk for females is 0.006. These probabilities hold relatively constant with advancing age, tapering slowly after age 25. By age 85, the probability of eventually dying from suicide is 0.003 for males and less than 0.001 for females (Figure 2.30).

FIGURE 2.30—Probability of Eventually Dying from Suicide, by Age and Sex, Michigan Residents, 1973-1975¹



ARTERIOSCLEROSIS

There were a total of 1,119 Michigan resident deaths attributed to arteriosclerosis in 1975. This cause was the 10th leading cause of death in the state. There were 462 male and 657 female deaths. Only 46 of the 1,119 total deaths were nonwhite.

The majority of the arteriosclerosis deaths were at advanced ages. No deaths due to this cause were recorded for persons under the age of 35. The median age of all deaths resulting from this condition was 84. Male deaths were slightly younger than female deaths (Table 2.33). The center of the white male age distribution was 82 years, 3 years below that for white females. Black males dying from this disease in 1975 had a median age of 74. This statistic for black females was 78 or 4 years above that for black males.

Arteriosclerosis resulted in 12.2 deaths per 100,000 Michigan residents in 1975. Female deaths resulting from this condition were relatively more frequent than for males with rates of 14.1 and 10.3 respectively (Table 2.34). Age-specific arteriosclerosis death rates were generally higher for males than females. Only for ages 85 and over was the female rate substantially higher than that of males in 1975.

The arteriosclerosis deaths observed among Michigan residents in 1975 occurred with greatest frequency to those in the oldest age groups. The arteriosclerosis death rate rose sharply beyond age 75. About 7 of every 1,000 Michigan residents aged 85 and over died from this disease in 1975 (Figure 2.31).

TABLE 2.33—Deaths Due to Arteriosclerosis by Age, Race, and Sex, Michigan Residents, 1975

AGE	ALL RACES			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year..	—	—	—	—	—	—	—	—	—	—	—	—
1-4 Years...	—	—	—	—	—	—	—	—	—	—	—	—
5-9 Years...	—	—	—	—	—	—	—	—	—	—	—	—
10-14 Years..	—	—	—	—	—	—	—	—	—	—	—	—
15-19 Years..	—	—	—	—	—	—	—	—	—	—	—	—
20-24 Years..	—	—	—	—	—	—	—	—	—	—	—	—
25-29 Years..	—	—	—	—	—	—	—	—	—	—	—	—
30-34 Years..	—	—	—	—	—	—	—	—	—	—	—	—
35-39 Years..	—	—	—	—	—	—	—	—	—	—	—	—
40-44 Years..	4	4	—	2	2	—	2	2	—	—	—	—
45-49 Years..	3	1	2	2	—	2	1	1	—	—	—	—
50-54 Years..	2	2	—	2	2	—	—	—	—	—	—	—
55-59 Years..	10	7	3	7	5	2	3	2	1	—	—	—
60-64 Years..	23	15	8	22	14	8	1	1	—	—	—	—
65-69 Years..	47	30	17	42	28	14	4	2	2	1	—	1
70-74 Years..	95	54	41	84	49	35	11	5	6	—	—	—
75-79 Years..	151	61	90	146	59	87	5	2	3	—	—	—
80-84 Years..	264	111	153	255	105	150	8	6	2	1	—	1
85-89 Years..	263	96	167	257	95	162	6	1	5	—	—	—
90 and Over..	257	81	176	252	79	173	5	2	3	—	—	—
Not Stated...	—	—	—	—	—	—	—	—	—	—	—	—
Total.....	1,119	462	657	1,071	438	633	46	24	22	2	—	2
Median Age..	84	82	85	84	82	85	76	74	78	*	*	*

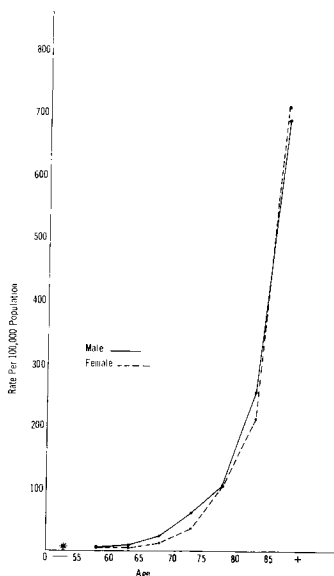
TABLE 2.34—Arteriosclerosis Death Rates by Age and Sex, Michigan Residents, 1975

AGE	TOTAL	MALE	FEMALE
All Ages.....	12.2	10.3	14.1
0-39 Years.....	**	**	**
40-44 Years.....	*	*	*
45-49 Years.....	*	*	*
50-54 Years.....	*	*	*
55-59 Years.....	2.2	3.2	1.3
60-64 Years.....	6.1	8.4	4.1
65-69 Years.....	16.4	22.7	11.1
70-74 Years.....	46.3	59.7	35.7
75-79 Years.....	103.3	102.9	103.5
80-84 Years.....	224.1	251.4	207.7
85 and Over.....	699.2	687.7	705.2

* There were no deaths under 40 years for this cause.

Inspection of arteriosclerosis death rates since 1900 is far less informative than the historical data of other causes of death. The classification of this disease has been significantly altered several times since the inception of the ICD codes (see footnotes of Figure 2.32). What can be seen in Figure 2.32 is a strong rise from 1900 to 1912. Michigan and national rates then stabilized and began declining through 1929. A coding revision then breaks comparability to 1930 rates. The arteriosclerosis death rates from 1930 to 1938 show no clear direction. The period 1939 to 1948 was again mixed. From 1949 to 1967 the national rates held fairly stable while Michigan rates dropped then returned to national levels. Since the last ICDA revision,

FIGURE 2.31—Arteriosclerosis Death Rates by Age and Sex, Michigan Residents, 1975¹

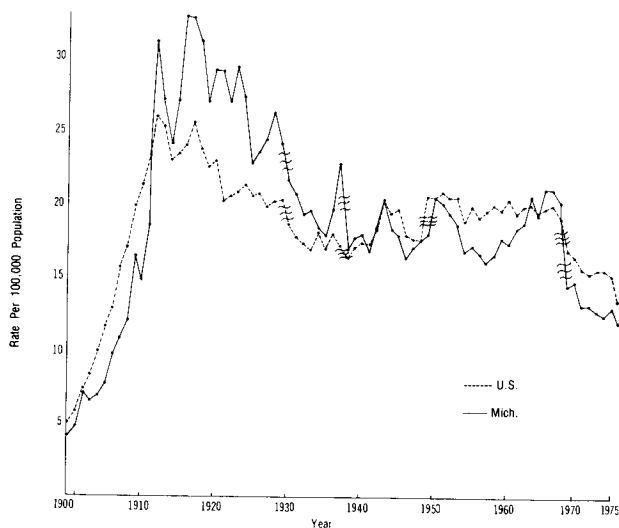


¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

the arteriosclerosis rates in Michigan have been below national rates. This covers the time period 1968-1975. In 1975, the national arteriosclerosis death rate was 13.6.

Virtually all arteriosclerosis deaths are reported as generalized and/or unspecified as to type. Only 8 of the 1,119 deaths were in other classifications (Table 2.35).

FIGURE 2.32—Arteriosclerosis Death Rates, Michigan and United States Residents,¹ 1900-1975²



¹National rates are from death registration states for 1900-1932 and the United States for 1933-1975.

²Although Michigan and United States arteriosclerosis death rates are comparable for any given year, changes in the International Classification of Diseases over the years have made historic comparison of these rates extremely difficult. Comparability breaks are especially pronounced in the 1930, 1939, 1949 and 1968 revisions. Analysis of arteriosclerosis death rates over the time period 1900-1975 requires detailed study to maintain comparability.

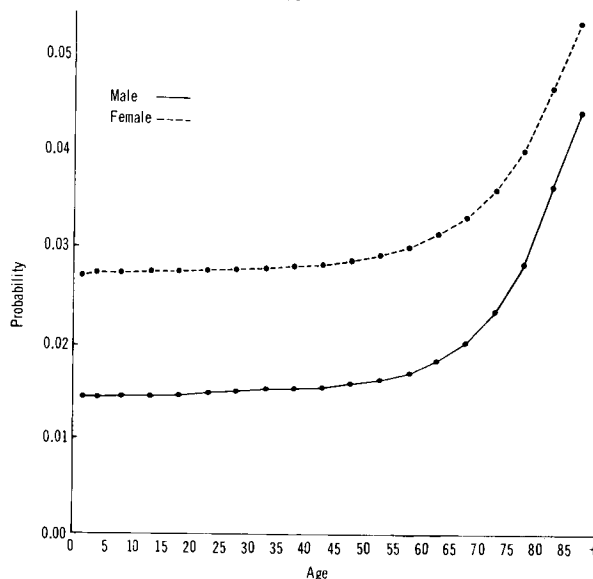
TABLE 2.35—Deaths Due to Arteriosclerosis by Detailed Cause, Michigan Residents, 1975

ICDA LIST NO.	CAUSE OF DEATH	NUMBER
440.0	Of Aorta	1
440.2	Of Arteries of the Extremities	6
440.3	Of Other Specific Arteries	1
440.9	Generalized and Unspecified	1,111
	TOTAL	1,119

The 1973 through 1975 mortality data for Michigan indicate that females are more likely to eventually die from arteriosclerosis than males. At birth, the likelihood for females is 0.027, while for males it is 0.014. This situation holds through all age intervals with probabilities rising beyond age 55. By age 85, the probability of eventually dying from arteriosclerosis is 0.054 for females and 0.044 for males (Figure 2.33).

As with heart disease (p. 38), arteriosclerosis mortality rates are generally higher for males than for females (Figure 2.31), yet females are more apt to eventually die from this condition (Figure 2.33). The relative frequency of male death over female death for deaths due to any cause is highlighted by this. It evidences that the greater frequency of arteriosclerosis deaths for males is overshadowed by the mortality disparity between the sexes for all other conditions.

FIGURE 2.33—Probability of Eventually Dying from Arteriosclerosis, by Age and Sex, Michigan Residents, 1973-1975¹



¹Note: Should comparisons be desired between this graph and a similar graph contained herein that pertains to some other specified cause of death, differences in scale may be encountered.

INFANT DEATH

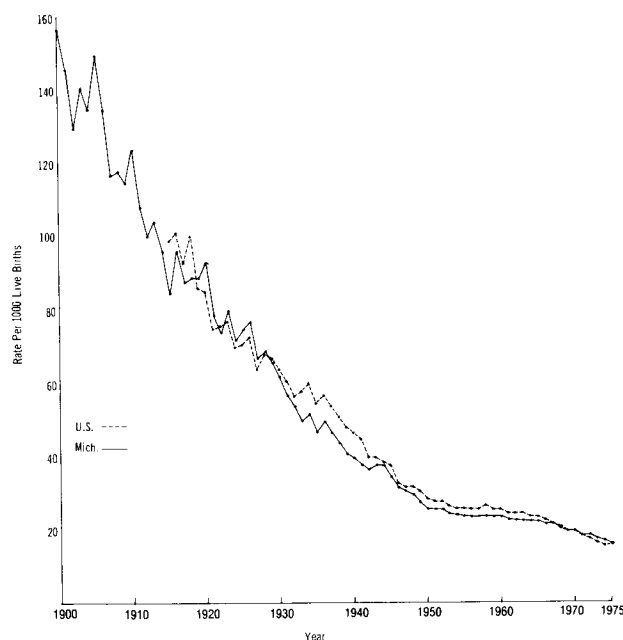
Of the 74,522 deaths occurring to Michigan residents in 1975, 2,205 occurred to individuals less than one year of age. The frequency of infant deaths in Michigan has declined by 44 percent since 1965 when there were 3,936 such deaths. The number of infant deaths has declined persistently since 1957 with the single exception of 1970. The 1975 frequency is 7.6 percent below the figure for 1974. Nationally, the number of infant deaths in 1975 was 50,525, 45.6 percent below 1965 and 3.0 percent less than 1974.

TABLE 2.36—Infant Deaths and Infant Mortality Rates, Michigan and United States Residents, 1965-1975

UNITED STATES		YEAR	MICHIGAN	
NO.	RATE		NO.	RATE
92,866	24.7	1965	3,936	23.6
85,516	23.7	1966	3,751	22.6
79,028	22.4	1967	3,595	22.1
76,263	21.8	1968	3,438	21.6
75,073	20.9	1969	3,356	20.2
74,667	20.0	1970	3,492	20.3
67,981	19.1	1971	3,157	19.5
60,182	18.5	1972	2,801	19.1
55,581	17.7	1973	2,561	18.1
52,776	16.7	1974	2,387	17.4
50,525	16.1	1975	2,205	16.5

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 about 16 of every 100 infants did not survive their first year. This rate fell below 100 by 1914 (96.8), to less than 70 by 1927 (67.7), then less than 50 by 1937 (47.8). During the 40's, the Michigan infant death declined from 40.6 in 1940 to 28.9 in 1949. Relative declines in rate slowed

FIGURE 2.34—Infant Mortality Rates, Michigan and United States Residents, 1900-1975



considerably at this point. It was not until 1971 that the rate dropped below 20 to 19.5. In 1975, the Michigan rate of infant mortality was 16.5 (Figure 2.34).

During the period 1915-1928, the state rate was above that for the United States 9 of 14 years. From 1929 through 1969, Michigan's infant death rate was consistently below national statistics. Since 1970, the infant mortality rate in Michigan has been slightly higher than the national rate. The national rate for 1975 is 16.1.

Infant mortality rates have historically been shown to vary with the age of the mother and the race of the child. Infant mortality rates by age of mother and race of child are provided in Table 2.37. These data

TABLE 2.37—Infant Deaths, Live Births, and Infant Mortality Rates by Age of Mother and Race of Infant, Michigan Resident Infants Born in 1974

AGE OF MOTHER	ALL INFANTS			WHITE INFANTS			NONWHITE INFANTS		
	INFANT DEATHS	LIVE BIRTHS	INFANT DEATH RATE	INFANT DEATHS	LIVE BIRTHS	INFANT DEATH RATE	INFANT DEATHS	LIVE BIRTHS	INFANT DEATH RATE
TOTAL.....	2,276	137,414	16.7	1,613	112,474	14.3	663	24,940	26.6
Under 15.....	19	501	37.9	4	185	21.6	15	316	47.5
15-19.....	610	25,977	23.5	371	18,265	20.3	239	7,712	31.0
20-24.....	763	49,975	15.3	556	41,497	13.4	207	8,478	24.4
25-29.....	545	40,215	13.6	429	35,050	12.2	116	5,165	22.5
30-39.....	318	19,608	16.2	237	16,599	14.3	81	3,009	26.9
40 or More.....	21	1,113	18.9	16	866	18.5	5	247	20.2
Unknown.....	—	25	000	—	12	000	—	13	000

TABLE 2.38—Infant Deaths and Mortality Rates by Infants Age at Death, Michigan Residents, 1970-1975

YEAR	AGE AT DEATH									
	TOTAL INFANT DEATHS		UNDER 1 DAY		1 to 6 DAYS		7 to 27 DAYS		28 to 365 DAYS	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
1970.....	3,492	20.34	1,367	7.96	1,095	6.38	221	1.29	809	4.71
1971.....	3,157	19.46	1,191	7.34	1,025	6.32	196	1.21	745	4.59
1972.....	2,801	19.07	1,024	6.97	906	6.17	185	1.26	686	4.67
1973.....	2,561	18.09	1,131	7.99	579	4.09	192	1.36	659	4.66
1974.....	2,387	17.37	940	6.84	569	4.14	225	1.64	653	4.75
1975.....	2,205	16.46	856	6.39	461	3.44	246	1.84	642	4.79

are from a file of merged live birth and infant death information. The rates presented are associated with Michigan residents born in 1974. Note that this matched file is approximately 96 percent complete and, therefore, the rates presented are understated.

Infant death rates display somewhat of a parabolic relationship with mother's age. These rates are highest for infants born to very young mothers. The infant mortality rates associated with mothers under 20 and particularly under 15 years are higher than any other age groupings. Mothers in their 20's and 30's display significantly lower infant mortality, with the lowest rates observed in the 25-29 age group. These rates rise with the age of the mother, increasing by about one third from 25-29 to the 40 years and over age group. Infant mortality for nonwhites is significantly above that for whites. For babies born in 1974, the nonwhite rate was 86 percent higher than that of whites. While the white rates followed the overall pattern of association to mother's age there were notable differences for nonwhites. Infant mortality to white infants of mothers under 15 was only slightly above that for mothers 15-19. Among nonwhite infants, those born to mothers under 15 experienced 53 percent greater mortality than those with mothers aged 15-19. While low mortality for nonwhite infants

is associated with the 25-29 age group, as is the case for whites, the increase in rate with mother's age is not as apparent. The infant death rate for nonwhites with mothers 40 or more is the lowest rate observed in 1974, and is the only rate that is not significantly above the corresponding rate for whites.

There are three subclassifications of infant death:

Death Under 1 Day 856 in 1975
 Deaths Under 7 Days 1,317 in 1975
 Deaths Under 28 Days 1,563 in 1975
 Total Infant Deaths
 (Under 1 Year) 2,205 in 1975

About 70 percent of all infant deaths occurred within the first month of life in 1975, with about 60 percent in the first week. These percentages were 71 and 77 percent in 1970. A review of Table 2.38 reveals that the 19.1 percent decline in infant mortality rate since 1970 stems from reductions in the rate of death under 7 days. The death rate for infants during their first day of life has declined 19.7 percent since 1970, while infant death rates for ages 1 through 6 days has declined by 46.1 percent over the last six years. In contrast, the rate of death for infants at ages 28 to 364 days has held stable and rates for infants aged 7 to 27 days have actually increased during this same

TABLE 2.39—Perinatal Deaths, Total Births, and Perinatal Death Rates by Age of Mother and Race of Infant, Michigan Residents Born in 1974

AGE OF MOTHER	ALL INFANTS			WHITE INFANTS			NONWHITE INFANTS		
	PERI-NATAL DEATHS	TOTAL BIRTHS	PERI-NATAL DEATH RATE	PERI-NATAL DEATHS	TOTAL BIRTHS	PERI-NATAL DEATH RATE	PERI-NATAL DEATHS	TOTAL BIRTHS	PERI-NATAL DEATH RATE
TOTAL.....	2,894	138,865	20.8	2,047	113,497	18.0	847	25,368	33.4
Under 15.....	21	508	41.3	5	187	26.7	16	321	49.8
15-19.....	674	26,304	25.6	410	18,464	22.2	264	7,840	33.8
20-24.....	925	50,418	18.3	660	41,807	15.8	265	8,611	30.8
25-29.....	687	40,550	16.9	537	35,308	15.2	150	5,242	28.6
30-39.....	532	19,909	26.7	394	16,826	23.4	138	3,083	44.8
40 or More.....	54	1,150	47.0	40	892	44.8	14	258	54.3
Unknown.....	1	26	000	1	13	000	0	13	000

time period.

When deaths under one week are grouped together with fetal deaths the resultant total is called perinatal deaths. By placing a ceiling of six days for the infant component of perinatal deaths, most accidental and environmental causes of death are eliminated. In 1975, Michigan resident perinatal deaths numbered 2,690 and the perinatal death rate was 19.9. This compares to 21.3 in 1974 and 26.0 in 1970.

As with infant death rates, perinatal mortality rates vary considerably with the age of the mother and the race of the child. Table 2.39 contains perinatal deaths and rates by age of mother and race of child for fetal deaths and live births occurring in 1974. As with Table 2.37, part of this table, i.e. hebdomadal deaths, are drawn from a merged file of birth and death data. As a result, perinatal deaths and rates are slightly understated. What is clear from the data is the increased risk of death to infants of mothers under 15 or age 40 or greater. Minimum risk in 1974 is associated with mothers 25-29 years of age. As with infant death rates, the nonwhite perinatal mortality rate associated with mothers aged 40 or more was the only rate not significantly above the corresponding white rate in 1974.

Michigan resident infant deaths in 1975 are listed by cause of death classification in Table 2.40. As with fetal deaths there is some non-specific reporting. The number of conditions allocated to other diseases of early infancy was 515 (23.4%) in 1975. Congenital anomalies caused the deaths of 382 infants and was the specific disease category most frequently reported. Asphyxia of newborn deaths numbered 173 and immaturity was the cause of 186 deaths. Sudden infant death syndrome was responsible for 221 infant deaths in 1975.

The vast majority of infant deaths are attributable to causes restricted to the fetus and newborn but there

TABLE 2.40—Infant Deaths by Cause of Death, Michigan Residents, 1975

ICDA LIST NUMBER/S	CAUSE OF DEATH	FREQUENCY
740-759	Congenital Anomalies	382
795.0	Sudden Infant Death Syndrome	221
777	Immaturity Unqualified	186
776.9	Asphyxia of Newborn	173
470-474, 480-486	Influenza and Pneumonia	76
E800-E849	Accidents	66
764-768 (.0-.3), 772	Birth Injuries	62
Residual 000-136	Other Infective and Parasitic Diseases	39
008-009	Enteritis and Other Diarrheal Diseases	32
320	Meningitis	25
550-553, 560	Hernia and Intestinal Obstruction	22
390-398, 402, 404, 410-429	Heart Disease	17
E960-E978	Homicide	11
140-209	Malignant Neoplasms	8
430-438	Cerebrovascular Diseases	7
490-491	Chronic and Unqualified Bronchitis	3
571	Cirrhosis of the Liver	2
441-448	Other Diseases of Arteries, etc.	2
280-285	Anemias	2
493	Asthma	2
210-239	Benign Neoplasms	1
492	Emphysema	1
E980-E999	All Other External Causes	8
Residual 770-778	Other Diseases of Early Infancy	515
	All Other Diseases	342
	TOTAL	2,205

still remain other major causes of death particularly in three areas: (1) infective and parasitic diseases; (2) respiratory diseases; and (3) accidents. Influenza and pneumonia deaths numbered 76, while accidental deaths numbered 66. There were 11 homicides involving infants in 1975.

About 86.1 percent of the mothers of Michigan resident infants born in 1974 and dying prior to 1 year of age received prenatal care prior to the sixth month

TABLE 2.41—Infant Deaths by Month Prenatal Care Began and Number of Prenatal Visits, Michigan Resident Infants Born in 1974

MONTH CARE BEGAN	TOTAL	NUMBER OF VISITS						UNKNOWN
		NONE	UNDER 5	5-9	10-14	15-19	20 AND OVER	
TOTAL.....	2,276	77	537	799	592	90	56	125
No Care.....	77	77	—	—	—	—	—	—
First.....	234	—	30	78	81	21	17	7
Second.....	764	—	124	295	260	36	22	27
Third.....	593	—	140	229	180	24	9	11
Fourth.....	247	—	101	86	47	5	2	6
Fifth.....	121	—	53	48	16	1	2	1
Sixth.....	79	—	34	35	6	2	2	—
Seventh.....	52	—	32	16	2	1	—	1
Eighth.....	23	—	16	6	—	—	1	—
Ninth.....	7	—	4	3	—	—	—	—
Unknown.....	79	—	3	3	—	—	1	72

TABLE 2.42—Infant Deaths by Birth Weight and Mother's Age,
Michigan Resident Infants Born in 1974

BIRTH WEIGHT IN GRAMS	TOTAL	MOTHER'S AGE					
		UNDER 15	15-19	20-24	25-29	30-39	40 OR MORE
TOTAL.....	2,276	19	610	763	545	318	21
500 or Less.....	166	1	41	51	39	33	1
501-1,000.....	510	8	131	187	114	68	2
1,001-1,500.....	282	2	92	87	59	39	3
1,501-2,000.....	204	—	64	63	50	24	3
2,001-2,500.....	207	1	51	81	47	24	3
2,501-3,000.....	262	3	79	82	65	32	1
3,001-3,500.....	338	2	73	123	81	55	4
3,501-4,000.....	172	1	50	52	49	19	1
4,001-4,500.....	45	—	6	15	14	9	1
4,501 and Over.....	26	—	3	10	9	4	—
Not Stated.....	64	1	20	12	18	11	2
Median Weight.....	1,843	907	1,786	1,899	2,013	1,814	2,211

of pregnancy (Table 2.41). This is below the corresponding percentage for all live births (91.2%). Of these same women 69.9 percent received care in the first trimester of pregnancy. Among all women having live births in 1974, 73.9 percent had received care prior to the 4th month of pregnancy. While these percentages are similar, differences in proportions receiving no care are relatively high. In 1974, 0.8 percent of all women having live births had no care. The percentage among women whose infants died was 2.4 percent. Another dissimilarity between all live births and infant deaths is apparent for the number of prenatal visits. Of those infants born in 1974 who died within one year, 23.6 percent of their mothers had prenatal care with fewer than five visits. The same percentage for all live births was 5.4 percent. Women with less than ten prenatal care visits, including no care, represented 33.4 percent of all live births compared to 62.1 percent for those infants that did not survive their first 12 months.

The median birth weight of infants born in 1974 and dying prior to 1 year of age was 1,843 grams (Table 2.42). The median birth weight of all Michigan resident live births in 1974 was 3,345 grams. An association between birth weight and mother's age is suggested by the data. Median birth weight was lowest for mothers under 15 (907 grams). By age 25-29 the median weight was 2,013 grams, while infant deaths to mothers 40 or more displayed the highest median weight in 1974 (2,211 grams).

Medians for all age groups were below what is considered normal weight ranges. These medians inversely follow the general pattern of association between infant mortality rates and mother's age.

COMMUNICABLE DISEASE DEATHS

Although comprising a smaller proportion of deaths than they have in the past, communicable disease deaths continue to be a major concern to public health professionals. 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 4.5 illustrates trends in deaths from the major communicable diseases.

In 1975, deaths from all infective and parasitic diseases numbered 562. As can be observed from Table 2.43, the four major causes of death in this

TABLE 2.43—Deaths from Selected Infective and Parasitic Diseases, Michigan Residents, 1975

ICDA LIST NUMBER	CAUSE OF DEATH	FREQUENCY
038	Septicemia	186
010-019	Tuberculosis	110
009	Diarrheal Disease	73
070	Infectious Hepatitis	23
036	Meningococcal Infections	18
065	Viral Encephalitis	9
093	Cardiovascular Syphilis	9
044	Late Effects of Acute Poliomyelitis	5
054	Herpes Simplex	4
094	Syphilis of Central Nervous System	1
	All Other	124
	TOTAL	562

group are septicemia (186 deaths), tuberculosis (110 deaths), diarrheal disease (73 deaths) and infectious hepatitis (23 deaths).

Of particular importance is the fact that infants accounted for 12.6 percent of all infective and parasitic disease deaths while accounting for only 3.0 percent of all deaths.

LIFE EXPECTANCY

The life expectancy of a Michigan resident at birth is 72.0 years, based on 1975 mortality statistics. Michigan males demonstrated a significantly shorter longevity than Michigan females. In 1975 the years remaining at birth are 68.5 for males and 75.7 for females. This results from the higher mortality rate of males at all ages.

Life expectancies by sex in selected years for Michigan and United States residents are presented in Table 2.44. It can be seen that longevity has increased greatly since 1901. In that year the life expectancy of Michigan residents was well above that for the nation. This differential had virtually disappeared by 1950. In 1975, the life expectancy of both males and females in Michigan is below that demonstrated nationwide. Michigan male longevity was only slightly below the national statistic in 1975. Longevity for females residing and dying in this State were 0.8 years below the average for the country. Note that females have consistently demonstrated greater longevity than males both in Michigan and the United States.

TABLE 2.44—Life Expectancy at Birth by Sex, Michigan and United States Residents, Selected Years, 1901-1975

UNITED STATES		YEAR	MICHIGAN	
Male Life Expectancy	Female Life Expectancy		Male Life Expectancy	Female Life Expectancy
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	74.8	1970	67.2	74.6
67.4	75.0	1971	67.3	74.9
67.4	75.1	1972	67.3	74.9
67.6	75.3	1973	67.4	75.0
68.1	75.8	1974	68.0	75.3
68.7	76.5	1975	68.5	75.7

¹ Michigan data for years 1920, 1930 and 1940 are for white only.

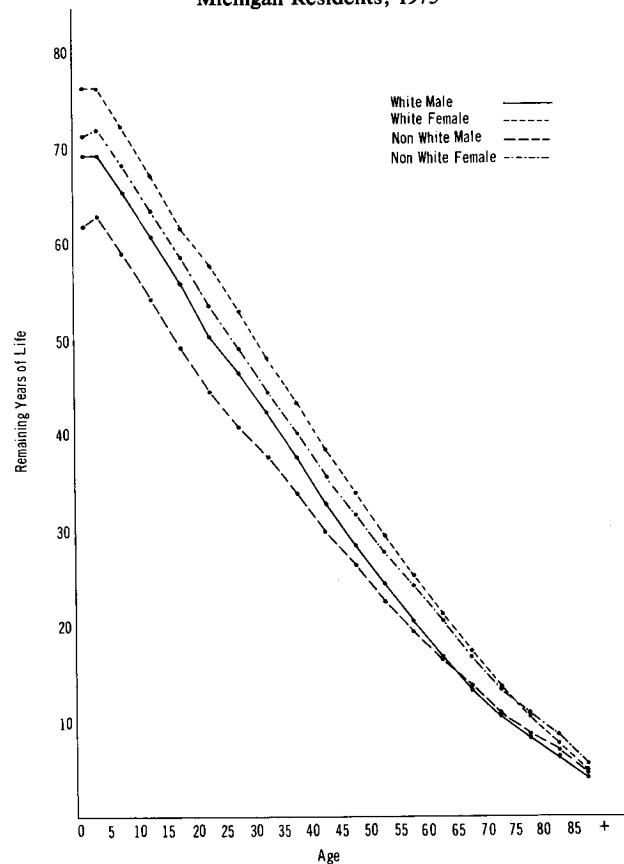
White persons displayed a life expectancy 6.1 years greater than non-white persons in 1975. White males can be expected to live 7.4 years longer than non-whites in 1975 compared to a differential of 5.8 years in 1950 (Table 2.45). The differential between females by race has moved in the opposite direction over the last twenty-five years. In 1950, Michigan resident

white females had an average longevity 8.5 years greater than that of non-white females. This disparity was 5.0 years in 1975. The enlarged racial difference between males is a reflection of the actual reduction in non-white male longevity, over the ten years from 1960 to 1970.

TABLE 2.45—Life Expectancy at Birth by Sex and Race, Michigan Residents, Selected Years, 1950-1975

POPULATION SUBGROUP	YEAR			
	1950	1960	1970	1975
Total Population	68.3	70.0	70.8	72.0
Total Male	65.7	67.1	67.2	68.5
Total Female	71.2	73.3	74.6	75.7
Total White	68.8	70.5	71.6	72.8
White Male	66.2	67.5	68.2	69.5
White Female	71.9	74.0	75.3	76.3
Total Nonwhite	61.8	65.6	65.0	66.7
Nonwhite Male	60.4	63.6	61.0	62.1
Nonwhite Female	63.4	67.7	69.4	71.3

FIGURE 2.35—Remaining Years of Life by Age, Sex and Race, Michigan Residents, 1975



The expected number of years of life remaining are presented graphically by age, race, and sex in Figure 2.35. The relative differential between the sexes for each race hold fairly stable throughout life, based upon Michigan resident mortality data from 1975. Non-whites display slightly greater expectancies in the older age groups.

The average number of years remaining for non-white females surpasses that of white females around age 70. Non-white males displayed a greater expectation than that of white males at ages 65 and over, and greater than that of white females at ages 85 and over.

PLACE OF OCCURRENCE

There were 1,915 Michigan resident deaths in 1975 that occurred outside the state. This represents 2.6 percent of all resident deaths. There were 348 out-of-state resident deaths in the state of Florida in 1975. This is 18.2 percent of all such deaths more than in any other area. The border areas of Ohio, Indiana, Wisconsin, and Canada account for 45.5 percent of all resident deaths outside Michigan. The near neighbor Illinois was the place of occurrence for 5.3 percent of these deaths. Michigan resident deaths occurred in all but two of the 50 states (Connecticut and Delaware) in 1975.

Of the non-residents that died in Michigan in 1975,

49.2 percent were from the border areas, 13.7 percent were Floridians and 9.6 percent from Illinois. Overall, nonresidents who died in Michigan represented 43 of the 50 states, Puerto Rico, Mexico, the British Isles, Europe and Asia. The most frequent place of residence was Ohio (Table 2.46).

TABLE 2.46—Deaths Occurring Outside the State of Residence by State of Occurrence, Michigan Occurrences and Residents, 1975

GEOGRAPHIC AREA	DEATHS OF RESIDENTS OCCURRING OUTSIDE MICHIGAN		DEATHS TO NONRESIDENTS OCCURRING IN MICHIGAN	
	NUMBER	PERCENT	NUMBER	PERCENT
TOTAL.....	1,915	100.0	1,172	99.9
Florida.....	348	18.2	161	13.7
Ohio.....	324	16.9	237	20.2
Indiana.....	285	14.9	104	8.9
Wisconsin.....	157	8.2	188	16.0
Canada.....	105	5.5	48	4.1
Illinois.....	102	5.3	113	9.6
Other Areas...	594	31.0	321	27.4



MARRIAGE & DIVORCE

SECTION III



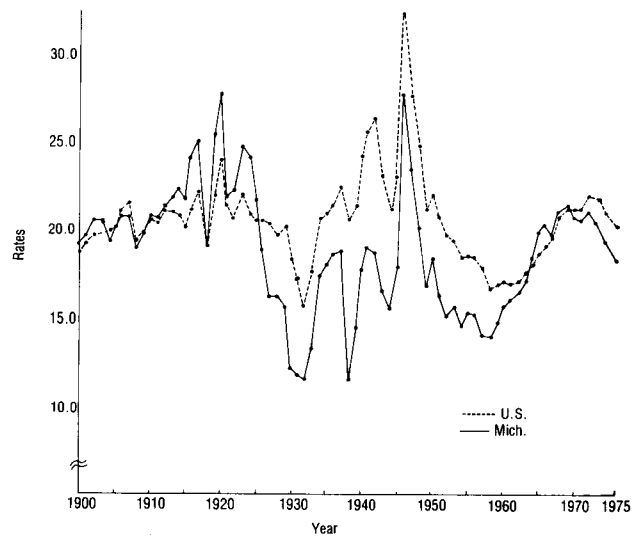
Marriage and Divorce

An Overview 1975

TOTAL MARRIAGES	82,856
TOTAL DIVORCES AND ANNULMENTS	40,782
MARRIAGE RATE	18.1
DIVORCE RATE	8.9
MEDIAN AGE OF THE BRIDE	22
MEDIAN AGE OF THE GROOM	24
MEDIAN DURATION OF MARRIAGES ENDING IN 1975	7.1

The number of marriages and divorces occurring annually in Michigan has increased considerably since 1900. The frequency of marriage has generally followed the growth of Michigan's population. The smallest number of marriages from 1900 to 1975 was 23,295 in 1900, while the largest number, 94,486 occurred in 1973. Divorces and annulments have, on the other hand, tended to rise in frequency faster than population. The smallest and largest number of divorces and annulments were witnessed in almost the same years as with marriages 2,435 occurring in 1900 and 40,782 taking place in 1975. In 1975, the number of marriages in the state fell for the second straight year. There were 82,856 marriages in 1975, 5.9 percent below the 1974 figure. The greatest number of divorces and annulments in this century occurred in 1975. There were 40,782 such events in that year,

FIGURE 3.1—Marriage Rates, Michigan and United States Occurrences, 1900-1975



2.1 percent higher than the revised estimate of 39,940 for 1974.

Since 1900, there have been noticeable shifts 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 fall-

TABLE 3.1—Marriages, Divorces and Annulments, Michigan and United States Occurrences, Selected Years, 1920-1975

YEAR	MICHIGAN				UNITED STATES	
	MARRIAGES	MARRIAGE RATE	DIVORCES AND ANNULMENTS	DIVORCE AND ANNULMENT RATE	MARRIAGE RATE	DIVORCE AND ANNULMENT RATE
1920	50,805	27.7	8,679	4.7	23.9	3.2
1930	29,482	12.2	10,639	4.4	18.3	3.2
1940	46,342	17.6	12,054	4.6	24.2	4.0
1950	58,180	18.3	15,979	5.0	22.1	5.1
1960	61,090	15.6	16,656	4.3	17.0	4.4
1961	63,320	16.0	16,219	4.1	16.9	4.5
1962	65,002	16.4	17,500	4.4	17.0	4.4
1963	68,160	17.0	17,479	4.4	17.5	4.5
1964	73,911	18.2	19,400	4.8	18.0	4.7
1965	81,247	19.8	20,305	5.0	18.6	4.9
1966	83,903	20.2	21,727	5.2	19.0	5.1
1967	84,363	19.6	23,620	5.9	19.5	5.3
1968	90,984	20.5	25,400	5.9	20.7	5.8
1969	93,392	20.8	28,347	6.5	21.2	6.4
1970	91,933	20.7	29,934	6.7	21.2	7.0
1971	92,134	20.5	31,790	7.1	21.2	7.4
1972	94,447	21.0	35,505	7.9	22.0	8.2
1973	94,486	20.9	37,121 ¹	8.2 ¹	21.8	8.8
1974	88,023	19.3	39,940 ¹	8.8 ¹	21.0	9.2
1975	82,856	18.1	40,782	8.9	20.2	9.8

¹ Estimate.

ing rates observed nationally. Historic shifts in rates have been related most notably to the factors of war and the economy. 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, the Michigan marriage rate has been exceeded annually by national statistics, excepting only 1965 through 1969. The marriage rate for Michigan in 1975 was 18.1, the lowest rate since 1963.

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, that 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 is drawn from all marriages performed in the state irregardless of the couples residence.

Table 3.2 shows that, in general, most of the couples

TABLE 3.2—Marriages by Residence Status of Bride and Groom, Michigan Occurrences, 1965 and 1975

RESIDENCE STATUS	1965		1975	
	NO.	PERCENT	NO.	PERCENT
Both Bride and Groom Residents.....	72,773	89.6	77,714	93.8
Bride Resident, Groom Non-Resident.....	2,735	3.4	3,039	3.7
Groom Resident, Bride Non-Resident.....	894	1.1	671	0.8
Both Bride and Groom Non-Residents.....	4,845	5.9	1,431	1.7
Residence Status, Not Stated..	—	0	1	0.0
Total.....	81,247	100.0	82,856	100.0

TABLE 3.4—Number of Marriages and Rates by Age and Sex, Michigan Occurrences, 1970 and 1975

AGES	MALES			FEMALES		
	NO. MARRIAGE 1975	RATE 1975	RATE 1970	NO. MARRIAGE 1975	RATE 1975	RATE 1970
Under 20 ¹	11,231	22.7	38.9	25,120	53.0	77.6
20-24	33,674	81.7	126.7	30,701	74.9	93.8
25-34	22,946	39.6	36.1	16,076	24.9	22.1
35-44	7,003	14.3	12.7	5,288	11.3	9.7
45 and Over	8,000	6.4	6.6	5,666	3.9	4.4
Not Stated	2	000	000	5	000	000
Total	82,856	18.4	21.1	82,856	17.8	20.3
Median Age	24	000	000	22	000	000

¹ 15-19 Population used to obtain rate, under 20 for marriages include 14 years and over.

TABLE 3.3—State of Residence of Non-resident Brides and Grooms, Michigan Occurrences, 1975

GEOGRAPHIC AREA	NON-RESIDENT BRIDE	NON-RESIDENT GROOM
California	96	243
Florida	108	224
Illinois	149	405
Indiana	300	506
Minnesota	64	109
New York	63	162
Ohio	443	709
Texas	24	135
Wisconsin	340	441
Foreign Countries	85	267
Other States	430	1,269
Total	2,102	4,470

marrying in Michigan are residents of the state. The table also relates that this pattern has not changed markedly over the last decade, though the proportion of marriages where both the bride and groom are not residents has declined substantially. These data indicate that the general characteristics of marriages occurring in Michigan should be representative of marriage patterns for Michigan residents.

There was a total of 2,102 nonresident brides married in Michigan in 1975. The figure for grooms is more than double that of brides, numbering 4,470. Table 3.3 shows the ten most frequent residences of nonresident brides and grooms married in Michigan. The neighboring states of Illinois, Indiana, Ohio and Wisconsin are the states of residence for 46 percent of all nonresident grooms and 59 percent of nonresident brides.

TABLE 3.5—Age at First Marriage and Remarriage: Bride
Michigan Occurrences, 1965 and 1975

AGES	1965				1975			
	TOTAL	FIRST MARRIAGE	RE-MARRIAGE	NOT STATED	TOTAL	FIRST MARRIAGE	RE-MARRIAGE	NOT STATED
Under 20.....	33,052	32,571	457	24	25,120	24,723	377	20
Percent.....	40.7	51.6	2.5	53.3	30.3	42.2	1.6	58.8
20-24.....	28,248	25,263	2,970	15	30,701	26,604	4,091	6
Percent.....	34.8	40.0	16.5	33.3	37.1	45.4	16.9	17.7
25-29.....	6,216	3,261	2,952	3	10,936	5,189	5,741	6
Percent.....	7.7	5.2	16.4	6.7	13.2	8.9	23.7	17.7
30-34.....	3,238	891	2,346	1	5,140	1,075	4,064	1
Percent.....	4.0	1.4	13.0	2.2	6.2	1.8	16.7	2.9
35-44.....	5,052	759	4,293	—	5,288	599	4,689	—
Percent.....	6.2	1.2	23.8	—	6.4	1.0	19.3	—
45 and Over....	5,428	410	5,016	2	5,666	361	5,304	1
Percent.....	6.7	0.6	27.8	4.4	6.8	0.6	21.9	2.9
Not Stated.....	13	—	13	—	5	3	2	—
Percent.....	0.0	—	0.1	—	0.0	0.0	0.0	—
Total.....	81,247	63,155	18,047	45	82,856	58,554	24,268	34
Percent.....	100.1	100.0	100.1	99.9	100.0	99.9	100.1	100.0

AGE AT MARRIAGE

Examination of the data in Table 3.4 reveals that females generally marry at a younger age than do males. More than twice the number of eligible females marry under the age of 20 compared to their eligible male counterparts. For ages 20 and over, eligible males marry more frequently than females particularly in age groups 25-34 and 45 and over. One half of all marriages occurring in Michigan involved brides under the age of 22 while the 50th percentile for grooms was 24.

The marriage rate for females under the age of 20 years is two and one-third times the comparable rate for males (Table 3.4). Rates of marriage for males are higher than for females in all other age groups. Since 1970, there have been significant declines in the marriage rates of both sexes under the age of 25 years. The largest decline observed is for males under the age of 20 years for whom the marriage rate has dipped 42 percent. Between the ages of 25 and 44 the rates of marriage have increased since 1970 for both sexes, while rates for persons 45 and over have dropped slightly.

TABLE 3.6—Age at First Marriage and Remarriage: Groom
Michigan Occurrences, 1965 and 1975

AGES	1965				1975			
	TOTAL	FIRST MARRIAGE	RE-MARRIAGE	NOT STATED	TOTAL	FIRST MARRIAGE	RE-MARRIAGE	NOT STATED
Under 20.....	14,468	14,411	43	14	11,231	11,188	34	9
Percent.....	17.8	22.8	0.2	40.0	13.6	19.7	0.1	37.5
20-24.....	37,264	35,574	1,679	11	33,674	31,327	2,339	8
Percent.....	45.9	56.2	9.4	31.4	40.6	55.3	8.9	33.3
25-29.....	11,401	8,566	2,831	4	16,023	10,336	5,684	3
Percent.....	14.0	13.5	15.8	11.4	19.3	18.2	21.7	12.5
30-34.....	4,713	2,238	2,474	1	6,923	2,157	4,763	3
Percent.....	5.8	3.5	13.8	2.9	8.4	3.8	18.2	12.5
35-44.....	6,238	1,704	4,533	1	7,003	1,002	6,000	1
Percent.....	7.7	2.7	25.3	2.9	8.5	1.8	22.9	4.2
45 and Over....	7,151	777	6,370	4	8,000	645	7,355	—
Percent.....	8.8	1.2	35.5	11.4	9.7	1.1	28.1	—
Not Stated.....	12	4	8	—	2	—	2	—
Percent.....	0.0	0.0	0.0	—	0.0	—	0.0	—
Total.....	81,247	63,274	17,938	35	82,856	56,655	26,177	24
Percent.....	100.0	99.9	100.0	100.0	100.1	99.9	99.9	100.0

TABLE 3.7—Remarriages of Brides by Age and Order of Marriage,
Michigan Occurrences, 1965 and 1975

AGES	1965				1975			
	ALL MAR-RIAGES	SECOND MAR-RIAGES	THIRD MAR-RIAGES	4th OR MORE MAR-RIAGES	ALL MAR-RIAGES	SECOND MAR-RIAGES	THIRD MAR-RIAGES	4th OR MORE MAR-RIAGES
ALL AGES.....	81,247	14,080	3,265	702	82,856	19,385	3,975	908
Under 20.....	33,052	455	2	—	25,120	373	4	—
20-24.....	28,248	2,805	155	10	30,701	3,888	185	18
25-29.....	6,216	2,561	356	35	10,936	5,018	657	66
30-34.....	3,238	1,865	396	85	5,140	3,179	739	146
35-39.....	2,732	1,651	504	106	3,081	1,913	585	161
40-44.....	2,320	1,361	538	133	2,207	1,388	485	157
45 and Over.....	5,428	3,375	1,310	331	5,666	3,624	1,320	360
Not Stated.....	13	7	4	2	5	2	—	—

ORDER OF MARRIAGE

The data in Tables 3.5 and 3.6 indicate that there is a trend toward younger first marriages by males, older first marriages by females, and a younger age for remarriages among both males and females. The most frequent age group of first marriage for males is 20-24 in both 1965 and 1975. Among females, the modal age group in 1965 was under 20 years. Data for 1975 indicates a shift in mode to the 20-24 year age group for first marriages of brides. An examination of the most frequent age interval for remarriages among males reveals that 45 years of age and older is the most frequent in both 1965 and 1975. The most frequent age of remarriage for females was the same as males in 1965, but switched to the age group 25-29 by 1975.

Noting that remarriages can only occur when a prior marriage has been terminated by divorce, annulment or death of a spouse, it is apparent that the age distribution of those remarrying will be generally older than for all marriages. Tables 3.7 and 3.8 demonstrate that the order of marriage has a strong positive relationship

with age for both brides and grooms. These data also show that remarriages constitute a larger percentage of all marriages in 1975 than 10 years earlier. In 1965, the proportion of all marriages that were remarriages was 22 percent for both brides and grooms. By 1975 these percentages had risen to 29 percent for brides and 32 percent for grooms. The proportion of remarriages that involve more than one prior marriage has remained fairly stable at about 20 percent for both brides and grooms. Perhaps most interesting is the increase in the proportion of all remarriages and particularly second order marriages in the younger age groups. This shift is observed in the age intervals from 20 through 34 years of age for both brides and grooms. The increase is most evident for the total frequency at ages 25-29, as this group now rivals the 45 and over group among grooms and exceeds 45 and over among brides.

The fact that remarriages have increased substantially in recent years is not surprising in light of the increased numbers of divorces and annulments being granted. As the number of marriages that end in divorce has grown over the last decade, the potential

TABLE 3.8—Remarriages of Grooms by Age and Order of Marriage,
Michigan Occurrences, 1965 and 1975

AGES	1965				1975			
	ALL MAR-RIAGES	SECOND MAR-RIAGES	THIRD MAR-RIAGES	4th OR MORE MAR-RIAGES	ALL MAR-RIAGES	SECOND MAR-RIAGES	THIRD MAR-RIAGES	4th OR MORE MAR-RIAGES
ALL AGES.....	81,247	14,367	3,002	569	82,856	21,200	4,125	852
Under 20.....	14,468	42	1	—	11,231	34	—	—
20-24.....	37,264	1,626	53	—	33,674	2,281	55	3
25-29.....	11,401	2,604	208	19	16,023	5,171	474	39
30-34.....	4,713	2,122	320	32	6,923	3,991	674	98
35-39.....	3,480	1,890	439	67	4,096	2,647	652	116
40-44.....	2,758	1,639	427	71	2,907	1,904	528	153
45 and Over.....	7,151	4,435	1,552	379	8,000	5,171	1,741	443
Not Stated.....	12	5	2	1	2	1	1	—

population eligible to "remarry" has also grown. It seems apparent that the declines in marriage rates for recent years would have been more rapid in the absence of the above conditions.

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 for both parties can not be directly affected by rates of divorce or deaths to married persons and more clearly reflects the propensity of the population to enter into marital agreements. In addition, the characteristics of persons being married for the first time, such as age at first marriage, provide a more concise description of those who are making an initial commitment.

As discussed in the preceding sections, the number and rate of marriage has fallen over the last few years and the number of remarriages has risen in this same

FIGURE 3.2—Percent of all Marriages that are First Marriages, Michigan Occurrences, 1960-1975



time period. It is obvious from this that the decline in marriages is generally attributable to falling numbers of first marriages. Figure 3.2 displays first marriages as a percentage of all marriages over the last 16 years. Examination of this graph shows a slight rising tendency for both males and females during the years 1960 through 1965. Since 1965, the general trend in this proportion has been downward. The declines shown for the period 1971 through 1975 has been especially marked for both sexes.

In 1975, first marriages constituted 70.6 percent of all marriages for brides and 68.4 percent of all marriages for grooms.

Tables 3.9 and 3.10 provide the number of first marriages by age for brides and grooms. Over all age groups, first marriages have declined substantially

since 1972 for both brides and grooms. The steepest declines in frequency occurred in 1974 and 1975. The number of first marriages of grooms declined 9.9 and 8.4 percent in these years, respectively, while these figures dropped 9.3 percent in 1974 and 8.9 percent in 1975 for brides. The frequency of first marriages for brides and grooms under 20 and 20-24 years old follows the same pattern as all first marriages. In fact, those age groups appear to be the source of the overall decline, as first marriages involve persons under 25 years of age 88 percent of the time among brides and

TABLE 3.9—First Marriages by Age of Bride, Michigan Occurrences, 1970-1975

AGE OF BRIDE	YEAR					
	1975	1974	1973	1972	1971	1970
All Ages.....	58,554	63,564	70,076	71,373	70,022	68,386
15-19 Years ¹	24,723	28,238	32,658	33,948	33,227	31,730
20-24 Years.....	26,604	28,153	30,249	30,771	30,646	30,688
25-29 Years.....	5,189	5,094	5,036	4,615	4,138	4,036
30-34 Years.....	1,075	1,108	1,108	1,048	973	964
35-39 Years.....	422	382	395	403	408	395
40-44 Years.....	177	204	228	217	221	214
45-49 Years.....	132	152	154	139	153	147
50 and Over.....	229	233	247	228	254	208
Not Stated.....	3	0	1	4	2	4

¹ Brides under age 15 included in ages 15-19.

TABLE 3.10—First Marriages by Age of Groom, Michigan Occurrences, 1970-1975

AGE OF GROOM	YEAR					
	1975	1974	1973	1972	1971	1970
All Ages.....	56,655	61,884	68,682	70,120	69,091	67,735
15-19 Years ¹	11,188	13,209	15,468	16,416	16,044	15,391
20-24 Years.....	31,327	34,283	38,436	39,641	39,692	38,999
25-29 Years.....	10,336	10,455	10,596	10,048	9,306	9,379
30-34 Years.....	2,157	2,208	2,289	2,139	2,056	2,097
35-39 Years.....	680	716	749	759	794	740
40-44 Years.....	322	339	418	415	454	493
45-49 Years.....	241	260	314	294	317	270
50 and Over.....	404	412	412	408	428	366
Not Stated.....	0	2	0	0	0	0

¹ Grooms under age 15 included in ages 15-19.

75 percent of the time among grooms as of 1975. These percentages of first-marriages under 25 represent a continuation of steady decline since 1970, despite an increasing population in Michigan for persons in these ages. In 1970 first married brides under 25 were 91 percent of all first married brides while a similar figure for grooms is 80 percent. For ages over 25,

small to moderate increases in first marriage frequencies are evident for grooms 25-29 and 30-34 and for brides 25-29, 30-34 and 35-39. For both sexes, frequencies have declined in ages 40-44 and 45-49 while 50 and over has increased since 1970.

The sex specific rate of first marriages for both brides and grooms was 12.6 per 1,000 population in 1975, for the lowest rate of the period 1970 through 1975 (Tables 3.11 and 3.12). In 1970, this rate for brides was 15.1 and for grooms 15.6. Significant declines in first marriage rates for both brides and grooms in the age groups under 20 and 20-24 are evident over this six year period. The rate for grooms

TABLE 3.11—First Marriage Rates by Age of Bride, Michigan Occurrences, 1970-1975

AGE OF BRIDE	YEAR					
	1975	1974	1973	1972	1971	1970
All Ages.....	12.6	13.7	15.2	15.5	15.2	15.1
15-19 Years ¹	52.1	60.2	70.6	75.5	74.0	72.7
20-24 Years.....	64.9	71.0	77.8	77.5	77.3	82.1
25-29 Years.....	15.1	15.2	15.3	14.9	13.4	13.4
30-34 Years.....	3.6	3.8	4.0	4.1	3.8	3.9
35-39 Years.....	1.8	1.6	1.7	1.7	1.7	1.6
40-44 Years.....	0.8	0.9	0.9	0.8	0.8	0.8
45-49 Years.....	0.5	0.6	0.6	0.5	0.6	0.5
50 and Over.....	0.2	0.2	0.2	0.2	0.2	0.2

¹ Brides under age 15 included in ages 15-19.

TABLE 3.12—First Marriage Rates by Age of Groom, Michigan Occurrences, 1970-1975

AGE OF GROOM	YEAR					
	1975	1974	1973	1972	1971	1970
All Ages.....	12.6	13.8	15.4	15.9	15.7	15.6
15-19 Years ¹	22.6	27.0	32.2	35.8	35.0	35.3
20-24 Years.....	76.0	91.1	110.8	116.0	116.3	118.6
25-29 Years.....	39.3	38.1	35.9	33.4	31.0	32.0
30-34 Years.....	6.8	7.1	7.7	8.6	8.3	8.8
35-39 Years.....	2.6	2.9	3.1	3.3	3.5	3.2
40-44 Years.....	1.4	1.4	1.7	1.6	1.8	1.9
45-49 Years.....	0.9	1.0	1.2	1.1	1.2	1.0
50 and Over.....	0.4	0.4	0.4	0.4	0.5	0.4

¹ Grooms under age 15 included in ages 15-19.

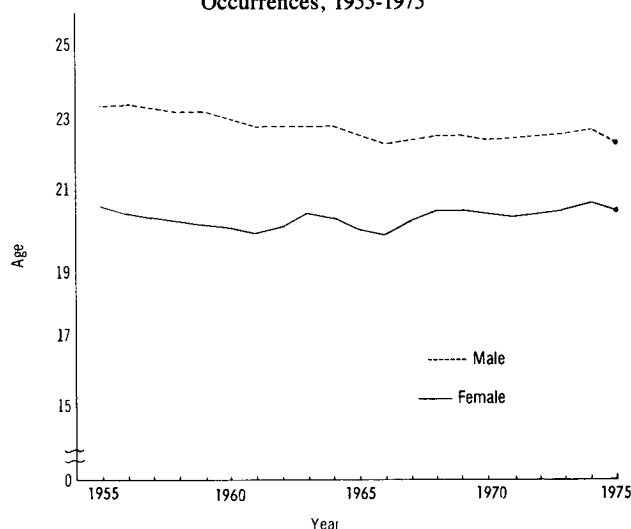
under 20 in 1975 was 16.3 percent below that for 1974 and 36.0 percent lower than in 1970. Similar declines are present for brides, though not as steep. The 1975 rate for brides was below the 1974 figure by 13.5 percent and that for 1970 by 28.3 percent. Corresponding decreases have occurred for first-mar-

riage rates in the age groups 20-24. Over all, only in one age category for grooms, (25-29), did the marriage rate increase since 1970 while one other (50 years and over) has held stable. Age specific rates for brides have risen for the age groups 25-29 and 35-39, and held stable for ages over 40 years.

AGE AT FIRST MARRIAGE

Over the last twenty-one years, from 1955 through 1975, the median age at first marriage for both brides

FIGURE 3.3—Median Age at First Marriage by Sex, Michigan Occurrences, 1955-1975



and grooms has not changed dramatically. These median ages followed a parallel path of slow decline from 1955 to 1961, whereupon, the male median stabilized and the female age rose in two successive years. The age of brides and grooms at the 50th percentile of first marriages slipped again from 1963 through 1966, reaching their lowest levels for this time period (19.7 for brides and 22.2 for grooms). Brides median age rose again, then stabilized. The age at first marriage has held fairly stable since 1968. In 1975, the median age for grooms at first marriage was 22.2 and that for brides was 20.4 years (Figure 3.3).

DIVORCES AND ANNULMENTS

The number of divorces reported in Michigan has increased consistently over the last 12 years (Table 3.1). Divorces have more than doubled in Michigan since 1965. There were 40,782 Michigan divorces in 1975 compared to 20,305 in 1965. Divorce rates have also displayed increases that have been consistent and significant. The rate has more than doubled since 1963 in both Michigan and the United States. National data indicates a steady increase in the divorce rate through 1975, when the rate was 9.6. Michigan data is still provisional for years 1972 through 1974, due to a lack of reporting from certain areas of the state,

making recent estimated trends subject to question. The reporting for 1975, however, was nearly complete, with only four areas not reporting. The 1975 rate is 8.9.

The number of persons divorced in Michigan per thousand population was higher than the United States for each year from 1900 through 1947 without exception. In the following 28 years the Michigan divorce rate has been at or below the national rate 21 times as can be seen in Figure 3.4. The lowest rate in this century for Michigan was 2.0 in the years 1900 and 1901, while the lowest national rate was 1.5 in 1900 and 1902. The highest rate observed in the state was 10.2 in 1946. The provisional national estimate of 9.6

in 1975 is the highest national rate for the 76 years examined. This would be the third straight year that a century high has been observed in the United States. The divorce rate for Michigan rose from a provisional rate 8.8 in 1974 to a rate of 8.9 in 1975. This rate is higher than any other since 1900, excepting only the peak rate occurring in 1946.

DURATION OF MARRIAGE AT DIVORCE

In conjunction with the increase in marriages during the 60's and early 70's, the duration of marriages being terminated has decreased over the last several years. Table 3.13 shows that 63.7 percent of all marriages terminated in 1975 were solemnized since 1966. In 1965 only 56.7 percent involved marriages under 10 years duration. An examination of this table reveals that terminations of marriages with durations of one to nine years has increased faster than divorces in general, while durations of less than one year, and 10 through 24 years have increased less than divorces overall. The frequency of divorce involving marriages of over 45 years duration has remained stable since 1965.

The effects of this shift in the distribution of marriage duration at the time of divorce has been to lower the median duration over the last eleven years through 1974 (Figure 3.5). In 1963, the median duration of marriages terminated in Michigan was 8.4 years. This figure dropped persistently, reaching 7.0 in 1974. The statistic for 1975 is 7.1 years, for the first increase since 1963. This rise is perhaps due to the decrease in marriages occurring in the state since 1973, as the

FIGURE 3.4—Divorce Rates, Michigan and United States Occurrences, 1900-1975

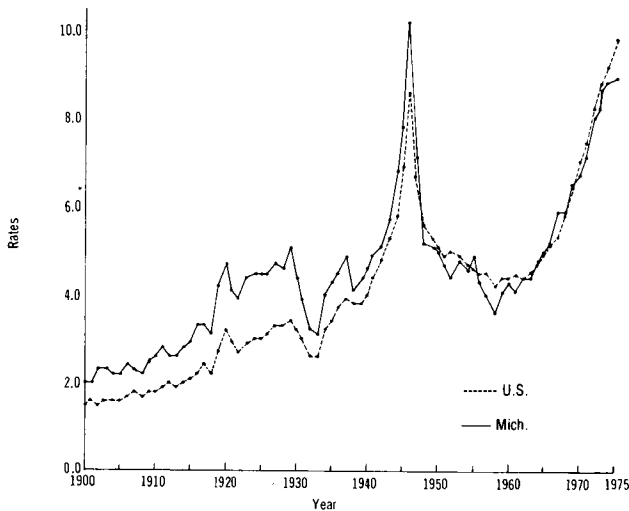
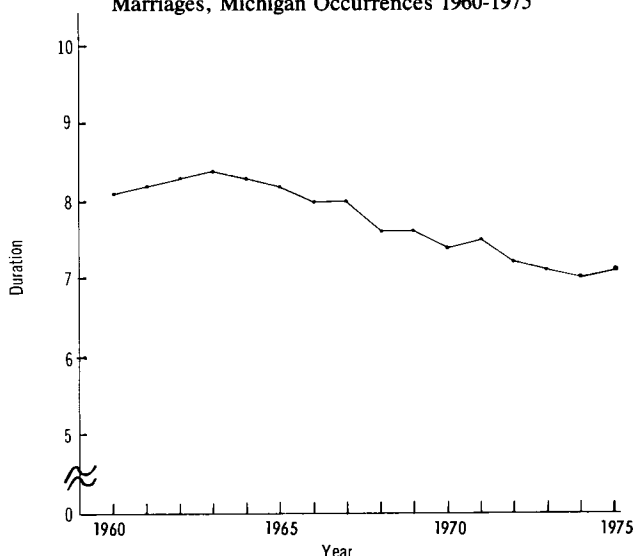


TABLE 3.13—Divorces and Annulments by Duration of Marriage, Michigan Occurrences, 1965 and 1975

DURATION IN YEARS	1965			1975		
	NUMBER	PERCENT	CUMULATIVE PERCENT	NUMBER	PERCENT	CUMULATIVE PERCENT
Under 1 Year.....	314	1.6	1.6	409	1.0	1.0
1-4.....	5,991	29.5	31.1	13,348	32.7	33.7
5-9.....	5,193	25.6	56.7	12,218	30.0	63.7
10-14.....	3,213	15.8	72.5	5,913	14.5	78.2
15-19.....	2,542	12.5	85.0	3,404	8.3	86.5
20-24.....	1,486	7.3	92.3	2,417	5.9	92.5
25-29.....	832	4.1	96.4	1,646	4.0	96.5
30-34.....	387	1.9	98.3	650	1.6	98.1
35-39.....	183	0.9	99.2	293	0.7	98.8
40-44.....	75	0.4	99.6	103	0.3	99.1
45-49.....	38	0.2	99.8	41	0.1	99.2
50 and Over.....	8	0.0	99.8	9	0.0	99.2
Not Stated.....	43	0.2	100.0	331	0.8	100.0
Total.....	20,305	100.0	100.0	40,782	99.9	100.0
Median Duration.....	8	000	000	7	000	000

FIGURE 3.5—Median Duration of Divorced and Annulled Marriages, Michigan Occurrences 1960-1975



number of existent marriages of less than two years duration has been decreasing. Without compensatory relative increases in the divorce rates of short duration marriages, the overall median would be expected to rise.

MINOR CHILDREN OF DIVORCED COUPLES

The number of children under 18 affected by divorce in 1975 was 47,619 at a minimum. This is an 18.4 percent increase since 1965. The average number of minor children per divorce, has, nonetheless, dropped slightly, from 1.3 children in 1965 to 1.2 children in 1975. The percentage of divorces with no children present has dropped slightly over the last 10 years while the percentage with one or two children has increased (Table 3.14).

TABLE 3.14—Divorces and Annulments by Children Under 18 Present, Michigan Occurrences, 1965 and 1975

NUMBER OF CHILDREN	DIVORCES AND ANNULMENTS				PERCENTS	
	1965	ESTIMATED TOTAL CHILDREN (MINIMUM) ¹	1975	ESTIMATED TOTAL CHILDREN (MINIMUM) ¹	1965	1975
Zero.....	8,517	0	16,647	0	41.9	40.8
One.....	4,193	4,193	9,739	9,739	20.7	23.9
Two.....	3,418	6,836	8,060	16,120	16.8	19.8
Three.....	2,126	6,378	3,776	11,328	10.5	9.3
Four.....	1,112	4,448	1,533	6,132	5.5	3.8
Five or More.....	797	3,985	860	4,300	3.9	2.1
Not Stated.....	142	000	167	000	0.7	0.4
Total.....	20,305	25,840	40,782	47,619	100.0	100.1

¹ Total children for marriages involving 5 or more children under 18 is not available.

GROUND FOR DIVORCE

In 1965, cruelty was the primary grounds for divorce in 92.5 percent of the cases granted. Since the passage of the "no fault" divorce law, effective January 1, 1972, legal grounds are seldom claimed. In 1975, 99 percent of all Michigan divorces were claimed as "no fault" divorces (Table 3.15).

TABLE 3.15—Divorces and Annulments by Legal Grounds for Decree, Michigan Occurrences, 1965 and 1975

LEGAL GROUNDS	1965		1975	
	NO.	PERCENT	NO.	PERCENT
Cruelty.....	18,782	92.5	41	0.1
Desertion.....	673	3.3	1	0.0
Nonsupport.....	231	1.1	2	0.0
Fraud.....	184	0.9	90	0.2
Bigamy.....	25	0.1	3	0.0
Conviction of Crime.....	17	0.1	1	0.0
Adultery.....	22	0.1	—	—
Drunkenness.....	14	0.1	—	—
No Fault.....	—	—	40,356	99.0
Other.....	34	0.2	273	0.7
Not Stated.....	323	1.6	15	0.0
Total.....	20,305	100.0	40,782	100.0

REFERENCE APPENDIX

SECTION IV

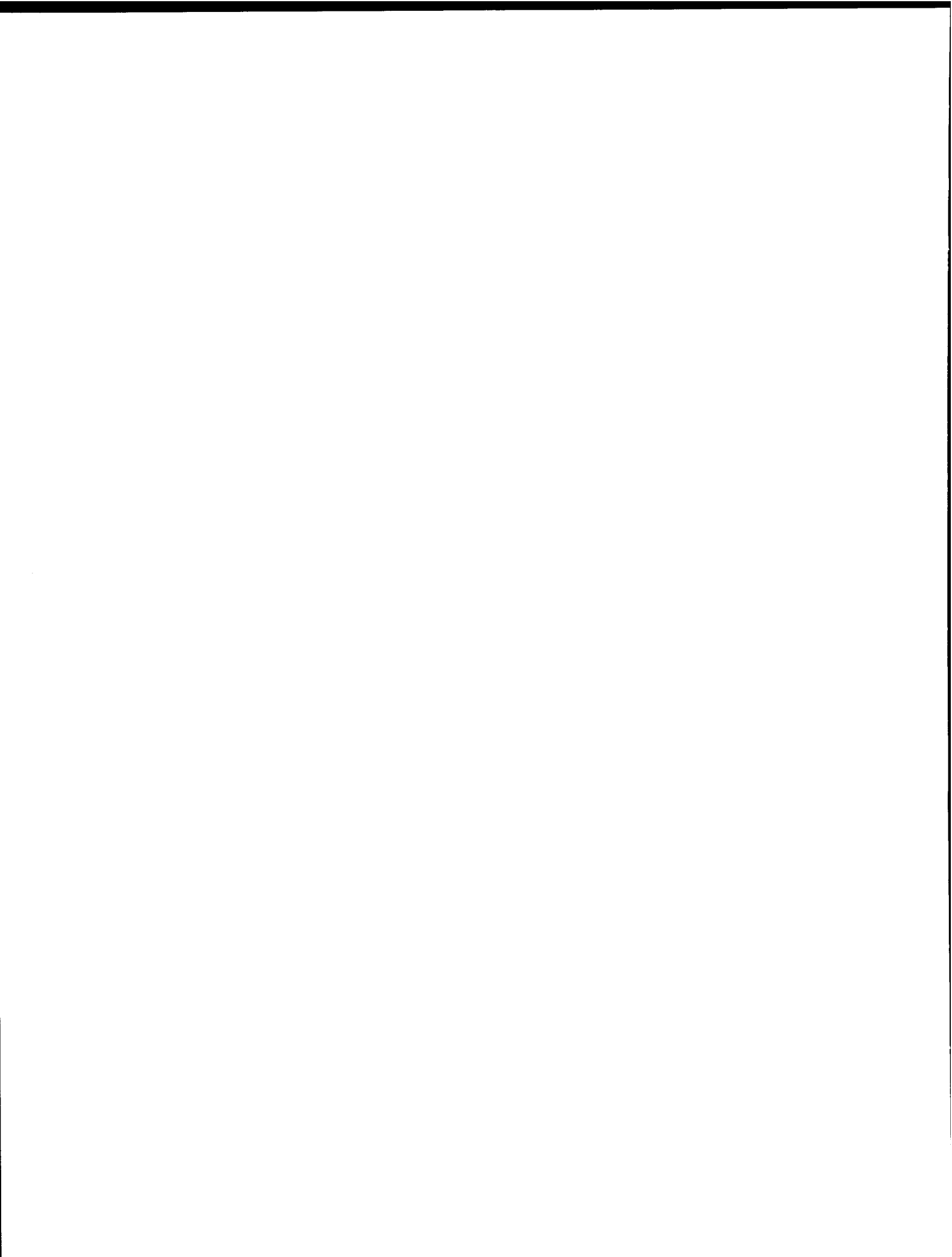


TABLE 4.1

POPULATION; LIVE BIRTHS - TOTAL AND ILLEGITIMATE; DEATHS - ALL AGES, INFANT, NEONATAL, PERINATAL, FETAL, MATERNAL, AND DEATHS DUE TO IMMATURITY; MARRIAGES; AND DIVORCES
MICHIGAN, 1900 - 1975

(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	
		Total	Illegitimate ²	All Ages	Under 1 Year ³	Under 28 Days	Perinatal	Due to 4 Immaturity	Fetal	Maternal			
1900	2,420,982	43,699	332	32,453	6,866								
1901	2,459,901	43,221	365	32,834	6,319								
1902	2,498,820	43,546	383	31,472	5,949								
1903	2,537,739	46,020	490	33,176	6,488								
1904	2,576,658	47,508	562	34,494	6,419								
1905	2,615,578	46,976	444	34,679	7,054								
1906	2,654,497	58,599	1,090	37,033	7,952								
1907	2,693,416	59,029	1,041	36,701	6,906								
1908	2,732,335	64,772	888	36,761	7,697								
1909	2,771,254	64,323	1,068	36,313	7,443								
1910	2,810,173	64,109	1,054	39,913	7,998								
1911	2,895,997	65,756	1,083	38,007	7,131								
1912	2,981,821	69,537	1,222	38,804	6,985								
1913	3,067,645	73,058	1,227	40,827	7,659								
1914	3,153,469	76,761	1,192	39,906	7,431								
1915	3,239,293	81,100	1,363	40,441	6,943								
1916	3,325,116	87,062	1,351	46,047	8,415								
1917	3,410,940	89,419	1,101	47,236	7,916								
1918	3,496,764	91,261	1,142	54,617	8,197								
1919	3,582,588	84,062	1,002	45,636	7,560								
1920	3,668,412	92,245	1,445	51,982	8,587								
1921	3,785,799	96,035	1,346	44,186	7,584								
1922	3,903,186	90,042	1,180	43,817	6,730								
1923	4,020,573	92,956	1,210	49,333	7,477								
1924	4,137,960	98,187	1,443	47,304	7,088								
1925	4,255,347	98,983	1,258	49,417	7,498								
1926	4,372,734	98,289	1,669	54,080	7,620								
1927	4,490,121	99,940	1,872	50,600	6,766								
1928	4,607,508	97,462	1,853	54,755	6,806								
1929	4,724,895	98,695	1,632	56,117	6,605								
1930	4,842,325	98,882	1,600	51,561	6,213								
1931	4,883,703	90,547	1,633	49,068	5,187								
1932	4,925,081	85,254	1,697	49,569	4,630								
1933	4,966,459	80,482	2,041	48,507	4,094								
1934	5,007,837	83,944	2,124	50,440	4,377								
1935	5,049,216	87,403	2,194	51,051	4,170								
1936	5,090,594	88,457	2,157	54,777	4,679								
1937	5,131,972	91,566	2,234	53,468	4,374								
1938	5,173,350	96,962	2,331	50,678	4,319								
1939	5,214,728	94,432	2,217	52,017	3,952								
1940	5,256,106	99,106	2,280	52,092	4,022								
1941	5,437,546	107,498	2,370	52,671	4,166								
1942	5,538,856	124,068	2,532	52,738	4,606								
1943	5,577,329	125,441	2,569	56,774	4,804								
1944	5,377,329	113,586	3,115	54,016	4,326								
1945	5,435,092	111,557	3,485	53,541	4,008								
1946	5,708,415	138,572	3,908	54,856	4,541								
1947	6,069,000	160,275	4,311	56,807	5,055								
1948	6,195,000	153,726	4,310	56,520	4,617								
1949	6,352,000	156,469	3,953	57,107	4,520								
1950	6,371,766	160,055	4,425	57,567	4,214								
1951	6,545,000	172,451	4,367	59,181	4,505								
1952	6,708,000	177,835	4,513	59,138	4,689								
1953	6,852,000	182,968	4,770	62,087	4,728								
1954	7,024,000	192,104	5,610	60,706	4,795								
1955	7,236,000	196,294	5,883	63,087	4,873								
1956	7,516,000	206,068	6,494	64,352	5,047								
1957	7,803,000	208,488	6,789	66,435	5,093								
1958	7,866,000	202,690	6,816	65,899	4,980								
1959	7,960,000	198,301	6,729	66,812	4,846								
1960	7,823,194	195,056	7,200	67,912	4,702								
1961	7,903,000	192,825	8,017	67,375	4,504								
1962	7,939,000	182,790	7,998	70,049	4,367								
1963	8,030,000	178,871	8,769	72,438	4,150								
1964	8,100,000	175,103	9,724	72,129	4,043								
1965	8,199,283	166,464	10,888	73,665	3,936								
1966	8,314,070	165,794	12,299	74,596	3,751								
1967	8,615,000	162,756	13,403	75,360	3,595								
1968	8,675,000	159,058	14,451	76,855	3,438								
1969	8,734,000	165,760	16,329	76,693	3,356								
1970	8,875,083	171,667	18,712	76,321	3,492								
1971	8,996,000	162,244	19,098	77,395	3,157								
1972	9,013,475	146,854	19,526	79,210	2,801								
1973	9,061,000	141,550	20,299	78,522	2,561								
1974	9,098,000	137,414	18,733	76,143	2,387								
1975	9,157,000	133,931	19,674	74,522	2,205								

¹1900 - 1960: United States Bureau of Census April 1 Census counts and July 1 estimates.
1961 - 1964: University of Michigan Population Studies Center July 1 estimates.

1965 - 1969: Michigan Center for Health Statistics July 1 estimate.

1970: United States Bureau of Census April 1 Census count.

1971 - 1975: United States Bureau of Census July 1 estimates.

²For the years 1900 - 1910 and 1912, illegitimate live births also include illegitimate fetal deaths.
³For years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.

⁴For 1910 through 1921 deaths due to immaturity also include deaths from congenital debility. Beginning with the year 1968, the category of deaths due to immaturity is no longer considered for primary mortality coding unless it is the only cause of death entered on the certificate. Previously this category included Immaturity Unqualified plus Immaturity with mention of any other Subsidiary Condition.

⁵Estimate

Office of Vital and Health Statistics
Michigan Department of Public Health

TABLE 4.2

LIVE BIRTH RATES - TOTAL AND ILLEGITIMATE; DEATH RATES - ALL AGES, INFANT, NEONATAL, PERINATAL,
MATERNAL AND DEATH RATES DUE TO IMMATURITY; FETAL DEATH RATIO; MARRIAGE AND DIVORCE RATES
MICHIGAN, 1900-1975

(Birth rate, death rate for all ages, rate of persons married and rate of persons divorced per 1,000 population. Illegitimate live birth ratio, fetal death ratio, death rates under 1 year, under 28 days, and death rates due to immaturity per 1,000 live births. Maternal death rates per 10,000 live births. Perinatal death rate - number of deaths under 1 week and fetal deaths per 1,000 live births and fetal deaths.)

Year	LIVE BIRTHS		DEATHS						PERSONS		
	Total	Illegitimate	All Ages	Under 1 Year	Under 28 Days	Perinatal	Due to 3 Immaturity	Fetal	Maternal	Married	Divorced
1900	18.1	7.6	13.4	157.1			14.2	30.3	103.4	19.2	2.0
1901	17.6	8.4	13.3	146.2			12.1	34.7	122.9	19.6	2.0
1902	18.2	8.4	12.6	130.6			13.3	39.4	102.8	20.5	2.3
1903	18.1	10.6	13.1	141.0			11.8	39.4	92.8	20.5	2.3
1904	18.4	11.8	13.4	135.1			13.3	40.2	91.8	19.3	2.2
1905	18.0	9.5	13.3	150.2			16.0	43.5	88.6	20.1	2.2
1906	22.1	18.6	14.0	135.7			14.2	40.2	68.3	20.7	2.4
1907	21.9	17.6	13.6	117.0			14.5	39.9	66.2	20.7	2.3
1908	23.7	13.7	13.5	118.8			15.1	41.6	67.9	18.9	2.2
1909	23.2	16.6	13.1	115.7			17.9	39.5	63.0	19.7	2.5
1910	22.8	16.4	14.2	124.8			32.0	39.9	67.2	20.7	2.6
1911	22.7	16.5	13.1	108.4			33.8	41.3	68.6	20.6	2.8
1912	23.3	17.6	13.0	100.4			33.6	41.8	56.9	21.3	2.6
1913	23.8	16.8	13.3	104.8			33.9	40.4	72.3	21.9	2.6
1914	24.3	15.5	12.7	96.8			31.1	40.6	66.0	22.4	2.8
1915	25.0	16.8	12.5	85.6			27.2	41.4	60.2	21.9	2.9
1916	26.2	15.5	13.8	96.7			28.7	42.4	57.8	24.1	3.3
1917	26.2	12.3	13.8	88.5			26.5	39.7	65.5	25.1	3.3
1918	26.1	12.5	15.6	89.8			25.9	40.4	77.7	19.0	3.1
1919	23.5	11.9	12.7	89.9			26.0	40.0	68.8	25.4	4.2
1920	25.1	15.7	14.2	93.1			27.2	40.9	86.2	27.7	4.7
1921	25.4	14.0	11.7	79.0			25.8	38.2	63.0	21.9	4.1
1922	23.1	13.1	11.2	74.7			19.9	42.0	61.2	22.3	3.9
1923	23.1	13.0	12.3	80.4			20.6	39.3	62.7	24.7	4.4
1924	23.7	14.7	11.4	72.2	41.9	66.7	20.1	37.7	64.8	24.1	4.5
1925	23.3	12.7	11.6	75.7	40.6	64.9	20.1	37.1	63.5	21.7	4.5
1926	22.5	17.0	12.4	77.5	41.2	66.3	20.2	38.8	64.2	18.7	4.5
1927	22.3	18.7	11.3	67.7	39.2	65.5	19.1	38.4	66.7	16.2	4.7
1928	21.2	19.0	11.9	69.8	38.4	65.2	18.9	38.0	61.9	16.2	4.6
1929	20.9	16.5	11.9	66.9	38.3	64.6	18.8	37.6	62.5	15.6	5.1
1930	20.4	16.2	10.6	62.8	36.6	63.5	18.3	37.6	60.4	12.2	4.4
1931	18.5	18.0	10.1	57.3	34.1	60.2	16.3	35.6	59.5	11.8	3.9
1932	17.3	19.9	10.1	54.3	32.8	59.0	16.1	35.0	57.8	11.6	3.2
1933	16.2	25.4	9.8	50.9	32.2	58.9	16.9	34.5	55.5	13.3	3.1
1934	16.8	25.3	10.1	52.1	32.4	55.2	16.9	31.1	53.6	17.3	4.0
1935	17.3	25.1	10.1	47.7	29.2	53.6	15.9	31.1	50.1	17.9	4.3
1936	17.4	24.4	10.8	50.6	29.9	51.9	15.8	29.7	48.0	18.5	4.5
1937	17.8	24.4	10.4	47.8	29.5	52.2	15.5	29.6	35.6	18.7	4.9
1938	18.7	24.0	9.8	44.5	28.2	50.0	15.3	28.2	35.6	11.6	4.1
1939	18.1	23.5	10.0	41.8	27.5	48.5	14.8	27.2	29.6	14.5	4.4
1940	18.9	23.0	9.9	40.6	26.5	46.7	13.1	26.3	29.5	17.6	4.6
1941	19.8	22.0	9.7	38.8	25.0	45.3	12.6	25.8	27.7	18.8	4.9
1942	22.4	20.4	9.5	37.1	24.9	43.9	12.7	24.7	21.0	18.6	5.1
1943	23.3	20.5	10.6	38.3	23.7	43.2	11.9	25.6	18.9	16.5	5.7
1944	21.1	27.4	10.0	38.1	24.5	44.1	12.4	25.3	17.4	15.5	6.8
1945	20.5	31.2	9.9	35.9	23.9	42.9	12.0	24.2	14.9	17.8	7.8
1946	24.3	28.2	9.6	32.8	24.0	42.2	12.5	22.9	11.8	27.6	10.2
1947	26.4	26.9	9.4	31.5	22.9	40.2	12.2	21.4	10.8	23.5	7.1
1948	24.8	28.0	9.1	30.0	21.8	38.0	11.8	20.4	7.8	20.0	5.2
1949	24.6	25.3	9.0	28.9	20.7	36.0	11.5	19.1	6.7	16.7	5.1
1950	25.1	27.6	9.0	26.3	19.0	35.4	6.8	19.3	5.7	18.3	5.0
1951	26.3	25.3	9.0	26.1	19.1	34.7	7.1	18.3	5.5	16.3	4.7
1952	26.5	25.4	8.8	26.4	19.2	34.6	7.1	18.1	4.6	15.1	4.4
1953	26.7	26.1	9.1	25.8	18.5	33.2	6.1	17.4	4.3	15.6	4.8
1954	27.3	29.2	8.6	25.0	18.5	32.8	6.8	16.9	4.9	14.6	4.6
1955	27.1	30.0	8.7	24.8	18.9	32.0	6.5	15.4	3.1	15.4	4.9
1956	27.4	31.5	8.6	24.5	18.4	31.8	6.0	15.7	4.1	15.2	4.3
1957	26.7	32.6	8.5	24.4	18.6	31.5	6.3	15.1	3.8	14.1	4.0
1958	25.8	33.6	8.4	24.6	18.7	31.7	6.0	15.3	3.4	14.0	3.6
1959	24.9	33.9	8.4	24.4	18.5	31.1	6.1	14.8	3.6	14.8	4.1
1960	24.9	36.9	8.7	24.1	18.4	31.5	5.9	15.4	3.8	15.6	4.3
1961	24.4	41.6	8.5	23.9	18.0	30.0	5.2	14.2	4.0	16.0	4.1
1962	23.0	43.8	8.8	23.9	17.8	30.6	5.0	14.8	3.1	16.4	4.4
1963	22.3	49.0	9.0	23.2	17.4	29.8	4.6	14.2	4.0	17.0	4.4
1964	21.6	55.5	8.9	23.1	17.5	29.8	4.6	14.1	3.5	18.2	4.8
1965	20.3	65.4	9.0	23.6	17.5	30.4	4.6	14.9	3.2	19.8	5.0
1966	19.9	74.2	9.0	22.6	17.1	29.2	4.9	13.8	3.3	20.2	5.2
1967	18.9	82.4	8.7	22.1	16.7	28.4	4.4	13.5	3.2	19.6	5.9
1968	18.3	90.9	8.9	21.6	16.5	27.8	3.1	13.0	2.8	21.0	5.9
1969	19.0	98.5	8.8	20.2	15.4	26.7	2.8	13.1	1.6	21.4	6.5
1970	19.3	109.0	8.6	20.3	16.6	26.0	2.5	12.0	1.7	20.7	6.7
1971	18.0	117.7	8.6	19.5	14.9	25.2	2.4	11.9	2.0	20.5	7.1
1972	16.3	133.0	8.8	19.1	14.4	24.9	2.2	12.1	2.4	21.0	7.9 ⁴
1973	15.6	143.4	8.7	18.1	13.4	23.7	2.9	11.9	1.8	20.9	8.2 ⁴
1974	15.1	136.3	8.4	17.4	12.6	21.3	1.7	10.6	1.4	19.3	8.8 ⁴
1975	14.6	146.9	8.1	16.5	11.7	19.9	1.4	10.3	1.2	18.1	8.9

¹For the years 1900-1910 and 1912, illegitimate live births also include illegitimate fetal deaths.

²For years prior to 1950 deaths under 1 month of age are included in deaths under 28 days.

³For 1910 through 1921 deaths due to immaturity also include deaths from congenital debility.

⁴Estimate

Office of Vital and Health Statistics
Michigan Department of Public Health

TABLE 4.3 Number of Live Births by Age of Mother

Michigan Residents, 1920-1975

YEAR	AGE OF MOTHER									AGE NOT STATED
	ALL AGES ¹	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
1920	92,740	34	8,129	26,344	26,251	17,521	10,427	3,523	336	175
1921	96,322	39	8,747	26,583	27,292	18,433	11,150	3,572	337	169
1922	90,209	28	8,125	24,575	25,154	17,690	10,584	3,485	343	225
1923	93,066	37	8,725	25,887	25,459	18,072	10,770	3,476	382	258
1924	98,025	38	9,877	28,000	25,781	18,707	11,395	3,682	321	224
1925	99,220	62	10,248	28,116	26,204	18,869	11,406	3,695	379	241
1926	98,781	76	10,496	28,479	25,876	18,444	11,219	3,568	254	269
1927	100,178	59	10,685	29,302	25,707	18,790	11,287	3,722	332	294
1928	97,797	54	10,788	28,895	25,003	17,953	10,913	3,558	315	318
1929	99,134	56	11,312	30,582	25,557	16,957	10,555	3,523	293	299
1930	99,325	60	11,476	29,956	25,861	17,125	10,684	3,582	291	290
1931	90,929	61	10,109	27,255	23,806	15,937	9,905	3,317	302	237
1932	85,736	62	9,297	25,686	22,608	14,988	9,314	3,250	291	240
1933	80,923	52	8,642	23,874	21,618	14,298	8,795	3,173	261	210
1934	83,925	48	9,039	25,458	22,507	14,968	8,391	3,050	259	205
1935	87,446	47	9,808	27,631	22,938	15,026	8,473	3,029	284	210
1936	88,427	53	9,764	28,681	23,584	14,814	8,194	2,866	274	197
1937	91,539	54	10,524	30,532	24,366	15,022	7,949	2,653	242	197
1938	96,963	64	11,024	32,581	26,116	15,690	8,397	2,698	253	140
1939	94,302	51	10,368	31,036	26,095	15,976	8,021	2,416	209	130
1940	99,021	51	10,671	32,960	27,860	16,549	8,146	2,390	202	192
1941	107,458	50	11,309	36,833	31,067	17,132	8,351	2,361	200	155
1942	123,886	66	12,721	43,947	36,034	19,367	8,985	2,445	202	119
1943	125,778	67	11,934	41,627	37,773	21,449	9,980	2,615	184	149
1944	114,700	76	10,113	36,096	33,654	21,094	10,636	2,714	182	135
1945	112,655	73	9,294	32,790	33,143	22,831	11,185	2,970	229	140
1946	139,277	72	10,899	45,999	41,985	25,184	11,811	3,002	223	102
1947	161,085	91	15,594	55,954	47,793	26,296	12,009	3,073	182	93
1948	154,730	95	16,245	53,520	45,059	25,268	11,391	2,888	173	91
1949	157,178	117	16,404	53,608	46,363	25,971	11,565	2,906	181	63
1950	160,955	111	16,310	53,442	48,186	27,422	12,392	2,831	169	92
1951	173,506	104	17,974	57,340	52,044	29,674	13,086	3,040	160	84
1952	178,634	134	17,206	58,012	54,198	31,756	13,880	3,176	220	52
1953	182,810	166	18,510	58,070	54,734	32,948	14,798	3,350	190	44
1954	192,322	208	20,522	50,776	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	62,369	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

¹Total 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.

YEAR	SOURCE
1920-1923	Unpublished Tables from the National Center for Health Statistics.
1924-1932	Bureau of the Census publication, <u>Birth, Stillbirth and Infant Mortality Statistics for Birth Registration Areas of the United States.</u>
1933-1936	Unpublished Tables from the National Center for Health Statistics.
1937-1949	Bureau of the Census publication, <u>Vital Statistics of the United States series.</u>
1950-1959	Department of Health Education and Welfare publication, <u>Vital Statistics of the United States series.</u>

TABLE 4.4 Live Birth Rates by Five Year Age Groups of Mother

Michigan Residents 1920-1975
(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	45-49	
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	111.2	79.4	50.8	20.8	2.2	2,148.0
1933	0.2	39.7	111.6	105.2	75.0	47.7	20.0	1.9	2,006.5
1934	0.2	41.0	117.6	108.4	77.8	45.3	18.9	1.8	2,055.0
1935	0.2	43.9	126.2	109.4	77.4	45.5	18.5	2.0	2,115.5
1936	0.2	43.1	129.5	111.4	75.5	43.8	17.3	1.8	2,113.0
1937	0.2	45.9	136.4	113.9	75.9	42.3	15.8	1.6	2,160.0
1938	0.3	47.4	143.9	120.9	78.5	44.4	15.8	1.6	2,264.0
1939	0.2	44.1	135.6	119.6	79.2	42.3	14.0	1.3	2,181.5
1940	0.2	44.9	142.8	126.8	81.5	42.8	13.7	1.2	2,269.5
1941	0.2	48.1	157.8	137.1	81.6	42.5	13.2	1.2	2,408.5
1942	0.3	54.5	186.6	155.3	89.9	44.7	13.4	1.2	2,729.5
1943	0.3	51.6	175.1	159.0	97.1	48.6	14.1	1.1	2,734.5
1944	0.3	44.1	150.5	138.5	93.2	50.6	14.3	1.0	2,462.5
1945	0.3	40.8	135.5	133.4	98.5	52.1	15.4	1.3	2,386.5
1946	0.3	48.3	188.5	165.3	106.2	53.8	15.3	1.2	2,894.5
1947	0.4	69.7	227.3	184.2	108.4	53.6	15.4	1.0	3,300.0
1948	0.4	73.2	215.5	170.0	101.9	49.8	14.2	1.0	3,130.0
1949	0.5	74.6	214.0	171.4	102.5	49.6	14.1	1.0	3,138.5
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	176.2	154.2	76.2	32.4	8.3	0.4	2,584.5
1971	1.0	63.5	157.3	141.4	71.8	28.8	7.3	0.4	2,357.5
1972	1.0	62.5	136.4	130.7	63.4	23.9	5.8	0.3	2,120.0
1973	1.2	60.1	131.9	120.9	55.8	22.1	4.7	0.2	1,984.5
1974	1.1	55.4	126.0	120.2	52.4	18.1	4.5	0.2	1,889.5
1975	1.0	51.7	118.8	116.8	49.2	17.7	4.3	0.2	1,798.5

SOURCE: Population figures used for 1920-1970 rates are from General Population Characteristics, Michigan, USBC, 1971, with arithmetic extrapolation between census years. 1971-1975 population from Michigan Health Statistics for 1971-1975.

TABLE 4.5
 REPORTED CASES OF CERTAIN COMMUNICABLE DISEASES
 MICHIGAN OCCURRENCES, 1900-1975

Year	Diphtheria	Streptococcal Sore Throat (Including Scarlet Fever)	Smallpox	Typhoid Fever	Whooping Cough	Measles	Hepatitis, Infectious and Serum	Tuberculosis (all forms) ²	Meningococcal Infections ¹	Poliomyelitis	Syphilis ²	Gonorrhea ²	Chancroid ²
1900	2,706	6,734	694	5,122	3,375	20,356		2,721	654				
1901	2,498	7,726	5,088	3,002	2,955	4,629		2,915	506				
1902	2,993	6,582	7,086	2,456	3,534	11,978		2,658	528				
1903	3,670	5,353	6,341	2,840	4,172	8,941		2,745	525				
1904	3,510	4,088	5,753	3,028	1,779	10,386		2,928	448				
1905	2,159	2,286	2,985	2,774	1,196	6,061		2,590	577				
1906	3,648	3,066	1,240	3,163	1,364	7,403		2,653	533				
1907	2,935	2,514	1,712	1,953	872	12,139		2,699	575				
1908	2,658	3,087	2,306	2,656	1,248	4,775		2,705	487				
1909	3,109	5,153	1,533	2,694	1,054	9,047		3,423	457				
1910	3,433	6,501	3,319	3,361	1,136	13,934		4,415	522	104			
1911	3,762	5,177	898	2,660	1,897	9,639		5,254	478	68			
1912	3,294	4,533	1,127	2,847	1,255	2,834		1,958	88	78			
1913	5,505	4,140	1,995	2,253	929	9,185		1,920	165	56			
1914	5,149	3,769	1,527	2,167	1,822	11,356		2,566	205	49			
1915	4,386	3,402	1,094	1,956	2,258	4,438		3,648	107	95			
1916	5,625	6,932	1,581	2,513	1,837	12,143		7,076	163	598			
1917	8,499	14,322	3,674	1,723	3,211	14,472		4,856	75	91			
1918	6,128	5,944	5,241	1,339	2,563	6,726		3,655	95	121			
1919	7,896	6,269	2,381	1,254	1,829	8,885		4,231	75	155	5,077	7,910	186
1920	10,360	10,280	4,818	1,421	7,171	22,364		4,994	203	67	8,117	11,463	262
1921	12,075	10,893	4,512	1,837	6,696	3,043		5,708	173	483	7,421	9,774	153
1922	8,513	9,687	1,230	1,108	5,642	12,107		5,573	159	43	7,900	9,717	90
1923	7,725	12,868	2,311	982	7,617	30,041		5,471	186	39	10,480	9,597	235
1924	6,011	12,989	4,527	782	4,364	18,290		5,570	157	647	13,000	10,490	183
1925	3,925	12,303	784	962	7,576	10,332		5,785	128	99	14,668	10,660	104
1926	5,377	12,681	549	583	8,776	39,946		5,387	96	107	14,872	10,707	103
1927	4,575	11,011	1,467	581	6,818	8,303		5,406	138	282	15,713	9,318	107
1928	3,724	10,486	1,335	390	9,700	27,039		5,885	276	77	15,323	8,592	100
1929	4,618	14,245	2,410	310	9,340	18,040		6,248	1,864	180	16,606	9,661	333
1930	3,206	11,174	2,375	504	7,937	28,129		5,128	901	208	16,538	8,554	163
1931	1,831	13,023	915	424	11,448	6,212		6,132	293	1,137	14,662	7,843	170
1932	1,188	15,255	222	513	13,091	42,129		7,103	129	112	11,969	6,963	140
1933	1,152	16,419	46	453	11,720	21,654		6,624	86	93	7,691	6,447	85
1934	614	19,238	59	486	11,255	6,528		5,264	53	230	6,483	6,188	132
1935	645	11,849	16	355	13,427	79,061		4,642	113	614	6,416	6,372	110
1936	661	12,650	32	287	14,287	2,453		5,157	120	152	6,401	6,460	133
1937	842	24,798	152	241	11,426	6,154		6,469	87	421	8,708	7,072	244
1938	619	18,362	274	285	14,563	79,400		6,335	69	59	14,684	7,046	341
1939	452	15,836	371	177	8,997	12,948		6,119	46	904	13,144	6,364	286
1940	264	10,366	76	120	11,757	20,206		6,063	49	1,228	9,999	7,650	218
1941	242	8,756	114	147	16,512	70,748		5,371	49	270	11,370	8,767	359
1942	243	7,503	17	74	11,602	8,569		5,720	66	162	12,461	8,753	276
1943	281	5,044	18	115	12,091	51,764		6,546	757	255	15,933	9,526	260
1944	419	8,963	10	78	4,049	26,711		6,419	857	884	17,288	11,987	185
1945	630	9,304	16	59	5,339	6,328	134	5,471	270	215	16,046	12,565	244
1946	385	5,977	3	85	8,116	42,261	34	5,548	185	1,091	18,051	12,635	206
1947	238	4,834	1	77	10,472	9,574	14	6,470	113	646	15,276	10,989	216
1948	126	5,934	-	49	2,668	42,952	9	6,109	107	775	12,100	9,448	465
1949	119	8,852	-	48	4,157	20,279	28	5,953	120	2,909	8,740	9,427	336
1950	84	4,665	-	43	9,184	38,245	48	5,538	133	2,029	8,830	8,678	202
1951	48	8,181	-	33	3,156	15,227	325	6,144	138	1,463	6,532	8,494	187
1952	45	8,325	-	53	1,992	32,941	283	6,152	169	3,912	7,377	7,691	58
1953	12	5,885	-	31	2,932	23,334	868	5,643	151	2,346	5,619	8,790	43
1954	57	5,142	-	30	5,620	40,725	1,419	5,764	150	2,168	4,686	9,940	47
1955	59	5,880	-	24	4,249	23,882	1,244	5,488	170	1,177	4,865	10,306	58
1956	220	7,349	-	56	1,907	41,966	814	5,515	182	656	4,785	9,598	52
1957	130	7,193	-	12	1,363	19,070	657	5,011	175	498	4,571	8,428	97
1958	6	5,380	-	18	1,233	41,448	688	5,587	228	1,228	4,267	8,621	178
1959	3	9,452	-	8	3,001	12,234	1,136	4,743	141	448	3,421	8,033	136
1960	9	9,287	-	14	1,129	36,161	2,113	4,127	169	88	3,647	8,372	112
1961	3	8,347	-	7	639	29,391	4,607	3,838	253	40	3,309	9,505	102
1962	4	8,116	-	12	1,756	25,303	3,280	3,474	139	21	4,331	11,654	75
1963	5	11,964	-	14	1,410	48,752	2,661	3,298	104	18	5,512	11,043	98
1964	1	17,228	-	13	957	30,897	2,472	3,047	80	3	5,220	12,028	106
1965	-	14,622	-	7	612	28,132	2,625	3,069	107	1	5,638	14,319	95
1966	1	13,862	-	7	653	15,251	2,589	3,259	135	1	5,842	15,424	114
1967	1	13,269	-	8	1,058	1,048	1,915	2,951	76	3	5,581	17,088	78
1968	-	10,101	-	1	429	353	2,356	2,618	94	3	5,351	18,153	105
1969	-	9,763	-	6	192	401	3,359	2,133	114	1	3,809	18,534	103
1970	-	11,863	-	14	195	1,834	4,594	1,992	69	2	3,920	20,359	98
1971	1	11,244	-	10	140	2,659	4,828	1,789	64	-	4,800	22,260	113
1972	1	13,304	-	7	116	2,353	4,322	1,632	55	1	4,891	24,750	175
1973	-	24,467	-	14	86	4,552	3,872	1,473	54	-	4,375	31,086	217
1974	-	31,802	-	11	104	2,365	3,599	1,431	54	2	2,722	32,067	171
1975	1	23,777	-	10	98	3,253	2,656	1,271	76	-	1,638	32,583	98

¹Meningococcal infections - Prior to 1952 data were for meningococcal meningitis.
²Tuberculosis, syphilis, gonorrhea and chancroid are resident cases.
³Effective January 1975, a new diagnostic classification system for tuberculosis was adopted. As a result, direct comparison of case counts and rates between 1975 and preceding years will not be possible.

TABLE 4.6

CASE RATES OF CERTAIN REPORTED COMMUNICABLE DISEASES
MICHIGAN OCCURRENCES, 1900-1975

(Rates per 100,000 Population)

Year	Diphtheria	Streptococcal Sore Throat (including Scarlet Fever)	Smallpox	Typhoid Fever	Whooping Cough	Measles	Infectious Hepatitis & Serum	Tuberculosis (all forms) ³	Meningococcal Infections ¹	Poliomyelitis	Syphilis ²	Gonorrhea ²	Chancroid ²
1900	111.8	278.2	28.7	211.6	139.4	840.8		112.4	27.0				
1901	101.5	314.1	206.8	122.0	120.1	188.2		118.5	20.6				
1902	119.8	263.4	283.6	98.3	141.4	479.3		106.4	21.1				
1903	144.6	210.9	249.9	111.9	164.4	352.3		108.2	20.7				
1904	136.2	158.7	223.3	117.5	69.0	403.1		113.6	17.4				
1905	82.5	87.4	114.1	106.1	45.7	231.7		99.0	22.1				
1906	137.4	115.5	46.7	119.2	51.4	278.9		99.9	20.1				
1907	109.0	93.3	63.6	72.5	32.4	450.7		100.2	21.3				
1908	97.3	113.0	84.4	97.2	45.7	174.8		99.0	17.8				
1909	112.2	185.9	55.3	97.2	38.0	326.5		123.5	16.5				
1910	122.2	231.3	118.1	119.6	40.4	495.8		157.1	18.6				
1911	129.9	178.8	31.0	91.8	65.5	332.8		181.4	16.5				
1912	110.5	152.0	37.8	95.5	42.1	95.0		65.7	3.0				
1913	179.5	135.0	65.0	73.4	30.3	299.4		62.6	5.4				
1914	163.3	119.5	48.4	68.7	57.8	360.1		81.4	6.5				
1915	135.4	105.0	33.8	60.4	69.7	137.0		112.6	3.3				
1916	169.2	208.5	47.5	75.6	55.2	365.2		212.8	4.9				
1917	249.2	419.9	107.7	50.5	94.1	424.3		142.4	2.2				
1918	175.2	170.0	149.9	38.3	73.3	192.4		104.5	2.7				
1919	220.4	175.0	66.5	35.0	51.1	248.0		118.1	2.1		141.7	220.8	5.2
1920	282.4	280.2	131.3	38.7	195.5	609.6		136.1	5.5	1.8	221.3	312.5	7.1
1921	318.9	287.7	119.2	48.5	176.9	80.4		150.8	4.6	12.8	196.0	258.2	4.0
1922	218.1	248.2	31.5	28.4	144.5	310.2		142.8	4.1	1.1	202.4	248.9	2.3
1923	192.1	320.1	57.5	24.4	189.5	747.2		136.1	4.6	1.0	260.7	238.7	5.8
1924	145.3	313.9	109.4	18.9	105.5	442.0		134.6	3.8	15.6	314.2	253.5	4.4
1925	92.2	289.1	18.4	22.6	178.0	242.8		135.9	3.0	2.3	344.7	250.5	2.4
1926	123.0	290.0	12.6	13.3	200.7	913.5		123.2	2.2	2.4	340.1	244.9	2.4
1927	101.9	245.2	32.7	12.9	151.8	184.9		120.4	3.1	6.3	349.9	207.5	2.4
1928	80.8	227.6	29.0	8.5	210.5	586.9		127.7	6.0	1.7	332.6	186.5	2.2
1929	97.7	301.5	51.0	6.6	197.7	381.8		132.2	39.4	3.8	351.4	204.5	7.0
1930	66.2	230.8	49.0	10.4	163.9	580.9		105.9	18.6	4.3	341.5	176.6	3.4
1931	37.5	266.7	18.7	8.7	234.4	127.2		125.6	6.0	23.3	300.2	160.6	3.5
1932	24.1	309.7	4.5	10.4	265.8	855.4		144.2	2.6	2.3	243.0	141.4	2.8
1933	23.2	330.6	0.9	9.1	236.0	436.0		133.4	1.7	1.9	154.9	129.8	1.7
1934	12.3	384.2	1.0	9.7	224.8	130.4		105.1	1.1	4.6	129.5	123.6	2.6
1935	12.8	234.7	0.3	7.0	265.9	1,565.8		91.9	2.2	12.2	127.1	126.2	2.2
1936	13.0	248.5	0.6	5.6	280.7	48.2		101.3	2.4	3.0	125.7	126.9	2.6
1937	16.4	483.2	3.0	4.7	222.6	119.9		126.1	1.7	8.2	169.7	137.8	4.8
1938	12.0	354.9	5.3	5.5	281.5	1,534.8		122.5	1.3	1.1	283.8	136.2	6.6
1939	8.7	303.7	7.1	3.4	172.5	248.3		117.3	0.9	17.3	252.0	122.0	5.5
1940	5.0	197.2	1.4	2.3	223.7	384.4		115.3	0.9	23.4	190.2	145.5	4.1
1941	4.5	161.0	2.1	2.7	303.7	1,301.1		98.8	0.9	5.0	209.1	161.2	6.6
1942	4.4	135.5	0.3	1.3	209.5	154.7		103.3	1.2	2.9	225.0	158.0	5.0
1943	5.2	93.8	0.3	2.1	224.8	962.6		121.7	14.1	4.7	296.3	177.1	4.8
1944	7.8	166.7	0.2	1.5	75.3	496.7		119.4	15.9	16.4	321.5	222.9	3.4
1945	11.6	171.2	0.3	1.1	98.2	116.4	2.5	100.7	5.0	4.0	295.2	231.2	4.5
1946	6.7	104.7	0.1	1.5	142.2	740.3	0.6	97.2	3.2	19.1	316.2	221.3	3.6
1947	3.9	79.6	0.0	1.3	172.5	157.8	0.2	106.6	1.9	10.6	251.7	181.1	3.6
1948	2.0	95.8	-	0.8	43.1	693.3	0.1	98.6	1.7	12.5	195.3	152.5	7.5
1949	1.9	139.4	-	0.8	65.4	319.3	0.4	93.7	1.9	45.8	137.6	148.4	5.3
1950	1.3	73.2	-	0.7	144.1	600.2	0.8	86.9	2.1	31.8	138.6	136.2	3.2
1951	0.7	125.0	-	0.5	48.2	232.7	5.0	93.9	2.1	22.4	99.8	129.8	2.9
1952	0.7	124.1	-	0.8	29.7	491.1	4.2	91.7	2.5	58.3	110.0	114.7	0.9
1953	0.2	85.9	-	0.5	42.8	340.5	12.7	82.4	2.2	34.2	82.0	128.3	0.6
1954	0.8	73.2	-	0.4	80.0	579.8	20.2	82.1	2.1	30.9	66.7	141.5	0.7
1955	0.8	81.3	-	0.3	58.7	330.0	17.2	75.8	2.3	16.3	67.2	142.4	0.8
1956	2.9	97.8	-	0.7	25.4	558.4	10.8	73.4	2.4	8.7	63.7	127.7	0.7
1957	1.7	92.2	-	0.2	17.5	244.4	8.4	64.2	2.2	6.4	58.6	108.0	1.2
1958	0.1	68.4	-	0.2	15.7	526.9	8.7	71.0	2.9	15.6	54.2	109.6	2.3
1959	0.0	118.7	-	0.1	37.7	153.7	14.3	59.6	1.8	5.6	43.0	100.9	1.7
1960	0.1	118.7	-	0.2	14.4	462.2	27.0	52.8	2.2	1.1	46.6	107.0	1.4
1961	0.0	105.6	-	0.1	8.1	371.9	58.3	48.6	3.2	0.5	41.9	120.3	1.3
1962	0.1	102.2	-	0.2	22.1	318.7	41.3	43.8	1.8	0.3	54.6	146.8	0.9
1963	0.1	149.0	-	0.2	17.6	607.1	33.1	41.1	1.3	0.2	68.6	137.5	1.2
1964	0.0	212.7	-	0.2	11.8	381.4	30.5	37.6	1.0	0.0	64.4	148.5	1.3
1965	-	178.3	-	0.1	7.5	343.1	32.0	37.4	1.3	0.0	68.8	174.6	1.2
1966	0.0	166.7	-	0.1	7.9	183.4	31.1	39.2	1.6	0.0	70.3	185.5	1.4
1967	0.0	154.0	-	0.1	12.3	12.2	22.2	34.2	0.9	0.0	64.8	198.4	0.9
1968	-	116.4	-	0.0	4.9	4.1	27.2	30.2	1.1	0.0	61.7	209.3	1.2
1969	-	111.8	-	0.1	2.2	4.6	38.5	24.4	1.3	0.0	43.6	212.2	1.2
1970	-	133.7	-	0.2	2.2	20.7	51.8	22.4	0.8	0.0	44.2	229.4	1.3
1971	0.0	125.0	-	0.1	1.6	29.6	53.7	19.9	0.7	-	53.4	247.4	1.0
1972	0.0	147.6	-	0.1	1.3	26.1	48.0	18.1	0.6	0.0	54.3	274.6	1.9
1973	-	270.0	-	0.2	0.9	50.2	42.7	16.3	0.6	-	48.3	343.1	2.4
1974	-	349.5	-	0.1	1.1	26.0	37.0	15.7	0.6	0.0	29.9	352.5	1.9
1975	0.0	259.7	-	0.1	1.1	35.5	29.0	13.9	0.8	-	17.9	355.8	1.1

¹Meningococcal infections - Prior to 1952 data were for meningococcal meningitis.²Tuberculosis, syphilis, gonorrhea and chancroid are resident rates.³Effective January, 1975, a new diagnostic classification system for tuberculosis was adopted. As a result direct comparison of case counts and rates between 1975 and preceding years will not be possible.

TABLE 4.8

NUMBER OF DEATHS AND DEATH RATES BY SPECIFIED CAUSES
MICHIGAN RESIDENTS, 1900-1975
(Rates per 100,000 Population)

Year	Heart Disease		Cancer (all forms)		Vascular Lesions Affecting Central Nervous System ³		Accidents (all forms) ⁴		Motor Vehicle Accidents ⁵		Diabetes		Pneumonia ⁶		Immaturity ⁷		General Arteriosclerosis ⁸	
	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	620	25.6		
1901	3,040	123.6	1,484	60.3	2,147	87.3	1,901	77.3			264	10.7	2,901	117.9	524	21.3		
1902	3,302	132.1	1,483	59.3	2,097	83.9	1,796	71.9			289	11.6	2,637	105.5	608	24.3		
1903	3,702	145.9	1,694	66.8	2,321	91.5	2,017	79.5			265	10.4	2,607	102.7	542	21.4		
1904	3,981	154.5	1,728	67.1	2,431	94.3	2,035	79.0			298	11.6	2,646	102.7	632	24.5		
1905	3,715	142.0	1,693	64.7	2,405	91.9	2,034	77.8			267	10.2	2,417	92.4	751	28.7		
1906	3,933	148.2	1,736	65.4	2,554	96.2	2,126	80.1			311	11.7	2,621	98.7	830	31.3		
1907	4,269	158.5	1,747	64.9	2,690	99.9	2,209	82.0			352	13.1	3,018	112.0	855	31.7		
1908	4,202	153.8	1,921	70.3	2,630	96.3	2,036	74.5			359	13.1	2,313	84.7	975	35.7		
1909	4,354	157.1	1,948	70.3	2,739	98.8	1,903	68.7			374	13.5	2,265	81.7	1,152	41.6		
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	2,050	72.9		
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	2,223	76.8		
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	2,340	78.5		
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	2,480	80.8		
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	2,391	75.8		
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	2,207	68.1		
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	2,498	75.1		
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	2,369	69.5		
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	2,362	67.5		
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	2,183	60.9		
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	2,512	68.5		
1921	6,176	163.1	3,375	89.1	3,931	103.8	2,676	65.4	403	10.6	586	15.5	2,849	75.3	2,481	65.5		
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	1,793	45.9		
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	1,911	47.5		
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	1,970	47.6		
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	1,987	46.7		
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	1,986	45.4		
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	1,911	42.6		
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	1,846	40.1		
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	1,853	39.2		
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	1,805	37.3	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	1,473	30.2	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	1,372	27.9	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	1,364	27.5	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	1,419	28.3	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	1,389	27.5	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	1,395	27.4	967	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	1,415	27.6	1,987	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	1,484	28.7	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	1,396	26.8	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	1,298	24.7	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	1,353	24.9	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	1,575	28.4	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	1,488	27.7	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	1,412	26.3	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	1,339	24.6	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	1,735	30.4	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	1,953	32.2	1,031	17.0
1948	18,726	302.3	8,336	134.6	5,272	85.1	4,017	64.8	1,545	24.9	1,771	28.6	1,853	29.9	1,820	29.4	1,085	17.5
1949	19,137	301.3	8,697	136.9	5,438	85.6	3,838	60.4	1,493	23.5	1,884	29.7	1,885	29.7	1,795	28.3	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	1,096	17.2	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	1,232	18.8	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	1,256	18.7	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	1,114	16.3	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	1,298	18.5	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	1,272	17.6	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	1,244	16.6	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	1,322	16.9	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	1,208	15.4	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	1,201	15.1	1,403	17.6
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	1,148	14.7	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	1,003	12.7	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	907	11.4	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	816	10.2	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	807	10.0	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	768	9.4	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						

TABLE 4.9
SELECTED VITAL STATISTICS BY COUNTY
MICHIGAN RESIDENTS, 1975

Area	Population Estimate	Live Births	Illegitimate Live Births	Low Weight Live Births	Deaths	Infant Deaths	Neonatal Deaths	Perinatal Deaths	Fetal Deaths	Marriages ¹	Divorces ¹
STATE	9,157,000	133,931	19,674	9,962	74,522	2,205	1,563	2,690	1,373	82,856	40,782
Alcona	8,500	95	9	7	113	1	1	3	2	75	12
Alger	8,800	132	13	6	124	3	3	5	2	84	-
Allegan	71,600	1,187	76	67	547	12	9	11	4	663	311
Alpena	33,100	473	32	21	251	6	5	13	8	318	125
Antrim	15,000	237	15	12	163	-	-	2	2	149	73
Arenac	13,300	195	22	10	130	5	2	2	-	143	-
Baraga	8,000	117	11	6	100	1	-	-	-	85	4
Barry	41,100	619	45	38	371	7	6	16	11	372	182
Bay	119,700	1,821	154	126	920	25	20	31	16	1,117	458
Benzie	9,900	126	13	9	133	1	1	4	3	103	49
Berrien	170,800	2,800	636	248	1,498	51	36	55	31	1,758	687
Branch	37,900	546	65	47	369	4	2	10	9	411	216
Calhoun	141,300	2,078	338	161	1,293	28	19	43	29	1,496	934
Cass	45,600	688	77	37	402	8	3	12	10	381	254
Charlevoix	18,400	315	24	21	200	5	4	5	2	181	100
Cheboygan	19,300	292	20	21	193	3	3	3	-	204	79
Chippewa	36,200	689	50	34	275	10	7	14	9	396	161
Clare	21,300	276	26	21	255	6	5	9	4	206	75
Clinton	53,200	771	43	40	293	4	3	5	3	382	150
Crawford	8,100	118	12	12	93	4	3	3	-	99	51
Delta	39,500	575	34	33	427	13	9	21	12	397	74
Dickinson	25,100	294	15	17	307	3	1	5	4	248	82
Eaton	75,700	1,040	58	62	528	11	8	19	11	632	331
Emmet	21,300	293	17	20	201	4	2	4	3	212	106
Genesee	450,400	7,145	1,332	535	3,256	135	81	140	78	4,464	2,709
Gladwin	16,600	220	14	15	170	6	6	8	3	154	48
Gogebic	20,700	224	24	21	297	6	6	8	2	273	43
Grand Traverse	45,100	674	52	40	367	8	6	14	8	510	235
Gratiot	39,700	626	45	35	355	10	7	12	5	403	145
Hillsdale	40,700	620	52	45	374	10	5	5	3	361	-
Houghton	36,700	473	19	30	463	4	1	5	4	288	99
Huron	35,600	521	21	23	419	7	5	9	4	314	82
Ingham	270,900	3,951	477	245	1,629	65	51	89	51	2,832	1,540
Ionia	47,100	839	79	51	398	11	8	17	10	472	199
Iosco	28,800	519	19	21	262	6	3	4	3	287	99
Iron	14,300	143	13	7	204	-	-	1	1	145	39
Isabella	50,800	711	52	57	279	15	13	17	6	478	188
Jackson	147,100	2,257	234	158	1,231	35	28	47	22	1,466	791
Kalamazoo	203,100	2,796	339	214	1,306	45	27	52	30	2,146	1,240
Kalamazoo	8,000	167	8	4	88	2	2	2	1	76	46
Kent	427,100	6,494	738	387	3,258	92	67	125	67	4,473	2,060
Keweenaw	2,100	28	2	3	34	1	1	1	-	21	7
Lake	6,700	93	22	4	101	1	-	-	-	54	17
Lapeer	62,000	1,022	65	80	428	16	12	13	5	532	271
Leelanau	12,300	149	9	7	121	-	-	2	2	107	31
Lenawee	86,700	1,385	102	78	750	16	9	16	8	808	378
Livingston	78,500	1,041	52	85	498	11	6	18	13	702	350
Luce	7,300	105	9	6	78	1	1	2	1	64	31
Mackinac	10,600	136	17	10	103	4	3	5	2	101	46
Macomb	669,600	8,698	524	540	3,896	108	76	140	67	5,886	3,088
Manistee	21,600	252	22	23	268	4	4	4	1	192	72
Marquette	70,300	1,141	67	60	512	21	16	19	4	692	302
Mason	24,500	366	35	30	251	6	5	6	2	255	110
Mecona	35,200	455	27	27	248	7	4	7	3	265	100
Menominee	25,500	311	19	10	251	3	3	3	1	384	77
Midland	67,500	1,059	63	75	380	17	11	17	8	684	279
Missaukee	8,700	151	13	7	80	1	1	2	1	102	16
Monroe	126,500	1,895	172	112	807	26	21	32	13	1,259	526
Montcalm	44,300	705	47	45	431	9	4	10	6	500	192
Montmorency	6,900	92	8	9	92	4	3	2	-	71	24
Muskegon	156,700	2,398	453	186	1,420	44	27	51	33	1,499	762
Newaygo	31,000	467	49	35	334	12	9	9	-	301	108
Oakland	967,500	12,549	1,229	823	6,374	180	132	223	110	8,459	4,755
Oceana	20,900	348	27	14	200	5	4	8	4	191	107
Ogemaw	14,800	231	16	16	182	5	2	4	2	169	35
Ontonagon	11,300	186	6	11	125	5	5	6	2	96	31
Oscoda	17,300	284	22	21	179	5	5	6	1	173	-
Oscoda	6,100	64	3	1	82	1	-	3	3	60	12
Otsego	13,400	198	11	8	97	3	1	5	4	140	39
Ottawa	140,500	2,150	78	101	886	23	12	26	17	1,187	524
Presque Isle	14,100	192	9	8	122	1	1	5	4	122	23
Roscommon	14,400	181	26	14	190	5	4	5	1	136	57
Saginaw	226,800	3,631	721	274	1,777	57	40	67	33	2,045	1,077
St. Clair	130,500	1,913	168	136	1,248	24	17	29	15	1,171	591
St. Joseph	51,200	860	73	37	456	18	9	19	10	536	245
Sanilac	38,500	605	44	35	407	8	7	9	2	341	104
Schoolcraft	8,600	134	15	9	114	2	1	2	2	80	22
Shiawassee	69,700	1,048	84	59	542	16	10	27	20	642	349
Tuscola	53,700	846	78	61	425	16	9	18	10	433	150
Van Buren	62,100	1,019	148	65	567	14	9	21	16	558	266
Washtenaw	256,400	3,443	343	212	1,243	42	29	64	42	2,379	1,560
Wayne	2,536,700	37,530	9,439	3,636	24,407	767	560	907	426	19,924	9,867
Wexford	22,000	371	29	20	217	3	1	4	3	283	104
County Not Stated		42	5	5	57	21	21	23	3		

¹ By County of Occurrence rather than county of residence

TABLE 4.10
SELECTED VITAL STATISTICS RATES BY COUNTY
MICHIGAN RESIDENTS, 1975

Area	Live Births	Illegitimate Live Births	Low Weight Live Births	Deaths	Infant Deaths	Neonatal Deaths	Perinatal Deaths	Fetal Deaths	Marriages	Divorces
STATE	14.6	146.9	74.4	8.1	16.5	11.7	19.9	10.3	18.1	8.9
Alcona	11.2	94.7	73.7	13.3	10.5	10.5	30.9	21.1	17.6	2.8
Alger	15.0	98.5	45.5	14.1	22.7	22.7	37.3	15.2	19.1	-
Allegan	16.6	64.0	56.4	7.6	10.1	7.6	9.2	3.4	18.5	8.7
Alpena	14.3	67.7	44.4	7.6	12.7	10.6	27.0	16.9	19.2	7.6
Antrim	15.8	63.3	50.6	10.9	-	-	8.4	8.4	19.9	9.7
Arenac	14.7	112.8	51.3	9.8	25.6	10.3	10.3	-	21.5	-
Baraga	14.6	94.0	51.3	12.5	8.5	-	-	-	21.2	1.0
Barry	15.1	72.7	61.4	9.0	11.3	9.7	25.4	17.8	18.1	8.9
Bay	15.2	86.6	69.2	7.7	13.7	11.0	16.9	8.8	18.7	7.7
Benzie	12.7	103.2	71.4	13.4	7.9	7.9	31.0	23.8	20.8	9.9
Berrien	16.4	227.1	88.6	8.8	18.2	12.9	19.4	11.1	20.6	8.0
Branch	14.4	119.0	86.1	9.7	7.3	3.7	18.0	16.5	21.7	11.4
Calhoun	14.7	162.7	77.5	9.2	13.5	9.1	20.4	14.0	21.2	13.2
Cass	15.1	111.9	53.8	8.8	11.6	4.4	17.2	14.5	16.7	11.1
Charlevoix	17.1	76.2	66.7	10.9	15.9	12.7	15.8	6.3	19.7	10.9
Cheboygan	15.1	68.5	71.9	10.0	10.3	10.3	10.3	-	21.1	8.2
Chippewa	19.0	72.6	49.3	7.6	14.5	10.2	20.1	13.1	21.9	8.9
Clare	13.0	94.2	76.1	12.0	21.7	18.1	32.1	14.5	19.3	7.0
Clinton	14.5	55.8	51.9	5.5	5.2	3.9	6.5	3.9	14.4	5.6
Crawford	14.6	101.7	101.7	11.5	33.9	25.4	25.4	-	24.4	12.6
Delta	14.6	59.1	57.4	10.8	22.6	15.7	35.8	20.9	20.1	3.7
Dickinson	11.7	51.0	57.8	12.2	10.2	3.4	16.8	13.6	19.8	6.5
Eaton	13.7	55.8	59.6	7.0	10.6	7.7	18.1	10.6	16.7	8.7
Emmet	13.8	58.0	68.3	9.4	13.7	6.8	13.5	10.2	19.9	10.0
Genesee	15.9	186.4	74.9	7.2	18.9	11.3	19.4	10.9	19.8	12.0
Gladwin	13.3	63.6	68.2	10.2	27.3	27.3	35.9	13.6	18.6	5.8
Gogebic	10.8	107.1	93.8	14.3	26.8	26.8	35.4	8.9	26.4	4.2
Grand Traverse	14.9	77.2	59.3	8.1	11.9	8.9	20.5	11.9	22.6	10.4
Graziot	15.8	71.9	55.9	8.9	16.0	11.2	19.0	8.0	20.3	7.3
Hillsdale	15.2	83.9	72.6	9.2	16.1	8.1	8.0	4.8	17.7	-
Houghton	12.9	40.2	63.4	12.6	8.5	2.1	10.5	8.5	15.7	5.4
Huron	14.6	40.3	44.1	11.8	13.4	9.6	17.1	7.7	17.6	4.6
Ingham	14.6	120.7	62.0	6.0	16.5	12.9	22.2	12.9	20.9	11.4
Ionia	17.8	94.2	60.8	8.5	13.1	9.5	20.0	11.9	20.0	8.5
Iosco	18.0	36.6	40.5	9.1	11.6	5.8	7.7	5.8	19.9	6.9
Iron	10.0	90.9	49.0	14.3	-	-	6.9	7.0	20.3	5.5
Isabella	14.0	73.1	80.2	5.5	21.1	18.3	23.7	8.4	18.8	7.4
Jackson	15.3	103.7	70.0	8.4	15.5	12.4	20.6	9.7	19.9	10.8
Kalamazoo	13.8	121.2	76.5	6.4	16.1	9.7	18.4	10.7	21.1	12.2
Kalkaska	20.9	47.9	24.0	11.0	12.0	12.0	11.9	6.0	19.0	11.5
Kent	15.2	113.6	59.6	7.6	14.2	10.3	19.1	10.3	20.9	9.6
Keweenaw	13.3	71.4	107.1	16.2	35.7	35.7	35.7	-	20.0	6.7
Lake	13.9	236.6	43.0	15.1	10.8	-	-	-	16.1	5.1
Lapeer	16.5	63.6	78.3	6.9	15.7	11.7	12.7	4.9	17.2	8.7
Leelanau	12.1	60.4	47.0	9.8	-	-	13.2	13.4	17.4	5.0
Lenawee	16.0	73.6	56.3	8.7	11.6	6.5	11.5	5.8	18.6	8.7
Livingston	13.3	50.0	81.7	6.3	10.6	5.8	17.1	12.5	17.9	8.9
Luce	14.4	85.7	57.1	10.7	9.5	9.5	18.9	9.5	17.5	8.5
Mackinac	12.8	125.0	73.5	9.7	29.4	22.1	36.2	14.7	19.1	8.7
Macomb	13.0	60.2	62.1	5.8	12.4	8.7	16.0	7.7	17.6	9.2
Manistee	11.7	87.3	91.3	12.4	15.9	15.9	15.8	4.0	17.8	6.7
Marquette	16.2	58.7	52.6	7.3	18.4	14.0	16.6	3.5	19.7	8.6
Mason	14.9	95.6	82.0	10.2	16.4	13.7	16.3	5.5	20.8	9.0
Mecosta	12.9	59.3	59.3	7.0	15.4	8.8	15.3	6.6	15.1	5.7
Menominee	12.2	61.1	32.2	9.8	9.6	9.6	9.6	3.2	30.1	6.0
Midland	15.7	59.5	70.8	5.6	16.1	10.4	15.9	7.6	20.3	8.3
Missaukee	17.4	86.1	46.4	9.2	6.6	6.6	13.2	6.6	23.4	3.7
Monroe	15.0	90.8	59.1	6.4	13.7	11.1	16.8	6.9	19.9	8.3
Montcalm	15.9	66.7	63.8	9.7	12.8	5.7	14.1	8.5	22.6	8.7
Montmorency	13.3	87.0	97.8	13.3	43.5	32.6	21.7	-	20.6	7.0
Muskegon	15.3	188.9	77.6	9.1	18.3	11.3	21.0	13.8	19.1	9.7
Newaygo	15.1	104.9	74.9	10.8	25.7	19.3	19.3	-	19.4	7.0
Oakland	13.0	97.9	65.6	6.6	14.3	10.5	17.6	8.8	17.5	9.8
Oceana	16.7	77.6	40.2	9.6	14.4	11.5	22.7	11.5	18.3	10.2
Ogemaw	15.6	69.3	69.3	12.3	21.6	8.7	17.2	8.7	22.8	4.7
Ontonagon	16.5	32.3	59.1	11.1	26.9	26.9	31.9	16.8	17.0	5.5
Osceola	16.4	77.5	73.9	10.3	17.6	17.6	21.1	3.5	20.0	-
Oscoda	10.5	46.9	15.6	13.4	15.6	-	44.8	46.9	19.7	3.9
Otsego	14.8	55.6	40.4	7.2	15.2	5.1	24.8	20.2	20.9	5.8
Ottawa	15.3	36.3	47.0	6.3	10.7	5.6	12.0	7.9	16.9	7.5
Praegue Isle	13.6	46.9	41.7	8.7	5.2	5.2	25.5	20.8	17.3	3.3
Roscommon	12.6	143.6	77.3	13.2	27.6	22.1	27.5	5.5	18.9	7.9
Saginaw	16.0	198.6	75.5	7.8	15.7	11.0	18.3	9.1	18.0	9.5
St. Clair	14.7	87.8	71.1	9.6	12.5	8.9	15.0	7.8	17.9	9.1
St. Joseph	16.8	84.9	43.0	8.9	20.9	10.5	21.8	11.6	20.9	9.6
Sanilac	15.7	72.7	57.9	10.6	13.2	11.6	14.8	3.3	17.7	5.4
Schoolcraft	15.6	111.9	67.2	13.3	14.9	7.5	14.7	14.9	18.6	5.1
Shiawassee	15.0	80.2	56.3	7.8	15.3	9.5	25.3	19.1	18.4	10.0
Tuscola	15.8	92.2	72.1	7.9	18.9	10.6	21.0	11.8	16.1	5.6
Van Buren	16.4	145.2	63.8	9.1	13.7	8.8	20.3	15.7	18.0	8.6
Washtenaw	13.4	99.6	61.6	4.8	12.2	8.4	18.4	12.2	18.6	12.2
Wayne	14.8	251.5	96.9	9.6	20.4	14.9	23.9	11.4	15.7	7.8
Wexford	16.9	78.2	53.9	9.9	8.1	2.7	10.7	8.1	25.7	9.5

1 - By county of occurrence rather than county of residence
2 - Rate of persons per population rather than events per population
3 - Ratio per 1,000 live births

TABLE 4.11
 VITAL STATISTICS BY SELECTED CITIES¹
 MICHIGAN RESIDENTS, 1975

AREA	LIVE BIRTHS BY RESIDENCE	ILLEGITIMATE LIVE BIRTHS BY RESIDENCE		DEATHS BY RESIDENCE	INFANT DEATHS BY RESIDENCE		FETAL DEATHS BY RESIDENCE	
	Number	Number	Rate	Number	Number	Rate	Number	Ratio
Allen Park	303	13	42.9	278	7	23.1	-	-
Ann Arbor	1,317	101	76.7	440	12	9.1	22	16.7
Battle Creek	710	199	280.3	533	11	15.5	13	18.3
Bay City	702	83	118.2	486	7	10.0	7	10.0
Birmingham	289	5	17.3	243	1	3.5	4	13.8
Dearborn	964	47	48.8	968	9	9.3	6	6.2
Dearborn Heights	817	51	62.4	490	14	17.1	7	8.6
Detroit	22,155	7,918	357.4	15,797	521	23.5	295	13.3
East Detroit	374	18	48.1	360	3	8.0	1	2.7
East Lansing	392	13	33.2	116	3	7.7	2	5.1
Ferndale	413	47	113.8	316	9	21.8	6	14.5
Flint	3,325	958	288.1	1,645	72	21.7	42	12.6
Garden City	439	37	84.3	197	10	22.8	4	9.1
Grand Rapids	2,889	564	195.2	1,833	52	18.0	36	12.5
Hamtramck	318	55	173.0	425	5	15.7	2	6.3
Highland Park	471	220	467.1	368	14	29.7	8	17.0
Holland (Pt.)	369	19	51.5	246	5	13.6	2	5.4
Inkster	639	193	302.0	281	16	25.0	10	15.6
Jackson	775	135	174.2	536	13	16.8	9	11.6
Kalamazoo	1,335	253	189.5	645	29	21.7	15	11.2
Lansing (Pts)	2,409	391	162.3	997	45	18.7	35	14.5
Lincoln Park	640	48	75.6	379	10	15.6	4	6.3
Livonia	1,026	40	39.0	663	19	18.5	4	3.9
Madison Heights	556	30	54.0	179	6	10.8	8	14.4
Midland (Pt.)	519	29	55.9	179	11	21.2	6	11.6
Muskegon	852	214	251.2	599	24	28.2	10	11.7
Oak Park	393	17	43.3	340	2	5.1	5	12.7
Pontiac	1,988	587	295.3	691	31	15.6	17	8.6
Portage	448	21	46.9	143	3	6.7	3	6.7
Port Huron	619	88	142.2	437	11	17.8	1	1.6
Roseville	838	56	66.8	342	12	14.3	2	2.4
Royal Oak	924	45	48.7	620	17	18.4	7	7.6
Saginaw	1,705	555	325.5	904	30	17.6	20	11.7
St. Clair Shores	797	35	43.9	614	5	6.3	4	5.0
Southfield	637	19	29.8	584	15	23.5	4	6.3
Southgate	420	23	54.8	181	10	23.8	3	7.1
Sterling Heights	1,308	30	22.9	317	9	6.9	13	9.9
Taylor	1,432	124	86.6	396	22	15.4	13	9.1
Troy	757	21	27.7	246	13	17.2	6	7.9
Warren	1,779	143	80.4	991	20	11.2	16	9.0
Westland	1,440	101	70.1	420	18	12.5	15	10.4
Wyandotte	544	51	93.8	403	4	7.4	7	12.9
Wyoming	954	56	58.7	376	9	9.4	10	10.5
Ypsilanti	751	153	203.7	186	9	12.0	5	6.7

¹25,000 population or over

TABLE 4.12
SELECTED CAUSES OF DEATH BY COUNTY
MICHIGAN RESIDENTS, 1975

Area	All Causes	Diseases of the Heart	Malignant Neoplasms	Cerebrovascular Disease	Accidents, All Forms	(Motor Vehicle Accidents)	Diabetes Mellitus	Influenza & Pneumonia	Arteriosclerosis	Tuberculosis, All Forms	All Other Infective & Parasitic Diseases	Cirrhosis of the Liver	Nephritis & Nephrosis	Infections of Stomach	Maternal Deaths, All Forms	Suicide and Self-Inflicted Injury	Homicide and Injury by Other Persons, Not in War	Residual
STATE	74,522	28,298	14,445	7,262	4,002	1,861	1,819	1,825	1,119	110	452	1,574	286	141	16	1,136	1,158	10,879
Alcona	113	42	32	5	8	2	7	2	1	1	-	2	-	-	-	2	-	11
Alger	124	49	8	14	15	6	2	11	3	1	-	4	-	-	-	2	-	15
Allegan	547	201	98	63	38	18	18	13	12	3	-	7	2	-	-	6	-	80
Alpena	251	106	50	39	13	4	4	3	2	-	-	1	-	-	-	2	-	24
Antrim	163	69	30	23	8	4	5	7	4	-	-	5	-	-	-	2	1	14
Arenac	130	51	22	11	11	4	1	3	7	-	-	2	-	-	-	2	-	20
Baraga	100	32	17	10	8	4	11	2	2	-	-	1	-	-	-	2	-	13
Barry	371	146	77	30	33	21	13	5	7	-	-	9	1	-	-	5	2	38
Bay	920	341	197	116	46	25	26	20	5	-	-	6	6	3	-	6	4	130
Benzie	133	49	31	8	15	7	2	6	1	-	-	-	-	-	-	1	-	18
Berrien	1,498	538	294	158	102	52	31	34	45	2	12	23	3	4	2	14	12	224
Branch	369	136	67	35	18	8	13	12	12	-	4	9	2	1	-	7	3	50
Calhoun	1,293	478	242	156	70	26	45	23	31	1	9	20	3	4	-	17	17	177
Cass	402	133	76	41	26	17	9	15	19	-	1	6	-	2	-	7	1	66
Charlevoix	200	72	39	33	8	6	3	2	3	-	-	6	-	-	-	5	1	28
Cheboygan	193	79	36	27	8	2	6	1	2	-	1	2	6	2	-	3	-	20
Chippewa	275	124	40	18	16	9	8	10	4	-	-	1	1	-	-	5	-	44
Clare	255	117	54	14	24	10	2	3	5	2	1	3	-	-	-	-	-	29
Clinton	293	136	45	29	12	5	5	8	4	1	4	3	-	1	-	1	-	40
Crawford	93	32	19	12	9	4	1	3	1	-	-	2	-	-	-	5	-	11
Delta	427	155	88	48	29	11	15	7	9	-	1	12	1	2	-	6	-	54
Dickinson	307	117	58	43	13	4	-	7	16	1	-	6	2	1	-	2	1	40
Eaton	528	225	85	57	24	15	15	14	16	-	1	7	3	-	-	7	1	73
Emmet	401	69	33	25	19	12	5	4	2	-	1	2	1	1	-	3	-	36
Genesee	3,256	1,181	644	338	207	105	76	80	45	5	19	57	8	6	-	49	63	478
Gladwin	170	85	22	22	5	1	3	3	2	-	1	3	3	-	-	1	-	20
Gogebic	297	138	50	19	13	6	14	11	7	1	2	4	-	-	-	6	-	32
Grand Traverse	367	114	75	47	21	11	8	10	10	-	3	3	-	-	-	7	-	69
Graziot	355	128	52	66	16	7	5	9	9	-	1	2	2	-	-	4	1	60
Hillsdale	374	151	67	29	30	14	10	19	4	1	2	2	1	1	-	1	1	55
Houghton	463	228	77	48	27	9	12	13	4	-	5	4	3	-	-	3	2	37
Huron	419	169	62	73	18	9	9	7	13	1	1	8	3	-	-	2	-	53
Ingham	1,629	562	313	166	101	46	31	39	36	1	19	24	2	1	1	40	12	281
Ionia	398	147	75	41	30	17	10	10	5	1	3	3	3	1	-	5	-	64
Iosco	262	105	56	18	17	9	5	4	2	-	-	2	1	1	-	6	-	45
Iron	204	75	48	29	15	3	4	4	1	-	-	2	1	-	-	1	-	24
Isabella	279	98	55	27	19	8	7	9	8	-	-	4	-	-	-	4	-	48
Jackson	1,231	508	224	110	62	34	34	26	32	-	4	16	3	3	-	20	10	179
Kalamazoo	1,306	454	276	122	71	34	33	45	27	-	12	14	3	1	-	27	9	212
Kalkaska	88	34	13	16	5	3	2	2	2	-	1	-	-	-	-	-	-	13
Kent	3,258	1,255	630	341	171	64	53	96	65	2	12	54	18	6	-	36	22	497
Keweenaw	34	18	4	2	1	1	1	1	-	-	-	-	-	-	-	-	-	7
Lake	101	38	23	7	11	6	4	2	1	-	-	2	-	-	-	-	-	12
Lapeer	428	172	84	44	28	9	11	4	7	-	2	5	-	-	-	10	1	60
Leelanau	121	44	20	10	14	9	4	6	2	1	-	1	-	-	-	1	-	16
Lenawee	750	260	147	73	49	26	20	20	34	-	3	10	2	1	-	16	7	108
Livingston	498	168	103	47	49	27	12	16	12	-	3	10	1	-	-	6	-	71
Luce	78	34	10	11	2	-	2	3	5	-	-	1	-	-	-	1	-	10
Mackinac	103	43	19	14	4	3	4	2	2	-	-	1	-	-	-	-	-	12
Macomb	3,896	1,527	859	321	185	93	90	77	35	4	25	84	18	5	-	82	37	547
Manistee	268	86	53	36	11	5	11	11	15	-	3	2	-	1	-	5	-	34
Marquette	512	204	83	67	41	26	9	13	6	-	6	9	3	1	-	10	2	58
Mason	251	104	52	26	10	3	4	4	4	-	3	5	-	-	-	2	-	37
Mecosta	248	100	44	24	14	5	10	3	5	-	1	7	1	1	-	3	1	34
Menominee	251	103	39	31	15	6	6	5	10	1	1	4	1	1	-	2	1	31
Midland	380	140	87	36	28	17	4	9	3	-	3	1	-	-	-	7	2	60
Missaukee	80	33	17	8	5	-	1	4	1	-	-	-	-	-	-	2	-	8
Monroe	807	312	123	79	53	23	28	25	11	1	2	16	2	3	-	17	8	127
Montcalm	431	170	68	63	27	12	12	19	4	-	1	4	1	-	-	5	-	57
Montmorency	92	37	18	7	11	4	4	4	-	-	-	1	-	1	-	1	-	12
Muskegon	1,420	526	247	170	75	36	47	34	28	4	7	11	6	6	1	23	19	216
Newaygo	334	111	81	30	31	18	11	5	8	-	2	6	-	1	-	1	-	47
Oakland	6,374	2,471	1,386	547	389	186	137	127	81	7	39	110	19	10	3	146	73	829
Oceana	200	86	24	27	11	6	4	6	6	-	-	2	-	-	-	-	-	34
Ogemaw	182	69	33	13	21	10	4	2	8	-	-	3	-	-	-	3	2	24
Ontonagon	125	53	23	14	7	5	2	2	5	-	-	-	-	-	-	7	-	12
Osceola	179	80	34	15	11	4	3	2	6	-	1	1	2	-	-	1	-	23
Oscoda	82	34	18	11	3	2	2	2	2	-	-	1	-	-	-	2	-	7
Otsego	97	42	19	7	3	1	3	1	1	1	-	1	1	-	-	1	1	16
Ottawa	886	334	187	74	55	19	19	18	17	2	4	12	2	-	-	10	4	148
Presque Isle	122	60	27	10	2	-	-	4	1	1	1	2	1	-	-	-	-	13
Roscommon	190	68	48	16	13	3	3	4	3	1	1	3	-	-	-	5	1	24
Saginaw	1,777	674	318	191	102	52	38	42	38	2	6	33	7	2	-	16	46	263
St. Clair	1,248	449	244	171	82	40	40	38	30	2	9	16	2	2	-	20	9	154
St. Joseph	456	182	95	45	22	9	6	14	9	-	1	6	-	-	-	9	1	66
Saniac	407	137	84	59	25	14	10	12	7	-	1	3	3	1	-	4	-	60
Schoolcraft	114	57	18	10	2	1	4	2	5	-	1	1	-	-	-	-	-	14
Shiawassee	542	166	108	88	31	16	23	16	12	-	2	-	-	-	-	9	-	86
Tuscola	425	186	76	35	30	9	9	7	7	-	3	4	1	-	-	6	-	61
Van Buren	567	209	102	63	33	18	13	16	13	-	5	5	1	4	-	10	4	89
Washtenaw	1,243	416	235	126	98	45	30	35	21	1	14	19	4	-	-	23	16	205
Wayne	24,407	9,270	4,675	2,076	978	406	607	617	160	63	161	816	125	53	8	344	751	3,703
Wexford	217	84	29	29	15	10	3	11	7	-	1	4	-	-	-	1	-	31
County Not Stated	57	10	4	2	4	-	1	2	-	-	-	-	-	-	-	1	2	31

TABLE 4.13
REPORTED CASES OF CERTAIN COMMUNICABLE DISEASES BY COUNTY
MICHIGAN RESIDENTS, 1975

AREA	Total	Gonorrhea	Chicken Pox	Streptococcal Sore Throat (Including Scarlet Fever)	Numps	Measles	Total	Hepatitis Infections and Serum	Unspecified	Rubella	Syphilis	Tuberculosis ²	Salmonella Infections	Dysentery Bacillary	Whooping Cough	Meningococcal Infections	All Others ³
STATE	104,516	32,583	24,862	23,777	9,979	3,253	2,877	2,656	221	1,714	1,638	1,271	864	745	98	76	779
Alcona	8	4	1	-	-	1	-	-	-	-	-	2	-	-	-	-	-
Alger	57	4	42	1	-	5	2	-	-	-	-	2	-	-	-	-	-
Allegan	415	47	95	119	23	59	18	18	-	17	10	2	-	-	-	-	1
Alpena	64	29	14	1	8	-	1	1	-	7	-	1	3	6	8	-	1
Antrim	44	6	-	-	-	-	2	2	-	-	1	-	2	-	-	-	1
Arenac	247	6	94	-	-	-	-	-	-	-	-	-	-	-	-	-	35
Baraga	68	1	14	12	119	10	5	1	1	2	-	2	-	-	-	-	-
Barry	491	32	98	11	16	30	2	5	-	1	-	-	-	-	-	-	-
Bay	1,125	256	303	21	139	6	20	19	1	6	-	1	4	6	1	-	1
Benzie	17	9	-	-	1	307	36	36	-	39	5	7	1	1	3	-	8
Berrien	2,233	1,223	310	146	211	37	53	50	-	1	1	2	-	-	-	-	-
Branch	417	92	213	67	13	1	14	14	3	47	50	24	40	79	4	3	6
Calhoun	951	593	201	43	31	10	20	20	-	-	5	11	4	-	1	-	1
Cass	405	58	168	29	84	27	13	13	-	6	6	8	3	6	1	1	5
Charlevoix	21	12	-	-	-	-	2	2	-	-	3	4	-	-	-	-	-
Cheboygan	63	6	24	5	11	-	1	-	1	11	3	2	-	-	-	-	-
Chippewa	466	4	169	274	5	-	3	2	1	5	1	-	-	-	-	-	-
Clare	47	22	3	-	6	5	5	5	-	2	-	1	-	-	-	-	-
Clinton	661	34	223	30	156	27	15	12	3	159	3	-	8	-	-	-	-
Crawford	247	6	109	6	117	1	7	6	-	1	-	1	7	5	-	-	2
Delta	242	30	124	33	10	41	1	1	-	-	-	1	-	-	-	-	-
Dickinson	142	16	67	7	5	38	1	1	-	3	2	1	-	-	-	-	-
Eaton	1,167	65	436	473	54	73	17	17	-	32	1	3	9	5	-	2	2
Emmet	40	30	-	-	-	-	8	8	-	-	-	-	-	-	-	-	-
Genesee	7,038	2,849	1,529	1,364	811	49	128	110	18	95	82	38	36	8	2	7	40
Gladwin	44	4	21	3	9	3	1	1	-	-	-	1	2	-	-	-	-
Gogebic	139	5	38	60	7	22	-	-	-	-	-	5	-	-	-	-	-
Grand Traverse	1,228	74	315	407	62	313	-	-	-	2	5	-	-	-	-	-	-
Gratiot	175	35	87	2	4	3	13	13	-	51	2	4	1	-	-	-	1
Hillsdale	123	39	41	3	20	3	4	4	-	14	6	1	8	-	-	1	1
Houghton	139	14	33	60	1	11	1	1	-	8	1	4	1	-	1	3	1
Huron	31	11	1	4	-	4	1	1	-	-	2	7	-	-	-	-	1
Ingham	7,449	1,761	365	4,755	169	68	149	137	12	57	21	22	30	38	-	3	11
Ionia	822	70	256	144	281	9	30	25	5	18	2	5	4	1	-	3	3
Iosco	289	6	41	81	120	26	5	5	-	7	1	1	1	-	-	-	-
Iron	133	8	22	72	-	20	1	1	-	7	-	2	-	-	-	1	-
Isabella	143	67	4	-	3	-	52	52	-	-	-	2	-	-	-	-	-
Jackson	1,712	633	591	160	174	3	74	59	15	40	6	18	9	1	1	1	1
Kalamazoo	2,658	1,500	369	304	229	8	68	66	2	20	13	9	13	37	2	2	63
Kalkaska	111	-	46	8	47	7	-	-	-	3	-	-	-	-	-	-	-
Kent	12,369	2,054	161	9,479	36	265	96	76	20	67	31	50	76	32	7	1	14
Keeweenaw	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lake	73	11	52	3	3	-	1	-	1	-	3	-	-	-	-	-	-
Lapeer	693	56	172	27	385	13	5	3	2	19	3	4	5	1	-	1	4
Leelanau	154	6	65	7	55	8	2	2	-	6	1	3	1	-	-	-	-
Lenawee	765	150	440	65	34	2	28	27	1	20	6	11	6	1	-	-	2
Livingston	317	33	151	65	33	7	6	6	-	15	2	2	2	1	-	-	1
Luce	98	13	51	3	25	6	-	-	-	-	-	-	-	-	-	-	-
Mackinac	113	21	87	-	-	1	-	-	-	3	-	1	-	-	-	-	-
Macomb	2,414	522	1,074	144	135	34	221	185	36	80	54	46	26	16	4	10	48
Manistee	279	29	226	11	1	-	6	4	2	1	2	-	3	-	-	-	-
Marquette	1,759	148	609	713	48	384	13	12	1	13	3	6	15	4	-	1	6
Mason	337	121	117	23	57	7	6	3	3	1	3	1	-	-	-	-	-
Mecosta	452	72	189	154	13	7	10	10	-	1	2	1	2	-	-	-	1
Menominee	53	5	35	2	2	-	-	-	-	1	4	2	-	-	-	-	1
Midland	947	66	215	125	503	19	8	4	4	5	1	1	2	-	-	1	1
Missaukee	49	-	9	10	2	17	2	2	-	-	-	-	-	-	-	-	-
Monroe	966	168	617	62	36	20	24	24	-	7	1	8	13	5	4	-	1
Montcalm	732	84	203	17	330	38	36	28	8	10	3	3	5	3	-	-	3
Montmorency	77	4	42	1	21	-	-	-	-	8	-	-	-	-	-	-	-
Muskegon	1,433	828	288	42	77	9	125	122	3	6	9	26	7	8	1	2	5
Newaygo	452	33	206	14	144	23	23	23	-	3	2	1	2	-	-	-	1
Oakland	8,352	1,773	3,898	824	771	112	312	295	17	177	90	107	56	23	5	7	197
Oceana	284	27	35	5	192	-	13	12	1	2	-	9	1	-	-	-	-
Ogemaw	86	5	18	3	9	45	4	4	-	1	-	-	-	-	-	-	-
Ontonagon	58	1	39	-	11	2	2	1	1	-	-	-	-	-	-	-	-
Oscoda	3	3	-	-	-	-	-	-	1	4	-	-	-	-	-	-	-
Oscoda	22	3	3	8	-	4	-	-	-	2	-	2	-	-	-	-	-
Otsego	24	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ottawa	1,436	347	545	106	177	112	101	98	3	11	7	5	12	3	1	-	9
Presque Isle	160	5	119	3	4	-	-	-	-	28	1	-	-	-	-	-	-
Roscommon	54	24	20	1	1	-	-	-	-	1	-	-	-	-	-	-	-
Saginaw	2,395	1,489	588	68	59	46	52	47	5	3	1	37	26	8	6	-	-
St. Clair	2,134	362	857	192	506	21	64	56	8	76	7	16	8	17	2	-	10
St. Joseph	424	80	170	34	92	16	13	12	1	8	2	1	-	1	-	-	6
Sanilac	48	13	5	1	19	3	1	-	1	-	1	-	-	-	-	-	-
Schoolcraft	152	14	37	72	5	14	-	-	10	-	-	-	-	3	-	-	1
Shiawassee	767	113	103	99	393	17	16	14	2	15	1	3	5	1	-	-	-
Tuscola	539	50	266	62	70	26	15	14	1	40	-	5	1	-	-	1	-
Van Buren	904	146	378	41	256	7	19	19	-	7	12	5	4	7	8	-	3
Washtenaw	2,724	1,806	122	580	32	10	64	62	2	10	37	34	16	3	6	2	2
Wayne	27,435	12,217	6,349	1,776	2,401	720	798	766	32	368	1,066	660	394	27	23	2	257
Wexford	68	7	26	8	9	-	5	5	-	6	-	-	-	1	-	-	1
State Homes	42	-	12	7	6	-	1	1	-	-	-	-	-	16	-	-	-

¹584 of these were serum hepatitis

²Effective January, 1975, a new diagnostic classification system for tuberculosis was adopted. As a result, direct comparison of case counts and rates between 1975 and preceding years will not be possible.

³Includes:
 Meningitis, Aseptic 280
 Encephalitis, Infections Diarrhea Epidemic Infants 1
 Meningitis excluding Aseptic 139
 Typhoid Fever 15
 Staphylococcal Infections 10
 Fungal Infection (Septemic) 44
 Diphtheria Rocky Mountain 1
 Spotted Fever 1
 Tularemia 1

TABLE 4.14
NUMBER OF DEATHS BY CAUSE
MICHIGAN RESIDENTS, 1975

ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER	ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER
I. INFECTIVE AND PARASITIC DISEASES (000-136)					
003	Other salmonella infections-----	2	181	Chorionepithelioma-----	3
004	Bacillary Dysentery-----	1	182	Other malignant neoplasm of uterus-----	214
006	Amebiasis-----	1	183	Malignant neoplasm of ovary, fallopian tube, and broad ligament-----	441
008	Enteritis due to other specified organism-----	4	184	Malignant neoplasm of other and unspecified female genital organs-----	36
009	Diarrheal disease-----	73	185	Malignant neoplasm of prostate-----	759
010	Silicotuberculosis-----	2	186	Malignant neoplasm of testis-----	38
011	Pulmonary tuberculosis-----	76	187	Malignant neoplasm of other and unspecified male genital organs-----	11
012	Other respiratory tuberculosis-----	3	188	Malignant neoplasm of bladder-----	433
013	Tuberculosis of meninges and central nervous system-----	4	189	Malignant neoplasm of other and unspecified urinary organs-----	291
016	Tuberculosis of genitourinary system-----	3	190	Malignant neoplasm of eye-----	4
017	Tuberculosis of other organs-----	1	191	Malignant neoplasm of brain-----	286
018	Disseminated tuberculosis-----	6	192	Malignant neoplasm of other parts of nervous system-----	50
019	Late effects of tuberculosis-----	15	193	Malignant neoplasm of thyroid gland-----	26
027	Other zoonotic bacterial diseases-----	2	194	Malignant neoplasm of other endocrine glands-----	13
033	Whooping cough-----	1	195	Malignant neoplasm of ill-defined sites-----	111
036	Meningococcal infection-----	18	196	Secondary and unspecified malignant neoplasm of lymph nodes-----	6
038	Septicemia-----	186	197	Secondary malignant neoplasm of respiratory and digestive systems-----	241
039	Other bacterial diseases-----	37	198	Other secondary malignant neoplasm-----	81
044	Late effects of acute poliomyelitis-----	5	199	Malignant neoplasm without specification of site-----	599
045	Aseptic meningitis due to enterovirus-----	4	200	Lymphosarcoma and reticulum-cell sarcoma-----	209
052	Chickenpox-----	2	201	Hodgkin's disease-----	121
053	Herpes zoster-----	3	202	Other neoplasms of lymphoid tissue-----	212
054	Herpes simplex-----	4	203	Multiple myeloma-----	238
055	Measles-----	1	204	Lymphatic leukemia-----	166
062	Mosquito-borne viral encephalitis-----	1	205	Myeloid leukemia-----	238
065	Viral encephalitis, unspecified-----	9	206	Monocytic leukemia-----	21
066	Late effects of viral encephalitis-----	2	207	Other and unspecified leukemia-----	158
070	Infectious hepatitis-----	23	208	Polycythemia vera-----	22
079	Other viral diseases-----	17	209	Myelofibrosis-----	39
093	Cardiovascular syphilis-----	9	211	Benign neoplasm of other parts of digestive system-----	10
094	Syphilis of central nervous system-----	1	212	Benign neoplasm of respiratory system-----	4
112	Moniliasis-----	9	215	Other benign neoplasm of muscular and connective tissue-----	2
113	Actinomycosis-----	1	216	Benign neoplasm of skin-----	3
115	Histoplasmosis-----	3	218	Uterine fibroma-----	1
116	Blastomycosis-----	7	219	Other benign neoplasm of uterus-----	1
117	Other systemic mycosis-----	7	223	Benign neoplasm of kidney and other urinary organs-----	1
135	Sarcoidosis-----	12	225	Benign neoplasm of brain and other parts of nervous system-----	33
136	Other and unspecified infective and parasitic diseases-----	7	226	Benign neoplasm of endocrine glands-----	10
II. NEOPLASMS (140-239)			227	Hemangioma and lymphangioma-----	4
140	Malignant neoplasm of lip-----	5	228	Benign neoplasm of other and unspecified organs and tissues-----	6
141	Malignant neoplasm of tongue-----	62	230	Neoplasm of unspecified nature of digestive organs-----	10
142	Malignant neoplasm of salivary gland-----	22	231	Neoplasm of unspecified nature of respiratory organs-----	8
143	Malignant neoplasm of gum-----	6	232	Neoplasm of unspecified skin and musculoskeletal system-----	2
144	Malignant neoplasm of floor of mouth-----	116	234	Neoplasm of unspecified nature of uterus-----	1
145	Malignant neoplasm of other and unspecified parts of mouth-----	32	237	Neoplasm of unspecified nature of other genitourinary organs-----	2
146	Malignant neoplasm of oropharynx-----	38	238	Neoplasm of unspecified nature of eye, brain, and other parts of nervous system-----	50
147	Malignant neoplasm of nasopharynx-----	26	239	Neoplasm of unspecified nature of other and unspecified organs-----	14
148	Malignant neoplasm of hypopharynx-----	17	III. ENDOCRINE, NUTRITIONAL, AND METABOLIC DISEASES (240-279)		
149	Malignant neoplasm of pharynx, unspecified-----	44	240	Simple Goiter-----	1
150	Malignant neoplasm of esophagus-----	302	242	Thyrototoxicosis with or without goiter-----	6
151	Malignant neoplasm of stomach-----	565	244	Myxedema-----	22
152	Malignant neoplasm of small intestine, including duodenum-----	33	246	Other diseases of thyroid gland-----	2
153	Malignant neoplasm of large intestine, except rectum-----	1,514	250	Diabetes mellitus-----	1,819
154	Malignant neoplasm of rectum and rectosigmoid junction-----	326	251	Disorders of pancreatic internal secretion other than diabetes mellitus-----	4
155	Malignant neoplasm of liver and intra- hepatic bile ducts, specified as primary-----	86	252	Diseases of parathyroid gland-----	2
156	Malignant neoplasm of gallbladder and bile ducts-----	174	253	Diseases of pituitary gland-----	5
157	Malignant neoplasm of pancreas-----	766	254	Diseases of thymus gland-----	3
158	Malignant neoplasm of peritoneum and retroperitoneal tissue-----	28	255	Diseases of adrenal glands-----	9
159	Malignant neoplasm of unspecified digestive organs-----	22			
160	Malignant neoplasm of nose, nasal cavities, middle ear, and accessory sinuses-----	22			
161	Malignant neoplasm of larynx-----	123			
162	Malignant neoplasm of trachea, bronchus, and lung-----	3,232			
163	Malignant neoplasm of other and unspecified respiratory organs-----	27			
170	Malignant neoplasm of bone-----	58			
171	Malignant neoplasm of connective and other soft tissue-----	66			
172	Malignant melanoma of skin-----	111			
173	Other malignant neoplasm of skin-----	58			
174	Malignant neoplasm of breast-----	1,380			
180	Malignant neoplasm of cervix uteri-----	217			

TABLE 4.14
NUMBER OF DEATHS BY CAUSE
MICHIGAN RESIDENTS, 1975 (continued)

ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER	ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER
256	Ovarian dysfunction-----	2			
258	Polyglandular dysfunction and other diseases of endocrine glands-----	14			
263	Other vitamin B deficiency-----	1			
266	Other vitamin deficiency-----	1			
268	Nutritional marasmus-----	24			
269	Other nutritional deficiency-----	70			
270	Congenital disorders of amino-acid metabolism-----	1			
271	Congenital disorders of carbohydrate metabolism-----	1			
272	Congenital disorders of lipid metabolism-----	7			
273	Other and unspecified congenital disorders of metabolism-----	33			
274	Gout-----	9			
275	Plasma protein abnormalities-----	21			
276	Amyloidosis-----	9			
277	Obesity not specified as of endocrine origin-----	68			
279	Other and unspecified metabolic diseases-----	27			
	IV. DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS (280-289)				
280	Iron deficiency anemias-----	7			
281	Other deficiency anemias-----	14			
282	Hereditary hemolytic anemias-----	29			
283	Acquired hemolytic anemias-----	3			
284	Aplastic anemia-----	53			
285	Other and unspecified anemias-----	44			
286	Coagulation defects-----	51			
287	Purpura and other hemorrhagic conditions-----	25			
288	Agranulocytosis-----	11			
289	Other diseases of blood and blood-forming organs-----	16			
	V. MENTAL DISORDERS (290-315)				
290	Senile and presenile dementia-----	19			
291	Alcoholic psychosis-----	7			
295	Schizophrenia-----	5			
296	Affective psychoses-----	2			
303	Alcoholism-----	159			
304	Drug dependence-----	340			
306	Special symptoms not elsewhere classified-----	4			
309	Mental disorders not specified as psychotic associated with physical conditions-----	39			
313	Severe mental retardation-----	1			
314	Profound mental retardation-----	2			
315	Unspecified mental retardation-----	3			
	VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS (320-389)				
320	Meningitis-----	70			
321	Phlebitis and thrombophlebitis of intracranial venous sinuses-----	1			
322	Intracranial and intraspinal abscess-----	17			
323	Encephalitis, myelitis, and encephalomyelitis-----	14			
324	Late effects of intracranial abscess or pyogenic infection-----	2			
330	Hereditary neuromuscular disorders-----	39			
331	Hereditary diseases of the striatopallidal system-----	14			
332	Hereditary ataxia-----	2			
333	Other hereditary and familial diseases of nervous system-----	7			
340	Multiple sclerosis-----	76			
341	Other demyelinating diseases of central nervous system-----	3			
342	Paralysis agitans-----	129			
343	Cerebral spastic infantile paralysis-----	32			
344	Other cerebral paralysis-----	46			
345	Epilepsy-----	69			
347	Other diseases of brain-----	100			
348	Motor neurone disease-----	85			
349	Other diseases of spinal cord-----	3			
350	Facial paralysis-----	1			
354	Polyneuritis and polyradiculitis-----	5			
357	Other diseases of peripheral nerves except autonomic-----	1			
368	Inflammation of lacrimal (glands and ducts)-- Cataract-----	1 3			
374					
381	Otitis media without mention of mastoiditis-----	4			
383	Mastoiditis without mention of otitis media-----	1			
384	Other inflammatory diseases of ear-----	1			
	VII. DISEASES OF THE CIRCULATORY SYSTEM (390-458)				
391	Rheumatic fever with heart involvement---	13			
393	Diseases of pericardium-----	1			
394	Diseases of mitral valve-----	137			
395	Diseases of aortic valve-----	129			
396	Diseases of mitral and aortic valves-----	32			
397	Diseases of other endocardial structures-- Other heart disease, specified as rheumatic-----	29 139			
400	Malignant hypertension-----	30			
401	Essential benign hypertension-----	48			
402	Hypertensive heart disease-----	315			
403	Hypertensive renal disease-----	159			
404	Hypertensive heart and renal disease-----	96			
410	Acute myocardial infarction-----	13,714			
411	Other acute and subacute forms of ischemic heart disease-----	67			
412	Chronic ischemic heart disease-----	11,954			
413	Angina pectoris-----	6			
420	Acute pericarditis, nonrheumatic-----	2			
421	Acute and subacute endocarditis-----	26			
422	Acute myocarditis-----	16			
423	Chronic disease of pericardium, nonrheumatic-----	23			
424	Chronic disease of endocardium-----	37			
425	Cardiomyopathy-----	149			
426	Pulmonary heart disease-----	67			
427	Symptomatic heart disease-----	1,175			
428	Other myocardial insufficiency-----	80			
429	Ill-defined heart disease-----	91			
430	Subarachnoid hemorrhage-----	353			
431	Cerebral hemorrhage-----	976			
432	Occlusion of precerebral arteries-----	105			
433	Cerebral thrombosis-----	2,084			
434	Cerebral embolism-----	30			
435	Transient cerebral ischemia-----	2			
436	Acute but ill-defined cerebrovascular disease-----	2,404			
437	Generalized ischemic cerebrovascular disease-----	1,194			
438	Other and ill-defined cerebrovascular disease-----	114			
440	Arteriosclerosis-----	1,119			
441	Aortic aneurysm (nonsyphilitic)-----	578			
442	Other aneurysm-----	51			
443	Other peripheral vascular disease-----	33			
444	Arterial embolism and thrombosis-----	210			
445	Gangrene-----	113			
446	Polyarteritis nodosa and allied conditions-----	25			
447	Other diseases of arteries and arterioles-----	26			
448	Diseases of capillaries-----	2			
449	Pulmonary embolism and infarction-----	432			
451	Phlebitis and thrombophlebitis-----	73			
453	Other venous embolism and thrombosis-----	29			
454	Varicose veins of lower extremities-----	4			
455	Hemorrhoids-----	1			
456	Varicose veins of other sites-----	18			
457	Noninfective disease of lymphatic channels-----	4			
458	Other diseases of circulatory system-----	29			
	VIII. DISEASES OF THE RESPIRATORY SYSTEM (460-519)				
462	Acute pharyngitis-----	2			
463	Acute tonsillitis-----	2			
464	Acute laryngitis and tracheitis-----	2			
465	Acute upper respiratory infection of multiple or unspecified sites-----	7			
466	Acute bronchitis and bronchiolitis-----	20			
470	Influenza, unqualified-----	53			
471	Influenza with pneumonia-----	71			
472	Influenza with other respiratory manifestations-----	9			
473	Influenza with digestive manifestations-----	2			
480	Viral pneumonia-----	44			
481	Pneumococcal pneumonia-----	138			
482	Other bacterial pneumonia-----	44			
483	Pneumonia due to other specified organism-----	1			
484	Acute interstitial pneumonia-----	19			
485	Bronchopneumonia, unspecified-----	397			

TABLE 4.14
NUMBER OF DEATHS BY CAUSE
MICHIGAN RESIDENTS, 1975 (continued)

ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER	ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER
486	Pneumonia, unspecified-----	1,047			
490	Bronchitis, unqualified-----	33			
491	Chronic bronchitis-----	148			
492	Emphysema-----	860			
493	Asthma-----	82	631	Ectopic pregnancy-----	2
508	Other diseases of upper respiratory tract-----	13	632	Hemorrhage of pregnancy-----	1
			634	Other complications of pregnancy-----	1
510	Empyema-----	15	637	Pre-eclampsia, eclampsia, and toxemia, unspecified-----	2
511	Pleurisy-----	36	652	Delivery complicated retained placenta-----	1
512	Spontaneous pneumothorax-----	7	653	Delivery complicated other postpartum hemorrhage-----	1
513	Abscess of lung-----	37			
			655	Delivery complicated fetopelvic disproportion-----	1
514	Pulmonary congestion and hypostasis-----	27	661	Delivery with other complications-----	2
515	Pneumoconiosis due to silica and silicates-----	24	673	Puerperal pulmonary embolism-----	2
			674	Cerebral hemorrhage in puerperium-----	1
516	Other pneumoconioses and related diseases-----	1	677	Other unspecified complication of puerperium-----	2
517	Other chronic interstitial pneumonia-----	139			
518	Bronchiectasis-----	25			
519	Other diseases of respiratory system-----	648			
	IX. DISEASES OF THE DIGESTIVE SYSTEM (520-577)				
525	Other diseases and conditions of the teeth and supporting structures-----	1	682	Other cellulitis and abscess-----	6
526	Diseases of the jaws-----	1	686	Other local infections of skin and subcutaneous tissue-----	5
527	Diseases of the salivary glands-----	1	692	Other eczema and dermatitis-----	2
528	Diseases of oral soft tissue excluding gingiva and tongue-----	2	694	Pemphigus-----	1
			695	Erythematous conditions-----	8
530	Diseases of esophagus-----	39	696	Psoriasis and similar disorders-----	1
531	Ulcer of stomach-----	122	707	Chronic ulcer of skin-----	30
532	Ulcer of duodenum-----	111			
533	Peptic ulcer, site unspecified-----	37			
534	Gastrojejunal ulcer-----	25	710	Acute arthritis due to pyogenic organisms-----	2
535	Gastritis and duodenitis-----	24	712	Rheumatoid arthritis and allied conditions-----	50
			713	Osteoarthritis and allied conditions-----	13
536	Disorders of function of stomach-----	10	714	Other specified forms of arthritis-----	1
537	Other diseases of stomach and duodenum-----	20	715	Arthritis, unspecified-----	3
540	Acute appendicitis-----	29	716	Polymyositis and dermatomyositis-----	10
541	Appendicitis, unqualified-----	3	718	Rheumatism, unspecified-----	1
550	Inguinal hernia without mention of obstruction-----	3	720	Osteomyelitis and periostitis-----	9
551	Other hernia of abdominal cavity without mention of obstruction-----	41	721	Osteitis deformans-----	5
552	Inguinal hernia with obstruction-----	10	723	Other diseases of bone-----	13
553	Other hernia of abdominal cavity with obstruction-----	36			
560	Intestinal obstruction without mention of hernia-----	186	725	Displacement of intervertebral disc-----	1
561	Non-infective gastroenteritis and colitis-----	18	729	Other diseases of joint-----	7
			732	Infectious other disease of tendon fascia-----	1
562	Diverticula of intestine-----	96	733	Other diseases of muscle, tendon, and fascia-----	16
563	Chronic enteritis and ulcerative colitis-----	31	734	Diffuse diseases of connective tissue-----	77
564	Functional disorders of intestines-----	3	735	Curvature of spine-----	2
566	Abscess of anal and rectal regions-----	2	738	Other deformities-----	1
567	Peritonitis-----	54			
568	Peritoneal adhesions-----	6			
569	Other diseases of intestines and peritoneum-----	228			
570	Acute and subacute necrosis of liver-----	20	740	Anencephalus-----	35
571	Cirrhosis of liver-----	1,574	741	Spina bifida-----	24
572	Suppurative hepatitis and liver abscess-----	4	742	Congenital hydrocephalus-----	36
			743	Other congenital anomalies of nervous system-----	31
573	Other diseases of liver-----	110	746	Congenital anomalies of heart-----	233
574	Cholelithiasis-----	63	747	Other congenital anomalies of circulatory system-----	44
575	Cholecystitis and cholangitis, without mention of calculus-----	51	748	Congenital anomalies of respiratory system-----	41
576	Other diseases of gallbladder and biliary ducts-----	56	749	Cleft palate and cleft lip-----	1
577	Diseases of pancreas-----	135	750	Other congenital anomalies of upper alimentary tract-----	2
			751	Other congenital anomalies of digestive system-----	18
	X. DISEASES OF THE GENITOURINARY SYSTEM (580-629)				
580	Acute nephritis-----	56			
581	Nephrotic syndrome-----	10			
582	Chronic nephritis-----	200	753	Congenital anomalies of urinary system-----	23
583	Nephritis, unqualified-----	17			
584	Renal sclerosis, unqualified-----	3	756	Other congenital anomalies of musculoskeletal system-----	8
590	Infections of kidney-----	141			
591	Hydronephrosis-----	1	758	Other and unspecified congenital anomalies-----	11
592	Calculus of kidney and ureter-----	17			
593	Other diseases of kidney and ureter-----	213	759	Congenital syndromes affecting multiple systems-----	68
594	Calculus of other parts of urinary system-----	3			
595	Cystitis-----	5			
596	Other diseases of bladder-----	8			
597	Urethritis (non-venereal)-----	1			
598	Stricture of urethra-----	1	760	Chronic circulatory and genitourinary diseases in mother-----	1
599	Other diseases of urinary tract-----	105	761	Other maternal conditions unrelated to pregnancy-----	12
600	Hyperplasia of prostate-----	42	762	Toxemia of pregnancy-----	6
601	Prostatitis-----	5	763	Maternal ante- and intrapartum infection	15
602	Other diseases of prostate-----	11	766	Difficult labor with malposition of fetus-----	7
604	Orchitis and epididymitis-----	1	768	Difficult labor with other and unspecified complications-----	1
607	Other diseases of male genital organs-----	3	769	Other complications of pregnancy and childbirth-----	178
			770	Conditions of placenta-----	50
611	Other diseases of breast-----	1	771	Conditions of umbilical cord-----	10
615	Other diseases of ovary and fallopian tube-----	1	772	Birth injury without mention of cause-----	62
616	Diseases of parametrium and pelvic peritoneum (female)-----	2			
623	Uterovaginal prolapse-----	3			
625	Other diseases of uterus-----	4			
626	Disorders of menstruation-----	1			
629	Other diseases of female genital organs-----	4			

TABLE 4.14
NUMBER OF DEATHS BY CAUSE
MICHIGAN RESIDENTS, 1975 (continued)

ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER	ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER
775	Hemolytic disease of newborn without mention of kernicterus-----	7	E863	Accidental poisoning by paints and varnishes-----	1
776	Anoxic and hypoxic conditions not elsewhere classifiable-----	520	E864	Accidental poisoning by petroleum products and other solvents-----	3
777	Immaturity, unqualified-----	187	E865	Accidental poisoning by pesticides, fertilizers, or plant food-----	1
778	Other conditions of fetus or newborn-----	105	E868	Accidental poisoning by noxious foodstuffs-plant-----	3
XVI. SYMPTOMS AND ILL-DEFINED CONDITIONS (780-796)			E869	Accidental poisoning by other and unspecified solid and liquid substances-----	34
780	Symptoms referable nervous system senses-----	7	E870	Accidental poisoning by gas distributed by pipeline-----	1
781	Other symptoms referable to nervous system and special senses-----	2	E871	Accidental poisoning by liquefied petroleum gas distributed in mobile containers-----	2
782	Symptoms referable to cardiovascular and lymphatic system-----	43	E873	Accidental poisoning by motor vehicle exhaust gas-----	37
783	Symptoms referable to respiratory system-----	9	E875	Accidental poisoning by other carbon monoxide-----	27
784	Symptoms referable to upper gastrointestinal tract-----	4	E876	Accidental poisoning by other gases and vapors-----	8
785	Symptoms referable to abdomen and lower gastrointestinal tract-----	2	E880	Fall on or from stairs or steps-----	61
788	Other general symptoms-----	8	E881	Fall on or from ladders or scaffolding-----	19
790	Nervousness and debility-----	1	E882	Fall from or out of building or other structure-----	26
792	Uremia-----	9	E883	Fall into hole or other opening in surface-----	5
794	Senility without mention of psychosis-----	26	E884	Other fall from one level to another-----	39
795	Sudden death (cause unknown)-----	242	E885	Fall on same level from slipping, stumbling, or tripping-----	16
796	Other ill-defined and unknown causes of morbidity and mortality-----	260	E887	Other and unspecified fall-----	452
E XVII. ACCIDENTS, POISONINGS, AND VIOLENCE (EXTERNAL CAUSE) (E800-E999)			E890	Accident caused by conflagration in private dwelling-----	188
E801	Railway accident involving collision with other object-----	2	E891	Accident caused by conflagration in other building or structure-----	7
E804	Fall in or from train-----	2	E892	Accident caused by conflagration not in building or structure-----	4
E805	Hit by rolling stock-----	5	E893	Accident caused by ignition of clothing-----	10
E806	Other specified railway accident-----	1	E894	Accident caused by ignition of highly inflammable material-----	5
E810	Motor vehicle traffic accident involving collision with train-----	22	E898	Accident caused by other specified fires or flames-----	9
E812	Motor vehicle traffic accident involving collision with another motor vehicle-----	688	E899	Accident caused by unspecified fire-----	37
E813	Motor vehicle traffic accident involving collision with other vehicle-----	57	E900	Excessive heat-----	6
E814	Motor vehicle traffic accident involving collision with pedestrian-----	321	E901	Excessive cold-----	11
E815	Other motor vehicle traffic accident involving collision-----	131	E902	High and low air pressure-----	1
E816	Noncollision motor vehicle traffic accident due to loss of control-----	430	E904	Hunger, thirst, exposure, and neglect-----	9
E818	Other noncollision motor vehicle traffic accident-----	32	E906	Other accidents caused by animals-----	1
E819	Motor vehicle traffic accident of unspecified nature-----	127	E907	Lightning-----	3
E820	Motor vehicle nontraffic accident involving collision with moving object-----	21	E909	Accidents due to other natural and environmental factors-----	2
E821	Motor vehicle nontraffic accident involving collision with stationary object-----	2	E910	Accidental drowning and submersion-----	293
E822	Motor vehicle non-traffic accident boarding or alighting-----	1	E911	Inhalation and ingestion of food causing obstruction or suffocation-----	92
E823	Motor vehicle non-traffic accident of other and unspecified nature-----	9	E912	Inhalation and ingestion of other object causing obstruction or suffocation-----	47
E826	Pedal cycle accident-----	1	E913	Accidental mechanical suffocation-----	38
E827	Other nonmotor road vehicle accident-----	3	E915	Foreign body accidentally entering other orifice-----	3
E830	Accident to watercraft causing submersion-----	19	E916	Struck accidentally by falling object--	32
E831	Accident to watercraft causing other injury-----	2	E917	Striking against or struck accidentally by objects-----	21
E832	Other accidental submersion or drowning in water transport-----	30	E918	Caught accidentally in or between objects-----	31
E834	Other fall one level to another in water transport-----	2	E919	Overexertion and strenuous movements-----	1
E838	Other and unspecified water transport accident-----	3	E920	Accidents caused by cutting or piercing instruments-----	6
E840	Accident to powered aircraft at take-off or landing-----	4	E921	Accidents caused by explosion of pressure vessel-----	1
E841	Accident to powered aircraft, other and unspecified-----	42	E922	Accident caused by firearm missiles-----	67
E842	Accident to unpowered aircraft-----	1	E923	Accident caused by explosive material--	13
E843	Fall in or from aircraft-----	1	E924	Accident caused by hot substance, corrosive liquid, and steam-----	12
E844	Other specified air transport accidents-----	2	E925	Accident caused by electric current-----	46
E853	Accidental poisoning by analgesics and antipyretics-----	30	E927	Vehicle accidents not elsewhere classifiable-----	28
E854	Accidental poisoning by other sedatives and hypnotics-----	19	E928	Machinery accidents not elsewhere classifiable-----	32
E855	Accidental poisoning by autonomic nervous system and psychotherapeutic drugs-----	4	E929	Other and unspecified accidents-----	58
E856	Accidental poisoning by other central nervous system depressants and stimulants-----	1	E930	Complications and misadventures in operative therapeutic procedures-----	21
E857	Accidental poisoning by cardiovascular drugs-----	7			
E859	Accidental poisoning by other and unspecified drugs and medicaments-----	64			
E860	Accidental poisoning by alcohol-----	4			

TABLE 414—Number of Deaths by Cause Michigan Residents, 1975 (continued)

ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER	ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER
E931	Complications and misadventures in other and unspecified therapeutic procedures-----	17	E964	Assault by submersion (drowning)-----	4
E932	Complications and misadventures in diagnostic procedures-----	8	E965	Assault by firearms and explosives-----	816
E940	Late effect of motor vehicle accident-----	2	E966	Assault by cutting and piercing instruments-----	163
E941	Late effect of other transport accident-----	1	E968	Assault by other and unspecified means-----	105
E943	Late effect of accidental fall-----	7	E970	Injury due to legal intervention by firearms-----	24
E946	Late effect of other accident-----	4	E980	Poisoning by solid or liquid substances, undetermined whether accidentally or purposely inflicted-----	69
E947	Late effect of surgical operation-----	2	E982	Poisoning by other gases, undetermined whether accidentally or purposely inflicted-----	26
E948	Late effect of irradiation-----	1	E983	Hanging strangulation undetermined-----	4
E950	Suicide and self-inflicted poisoning by solid or liquid substances-----	134	E984	Submersion (drowning), undetermined whether accidentally or purposely inflicted	16
E951	Suicide and self-inflicted poisoning by gases in domestic use-----	1	E985	Injury by firearms and explosives, undetermined whether accidentally or purposely inflicted-----	33
E952	Suicide and self-inflicted poisoning by other gases-----	190	E986	Injury by cutting and piercing instruments, undetermined whether accidentally or purposely inflicted-----	2
E953	Suicide and self-inflicted injury by hanging, strangulation, and suffocation-----	173	E987	Falling from high places undetermined-----	4
E954	Suicide and self-inflicted injury by submersion (drowning)-----	22	E988	Injury by other and unspecified means, undetermined whether accidentally or purposely inflicted-----	42
E955	Suicide and self-inflicted injury by firearms and explosives-----	570	E989	Late effect of injury undetermined-----	1
E956	Suicide and self-inflicted injury by cutting and piercing instruments-----	11	E999	Late effect of injury due to war operations--	1
E957	Suicide and self-inflicted injury by jumping from high place-----	22			
E958	Suicide and self-inflicted injury by other and unspecified means-----	12			
E959	Late effect of self-inflicted injury-----	1			
E960	Fight, brawl, or rape-----	1			
E963	Assault by hanging and strangulation-----	45			
				TOTAL	74,522

TABLE 4.15

Population by Age and Sex,¹ Michigan Residents, 1975

Age	Total	Percent	Males	Percent	Females	Percent
0-4.....	750,474	8.19	384,044	8.53	366,430	7.87
5-9.....	815,493	8.91	415,013	9.22	400,480	8.60
10-14.....	926,926	10.12	471,784	10.48	455,142	9.77
15-19.....	968,397	10.58	494,280	10.98	474,117	10.18
20-24.....	822,236	8.98	412,396	9.16	409,841	8.80
25-29.....	605,854	6.62	262,998	5.84	342,856	7.36
30-34.....	618,798	6.76	316,374	7.03	302,424	6.49
35-39.....	500,728	5.47	259,682	5.77	241,046	5.18
40-44.....	457,696	5.00	230,578	5.12	227,118	4.88
45-49.....	514,904	5.62	257,030	5.71	257,874	5.54
50-54.....	517,442	5.65	249,501	5.54	267,941	5.75
55-59.....	454,202	4.96	216,098	4.80	238,104	5.11
60-64.....	374,274	4.09	178,195	3.96	196,078	4.21
65-69.....	285,786	3.12	132,347	2.94	153,438	3.29
70-74.....	205,378	2.24	90,517	2.01	114,861	2.47
75-79.....	146,227	1.60	59,287	1.32	86,941	1.87
80-84.....	117,809	1.29	44,157	0.98	73,653	1.58
85 and over.....	74,376	0.81	25,739	0.57	48,637	1.04
Total.....	9,157,000	100.01	4,500,020	99.96	4,656,981	99.99

¹ Estimates developed from total state population estimate for 7/1/75 as contained in: Population Estimates, Current Population Reports, series P-26, no. 10, USDC, SESA, USGPO, May, 1975, and from projected population subgroup proportions as developed from; Population Projections, Research Division, Bureau of Programs and Budgets, Executive Office, State of Michigan, Dec., 1972.

TABLE 4.16
POPULATION CHANGES BY COUNTY
MICHIGAN RESIDENTS, 1975

Area	Population Estimates July 1, 1965	Population Estimates July 1, 1975	Percent Change	Natural Increase	Net Migration
STATE	8,199,000	9,157,000	11.7	799,814	157,486
Alcona	5,600	8,500	51.8	-34	2,934
Alger	8,300	8,800	6.0	211	289
Allegan	56,600	71,600	26.5	6,046	8,954
Alpena	29,700	33,100	11.4	2,412	988
Antrim	9,000	15,000	66.7	473	5,527
Arenac	9,300	13,300	43.0	532	3,468
Baraga	7,200	8,000	11.1	333	467
Barry	28,200	41,100	45.7	2,731	10,169
Bay	107,400	119,700	11.5	10,997	1,303
Benzie	7,800	9,900	26.9	191	1,909
Berrien	156,800	170,800	8.9	16,356	-2,356
Branch	35,100	37,900	8.0	2,222	578
Calhoun	138,000	141,300	2.4	11,708	8,408
Cass	37,300	45,600	22.3	2,984	5,316
Charlevoix	15,500	18,400	18.7	875	2,025
Cheboygan	13,700	19,300	40.9	1,106	4,494
Chippewa	33,700	36,200	7.4	4,227	-1,727
Clara	11,900	21,300	79.0	570	8,830
Clinton	43,500	53,200	22.3	5,528	4,172
Crawford	5,200	8,100	55.8	301	2,599
Delta	32,500	39,500	21.5	1,803	5,197
Dickinson	23,300	25,100	7.7	243	1,557
Eaton	53,800	75,700	40.7	6,302	15,598
Emmet	16,600	21,300	28.3	1,134	3,566
Genesee	419,900	450,400	7.3	55,432	-24,932
Gladwin	10,000	16,600	66.0	581	6,019
Gogebic	20,300	20,700	2.0	-533	933
Grand Traverse	36,400	45,100	23.9	3,011	5,689
Gratiot	37,600	39,700	5.6	3,777	-1,677
Hillsdale	33,800	40,700	20.4	2,621	4,279
Houghton	32,700	36,700	12.2	201	3,799
Huron	33,300	35,600	6.9	1,836	464
Ingham	231,500	270,900	17.0	31,852	7,548
Ionia	43,800	47,100	7.5	4,173	-873
Iosco	19,900	28,800	44.7	2,985	5,915
Iron	14,900	14,300	-4.0	-753	153
Isabella	35,300	50,800	43.9	4,319	11,181
Jackson	134,600	147,100	9.3	11,290	1,210
Kalamazoo	176,300	203,100	15.2	18,356	8,444
Kalkaska	4,700	8,000	70.2	293	3,007
Kent	382,400	427,100	11.7	37,765	6,935
Keweenaw	2,300	2,100	-8.7	-95	-105
Lake	4,500	6,700	48.9	-200	2,400
Lapeer	45,400	62,000	36.6	5,618	10,982
Leelanau	9,500	12,300	29.5	332	2,468
Lenawee	78,600	86,700	10.3	7,623	477
Livingston	41,600	78,500	88.7	5,357	31,543
Luce	7,100	7,300	2.8	180	20
MacInac	9,800	10,600	8.2	415	385
Macomb	533,800	669,600	25.4	75,270	60,530
Manistee	19,300	21,600	11.9	499	1,801
Marquette	60,000	70,300	17.2	6,468	3,832
Mason	21,200	24,500	15.6	633	2,667
Mecosta	22,000	35,200	60.0	2,261	10,939
Menominee	23,100	25,500	10.4	557	1,843
Midland	54,700	67,500	23.4	8,258	4,542
Missaukee	6,100	8,700	42.6	283	2,317
Monroe	107,400	126,500	17.8	12,207	6,893
Montcalm	37,800	44,300	17.2	3,008	3,492
Montmorency	4,200	6,900	64.3	4	2,696
Muskegon	149,300	156,700	5.0	14,315	-6,915
Newaygo	24,900	31,000	24.5	1,783	4,317
Oakland	769,900	967,500	25.7	89,472	108,128
Oceana	15,800	20,900	32.3	1,253	3,847
Ogemaw	9,000	14,800	64.4	177	5,623
Ontonagon	10,800	11,300	4.6	452	48
Osceola	13,600	17,300	27.2	900	2,800
Oscoda	3,600	6,100	69.4	-59	2,559
Otsego	8,700	13,400	54.0	1,026	3,674
Ottawa	105,600	140,500	33.0	13,668	21,232
Presque Isle	12,100	14,100	16.5	698	1,302
Roscommon	7,300	14,400	97.3	-285	7,385
Saginaw	294,800	226,800	10.7	25,443	-3,443
St. Clair	109,200	130,500	19.5	9,386	11,914
St. Joseph	42,800	51,200	19.6	3,572	4,828
Sanilac	33,400	38,500	15.3	1,871	3,229
Schoolcraft	7,900	8,600	9.9	181	519
Shiawassee	57,200	69,700	21.9	7,053	5,447
Tuscola	44,500	53,700	21.2	4,369	5,031
Van Buren	50,700	62,100	22.5	4,051	7,349
Washtenaw	191,900	256,400	33.6	27,531	36,969
Wayne	2,666,700	2,536,700	-4.9	206,659	-336,659
Westford	17,800	22,000	23.6	1,184	3,016
Not Stated	-	-	-	-21	21

TABLE 4.17--Abridged Life Table, Michigan Residents, 1975

AGE	NQX(1) ¹	LX(2) ¹	NDX(3) ¹	NLX(4) ¹	TX(5) ¹	EX(6) ¹
0-1.....	0.01607	100,000	1,607	98,541	7,199,157	72.0
1-5.....	0.00256	98,393	252	392,981	7,100,616	72.2
5-10.....	0.00168	98,141	165	490,253	6,707,635	68.3
10-15.....	0.00160	97,976	156	489,566	6,217,382	63.4
15-20.....	0.00530	97,821	518	487,943	5,727,816	58.6
20-25.....	0.00820	97,303	797	484,593	5,239,873	53.9
25-30.....	0.00887	96,506	856	480,380	4,755,280	49.3
30-35.....	0.00778	95,650	744	476,410	4,274,900	44.7
35-40.....	0.00989	94,907	938	472,352	3,798,490	40.0
40-45.....	0.01628	93,969	1,529	466,313	3,326,137	35.4
45-50.....	0.02533	92,439	2,341	456,727	2,859,825	30.9
50-55.....	0.03740	90,098	3,369	442,607	2,403,098	26.7
55-60.....	0.05680	86,729	4,926	422,090	1,960,491	22.6
60-65.....	0.08572	81,803	7,011	392,435	1,538,401	18.8
65-70.....	0.12668	74,792	9,474	351,449	1,145,966	15.3
70-75.....	0.19378	65,317	12,657	296,019	794,517	12.2
75-80.....	0.27780	52,661	14,629	226,737	498,498	9.5
80-85.....	0.33350	38,032	12,683	157,693	271,762	7.1
85+.....	1.00000	25,349	25,349	114,069	114,069	4.5

¹ Definitions of life table values are contained in the Technical Notes.

TABLE 4.18--Abridged Life Table for Males, Michigan Residents, 1975

AGE	NQX(1) ¹	LX(2) ¹	NDX(3) ¹	NLX(4) ¹	TX(5) ¹	EX(6) ¹
0-1.....	0.01765	100,000	1,765	98,385	6,847,237	68.5
1-5.....	0.00270	98,235	265	392,345	6,748,852	68.7
5-10.....	0.00204	97,970	199	489,302	6,356,507	64.9
10-15.....	0.00199	97,771	194	488,486	5,867,205	60.0
15-20.....	0.00777	97,577	758	486,195	5,378,719	55.1
20-25.....	0.01206	96,820	1,167	481,319	4,892,524	50.5
25-30.....	0.01491	95,652	1,426	474,655	4,411,205	46.1
30-35.....	0.01027	94,226	967	468,653	3,936,550	41.8
35-40.....	0.01220	93,259	1,137	463,627	3,467,897	37.2
40-45.....	0.01969	92,121	1,813	456,433	3,004,269	32.6
45-50.....	0.03171	90,308	2,863	444,887	2,547,836	28.2
50-55.....	0.04849	87,445	4,240	427,350	2,102,949	24.0
55-60.....	0.07633	83,205	6,351	401,113	1,675,599	20.1
60-65.....	0.11552	76,854	8,878	363,133	1,274,485	16.6
65-70.....	0.16816	67,976	11,430	312,386	911,352	13.4
70-75.....	0.24888	56,545	14,072	248,220	598,967	10.6
75-80.....	0.34528	42,473	14,665	175,124	350,747	8.3
80-85.....	0.40615	27,808	11,294	109,567	175,623	6.3
85+.....	1.00000	16,514	16,514	66,056	66,056	4.0

¹ IBID.

TABLE 4.19--Abridged Life Table for Females, Michigan Residents, 1975

AGE	NQX(1) ¹	LX(2) ¹	NDX(3) ¹	NLX(4) ¹	TX(5) ¹	EX(6) ¹
0-1.....	0.01441	100,000	1,441	98,706	7,566,698	75.7
1-5.....	0.00242	98,559	238	393,650	7,467,993	75.8
5-10.....	0.00132	98,321	129	491,250	7,074,343	72.0
10-15.....	0.00119	98,192	116	490,697	6,583,093	67.0
15-20.....	0.00271	98,075	266	489,777	6,092,396	62.1
20-25.....	0.00429	97,810	419	488,032	5,602,619	57.3
25-30.....	0.00421	97,391	410	485,946	5,114,588	52.5
30-35.....	0.00517	96,981	501	483,717	4,628,641	47.7
35-40.....	0.00739	96,480	712	480,773	4,144,925	43.0
40-45.....	0.01281	95,768	1,226	476,000	3,664,152	38.3
45-50.....	0.01894	94,542	1,790	468,501	3,188,152	33.7
50-55.....	0.02696	92,752	2,500	457,865	2,719,651	29.3
55-60.....	0.03875	90,252	3,497	443,041	2,261,786	25.1
60-65.....	0.05782	86,755	5,016	422,029	1,818,745	21.0
65-70.....	0.08937	81,739	7,304	391,682	1,396,717	17.1
70-75.....	0.14777	74,435	10,999	346,171	1,005,035	13.5
75-80.....	0.22823	63,436	14,478	281,610	658,864	10.4
80-85.....	0.28603	48,958	14,003	209,473	377,255	7.7
85+.....	1.00000	34,955	34,955	167,782	167,782	4.8

¹ IBID.

TABLE 4.20--Abridged Life Table for Whites, Michigan Residents, 1975

AGE	NQX(1) ¹	LX(2) ¹	NDX(3) ¹	NLX(4) ¹	TX(5) ¹	EX(6) ¹
0-1.....	0.01386	100,000	1,386	98,747	7,284,421	72.8
1-5.....	0.00239	98,614	235	393,905	7,185,673	72.9
5-10.....	0.00158	98,379	155	491,469	6,791,768	69.0
10-15.....	0.00161	98,224	158	490,800	6,300,299	64.1
15-20.....	0.00514	98,067	503	489,179	5,809,500	59.2
20-25.....	0.00677	97,563	660	486,192	5,320,320	54.5
25-30.....	0.00645	96,904	624	482,937	4,834,128	49.9
30-35.....	0.00585	96,279	563	480,025	4,351,191	45.2
35-40.....	0.00827	95,717	791	476,756	3,871,166	40.4
40-45.....	0.01348	94,926	1,280	471,709	3,394,410	35.8
45-50.....	0.02273	93,646	2,128	463,297	2,922,700	31.2
50-55.....	0.03417	91,518	3,127	450,326	2,459,403	26.9
55-60.....	0.05403	88,391	4,775	430,815	2,009,077	22.7
60-65.....	0.08312	83,616	6,950	401,732	1,578,262	18.9
65-70.....	0.12649	76,667	9,697	360,326	1,176,530	15.3
70-75.....	0.19234	66,969	12,881	303,725	816,204	12.2
75-80.....	0.27516	54,089	14,883	233,308	512,479	9.5
80-85.....	0.33727	39,206	13,223	162,246	279,170	7.1
85+.....	1.00000	25,983	25,983	116,924	116,924	4.5

¹ IBID.

TABLE 4.21--Abridged Life Table for White Males, Michigan Residents, 1975

AGE	NQX(1) ¹	LX(2) ¹	NDX(3) ¹	NLX(4) ¹	TX(5) ¹	EX(6) ¹
0-1.....	0.01522	100,000	1,522	98,613	6,949,094	69.5
1-5.....	0.00253	98,478	248	393,356	6,850,480	69.6
5-10.....	0.00194	98,229	190	490,624	6,457,124	65.7
10-15.....	0.00199	98,039	195	489,824	5,966,500	60.9
15-20.....	0.00755	97,845	738	487,536	5,476,676	56.0
20-25.....	0.00988	97,106	959	483,190	4,989,140	51.4
25-30.....	0.01045	96,147	1,005	478,174	4,505,950	46.9
30-35.....	0.00746	95,143	710	473,923	4,027,776	42.3
35-40.....	0.00982	94,433	927	470,016	3,553,853	37.6
40-45.....	0.01619	93,506	1,513	464,108	3,083,836	33.0
45-50.....	0.02876	91,993	2,645	453,857	2,619,729	28.5
50-55.....	0.04399	89,348	3,930	437,665	2,165,872	24.2
55-60.....	0.07318	85,418	6,251	412,492	1,728,207	20.2
60-65.....	0.11212	79,167	8,876	374,820	1,315,715	16.6
65-70.....	0.16920	70,291	11,893	322,912	940,894	13.4
70-75.....	0.24975	58,398	14,585	256,186	617,982	10.6
75-80.....	0.34340	43,813	15,045	180,876	361,796	8.3
80-85.....	0.41042	28,768	11,807	113,075	180,921	6.3
85+.....	1.00000	16,961	16,961	67,846	67,846	4.0

¹ IBID.

TABLE 4.22--Abridged Life Table for White Females, Michigan Residents, 1975

AGE	NQX(1) ¹	LX(2) ¹	NDX(3) ¹	NLX(4) ¹	TX(5) ¹	EX(6) ¹
0-1.....	0.01240	100,000	1,240	98,890	7,631,506	76.3
1-5.....	0.00225	98,760	222	394,490	7,532,616	76.3
5-10.....	0.00120	98,538	117	492,367	7,138,125	72.4
10-15.....	0.00121	98,421	119	491,835	6,645,758	67.5
15-20.....	0.00261	98,302	256	490,916	6,153,924	62.6
20-25.....	0.00358	98,045	351	489,365	5,663,008	57.8
25-30.....	0.00334	97,695	326	487,670	5,173,643	53.0
30-35.....	0.00411	97,369	399	485,910	4,685,973	48.1
35-40.....	0.00645	96,970	625	483,411	4,200,063	43.3
40-45.....	0.01039	96,345	1,000	479,418	3,716,652	38.6
45-50.....	0.01645	95,344	1,568	473,081	3,237,233	34.0
50-55.....	0.02496	93,776	2,340	463,398	2,764,153	29.5
55-60.....	0.03637	91,436	3,325	449,409	2,300,755	25.2
60-65.....	0.05602	88,111	4,935	429,055	1,851,346	21.0
65-70.....	0.08838	83,176	7,350	398,765	1,422,291	17.1
70-75.....	0.14507	75,825	10,999	353,140	1,023,526	13.5
75-80.....	0.22540	64,826	14,611	288,341	670,386	10.3
80-85.....	0.28985	50,215	14,554	214,442	382,044	7.6
85+.....	1.00000	35,660	35,660	167,603	167,603	4.7

¹ IBID.

TABLE 4.23--Abridged Life Table for Nonwhites, Michigan Residents, 1975

AGE	NQX(1) ¹	LX(2) ¹	NDX(3) ¹	NLX(4) ¹	TX(5) ¹	EX(6) ¹
0-1.....	0.02670	100,000	2,670	97,553	6,672,753	66.7
1-5.....	0.00347	97,330	337	388,535	6,575,201	67.6
5-10.....	0.00236	96,992	228	484,334	6,186,666	63.8
10-15.....	0.00151	96,764	146	483,534	5,702,332	58.9
15-20.....	0.00623	96,618	602	481,887	5,218,798	54.0
20-25.....	0.01647	96,017	1,581	476,503	4,736,911	49.3
25-30.....	0.02529	94,436	2,388	466,292	4,260,408	45.1
30-35.....	0.02162	92,047	1,990	455,156	3,794,116	41.2
35-40.....	0.02084	90,058	1,876	445,842	3,338,960	37.1
40-45.....	0.03591	88,181	3,166	433,395	2,893,118	32.8
45-50.....	0.04493	85,015	3,819	415,936	2,459,723	28.9
50-55.....	0.06313	81,196	5,126	393,642	2,043,787	25.2
55-60.....	0.08020	76,070	6,101	365,606	1,650,145	21.7
60-65.....	0.10791	69,970	7,550	331,371	1,284,540	18.4
65-70.....	0.12819	62,420	8,002	292,873	953,169	15.3
70-75.....	0.20725	54,419	11,278	245,022	660,295	12.1
75-80.....	0.31061	43,140	13,400	181,591	415,273	9.6
80-85.....	0.28047	29,741	8,341	126,684	233,682	7.9
85+.....	1.00000	21,400	21,400	106,998	106,998	5.0

¹ IBID.

TABLE 4.24--Abridged Life Table for Nonwhite Males, Michigan Residents, 1975

AGE	NQX(1) ¹	LX(2) ¹	NDX(3) ¹	NLX(4) ¹	TX(5) ¹	EX(6) ¹
0-1.....	0.02968	100,000	2,968	97,253	6,206,340	62.1
1-5.....	0.00364	97,032	353	387,325	6,109,087	63.0
5-10.....	0.00267	96,678	258	482,683	5,721,762	59.2
10-15.....	0.00195	96,421	187	481,763	5,239,080	54.3
15-20.....	0.00908	96,233	873	479,436	4,757,317	49.4
20-25.....	0.02476	95,360	2,361	471,605	4,277,881	44.9
25-30.....	0.04589	92,999	4,267	454,435	3,806,275	40.9
30-35.....	0.03238	88,732	2,873	436,127	3,351,840	37.8
35-40.....	0.03003	85,859	2,578	423,072	2,915,714	34.0
40-45.....	0.04722	83,281	3,932	406,934	2,492,641	29.9
45-50.....	0.05403	79,350	4,287	386,528	2,085,708	26.3
50-55.....	0.08414	75,063	6,316	360,101	1,699,180	22.6
55-60.....	0.10254	68,747	7,049	326,655	1,339,078	19.5
60-65.....	0.14436	61,699	8,906	286,520	1,012,423	16.4
65-70.....	0.16007	52,792	8,450	243,209	725,904	13.8
70-75.....	0.24124	44,342	10,697	195,781	482,694	10.9
75-80.....	0.36713	33,645	12,352	136,670	286,913	8.5
80-85.....	0.34997	21,293	7,452	86,574	150,244	7.1
85+.....	1.00000	13,841	13,841	63,669	63,669	4.6

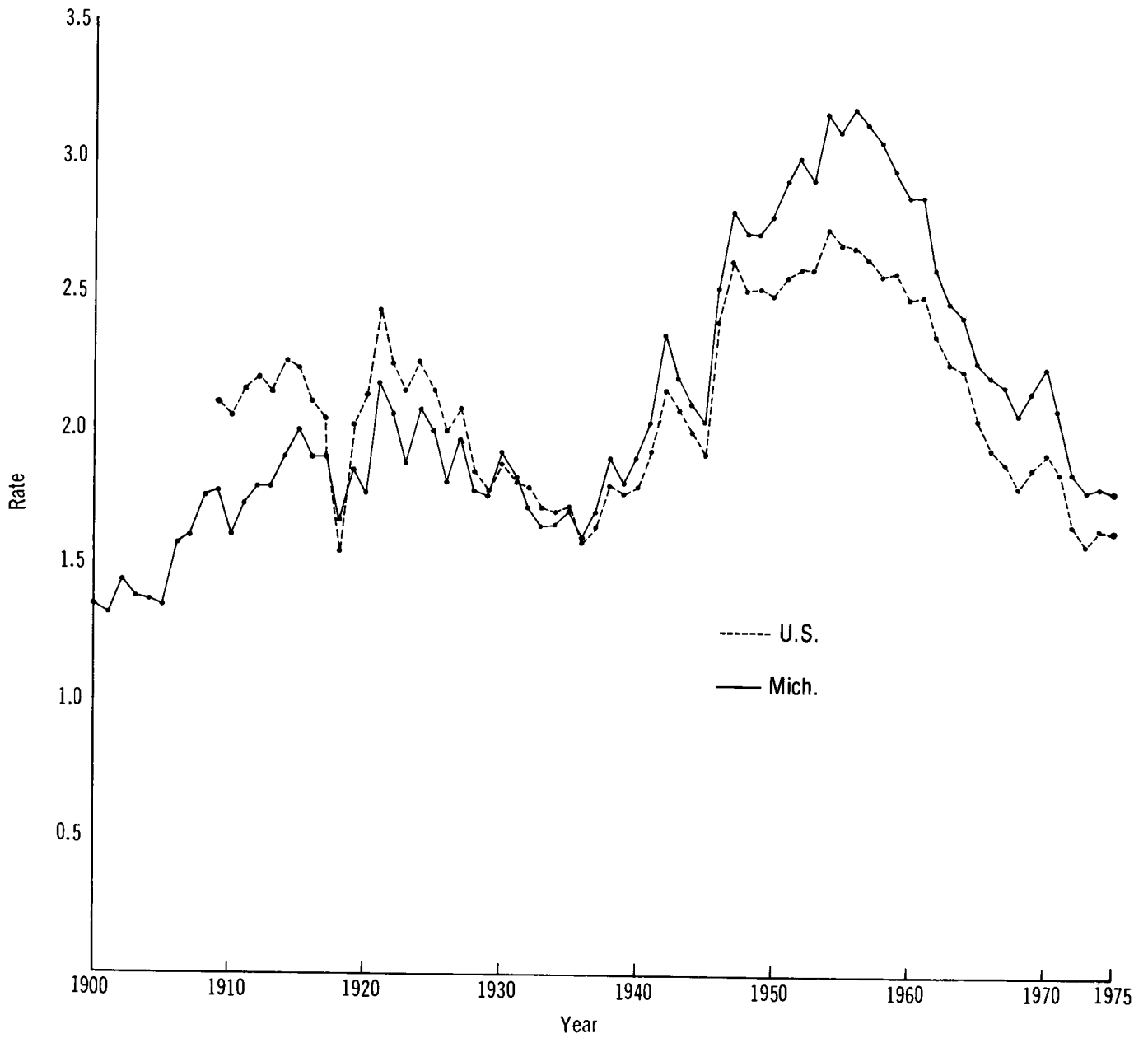
¹ IBID.

TABLE 4.25--Abridged Life Table for Nonwhite Females, Michigan Residents, 1975

AGE	NQX(1) ¹	LX(2) ¹	NDX(3) ¹	NLX(4) ¹	TX(5) ¹	EX(6) ¹
0-1.....	0.02379	100,000	2,379	97,846	7,132,373	71.3
1-5.....	0.00330	97,621	322	389,719	7,034,527	72.1
5-10.....	0.00205	97,300	199	485,952	6,644,808	68.3
10-15.....	0.00106	97,101	103	485,273	6,158,856	63.4
15-20.....	0.00329	96,998	319	484,347	5,673,583	58.5
20-25.....	0.00871	96,679	841	481,426	5,189,236	53.7
25-30.....	0.01000	95,838	958	476,860	4,707,810	49.1
30-35.....	0.01220	94,880	1,157	471,575	4,230,950	44.6
35-40.....	0.01376	93,723	1,289	465,756	3,759,375	40.1
40-45.....	0.03150	92,434	2,911	455,368	3,293,619	35.6
45-50.....	0.03997	89,523	3,578	438,832	2,838,251	31.7
50-55.....	0.04301	85,945	3,696	420,750	2,399,420	27.9
55-60.....	0.05906	82,249	4,857	399,514	1,978,669	24.1
60-65.....	0.07331	77,392	5,673	373,224	1,579,156	20.4
65-70.....	0.09762	71,719	7,001	342,268	1,205,932	16.8
70-75.....	0.17483	64,718	11,314	296,797	863,665	13.3
75-80.....	0.26519	53,404	14,162	231,138	566,867	10.6
80-85.....	0.23006	39,242	9,028	172,572	335,729	8.6
85+.....	1.00000	30,214	30,214	163,157	163,157	5.4

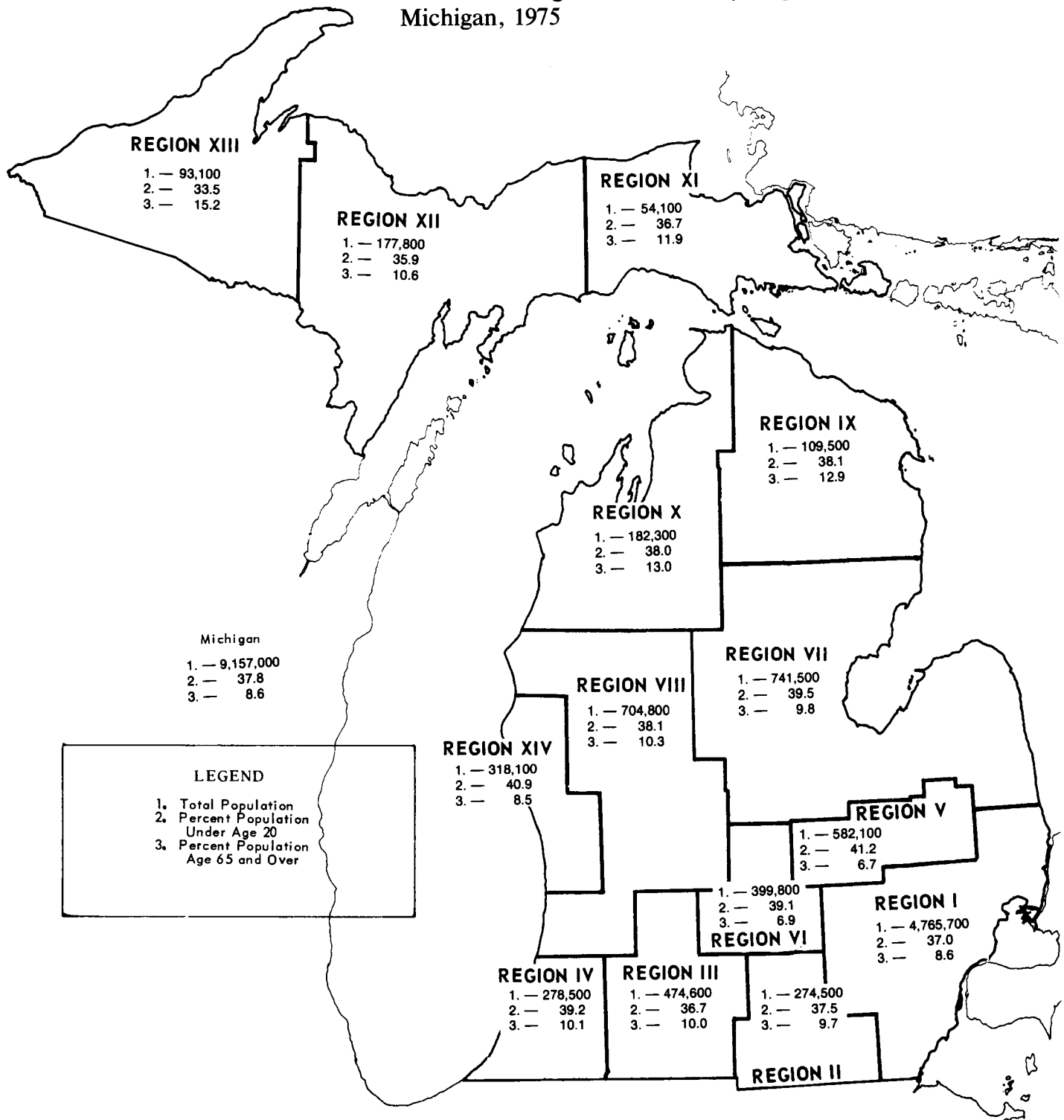
¹ IBID.

FIGURE 4.1 — Rate of Natural Increase, Michigan, 1900-1975,
and the United States, 1909¹-1975



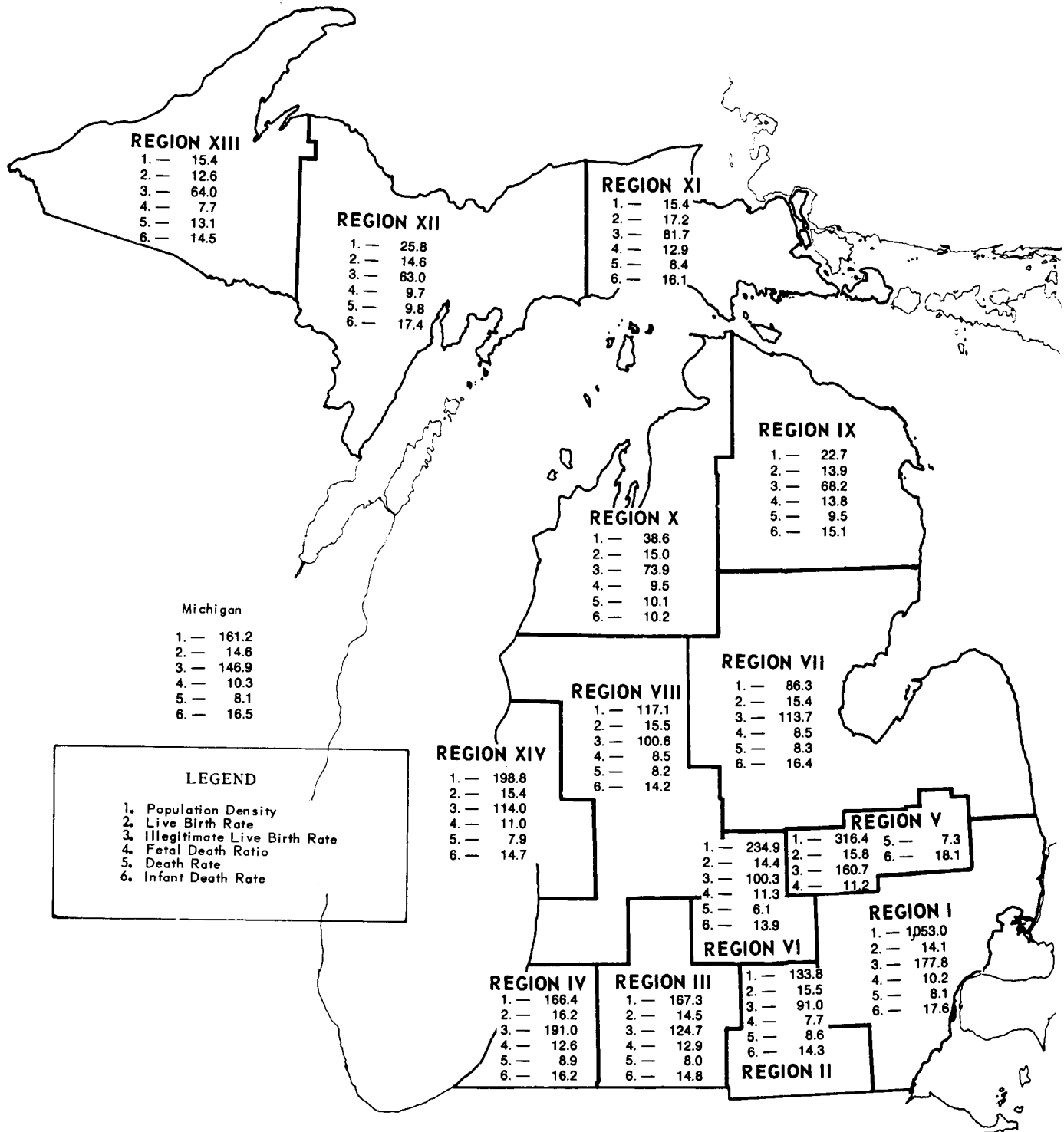
¹Data not available prior to 1909.

FIGURE 4.2 — Total Population, Percent Under Age 20 and Percent Age 65 and over by Region,¹ Michigan, 1975



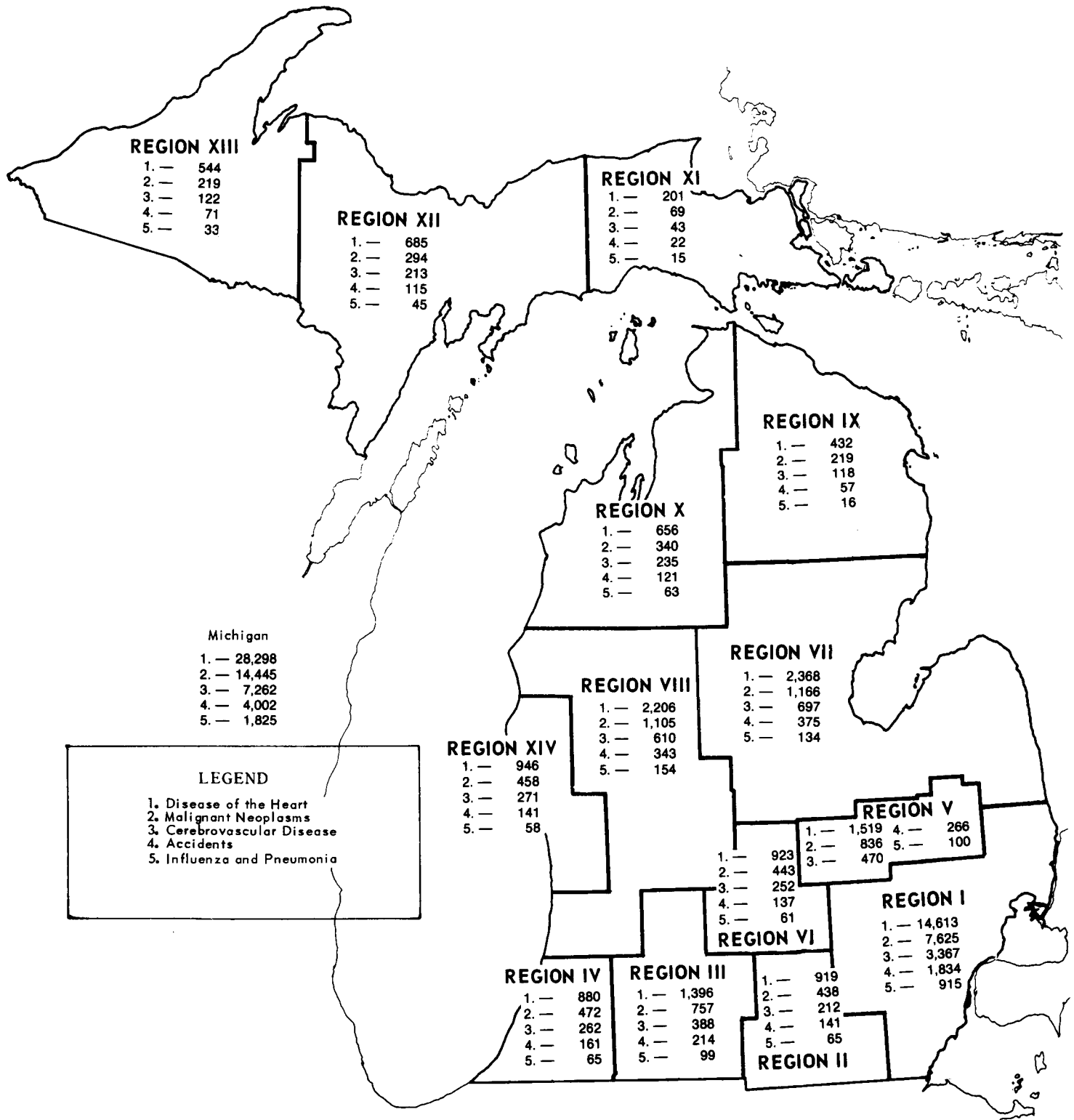
¹State Planning and Development Regions — August, 1973

FIGURE 4.3 — Population Density, Live Birth Rates, Illegitimate Live Birth Ratios, Fetal Death Ratios, Death Rates and Infant Death Rates by Region,¹ Michigan Residents, 1975



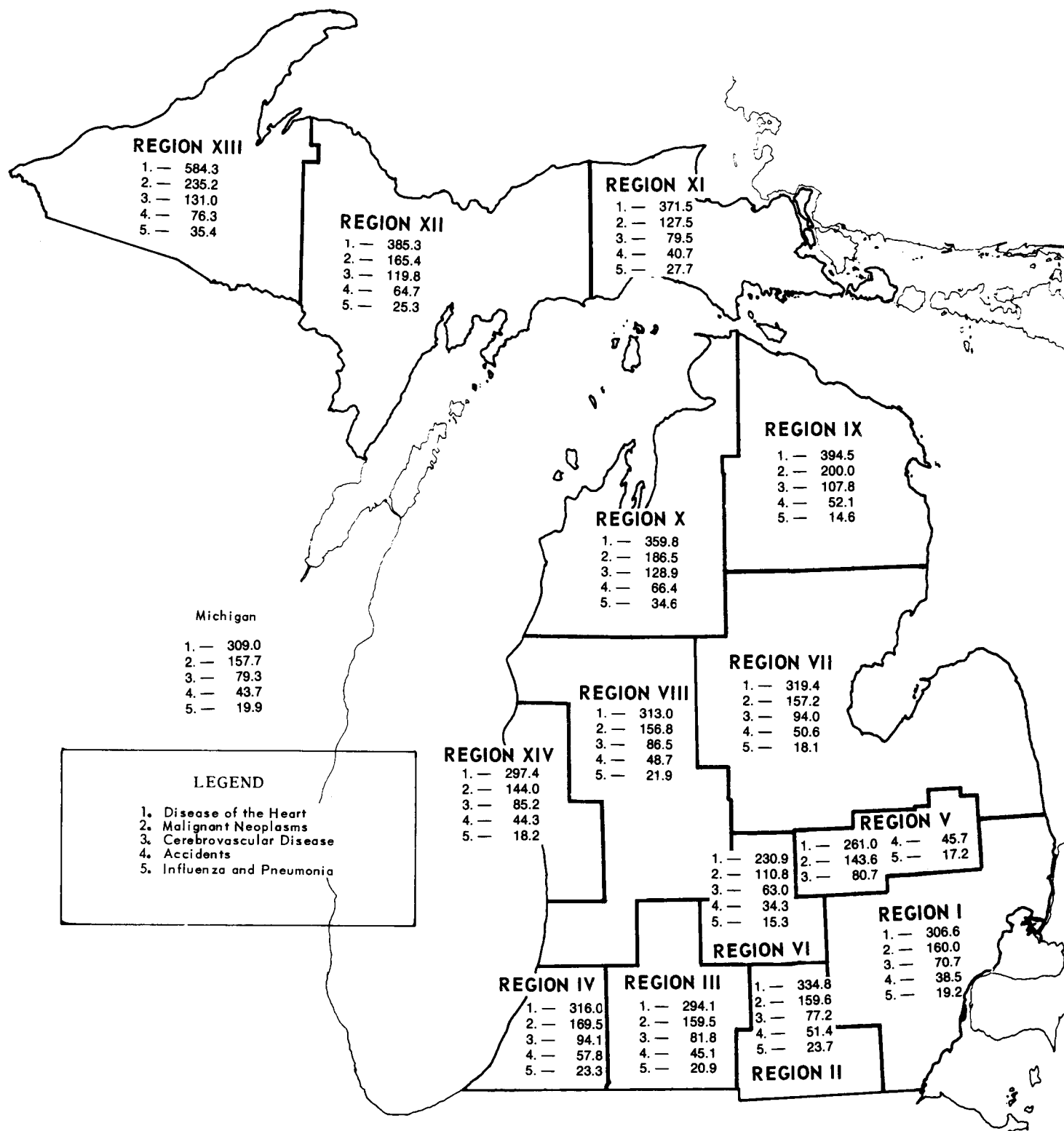
¹State Planning and Development — August, 1973

FIGURE 4.4 — Leading Causes of Death; Number of Deaths by Region,¹
Michigan Residents, 1975



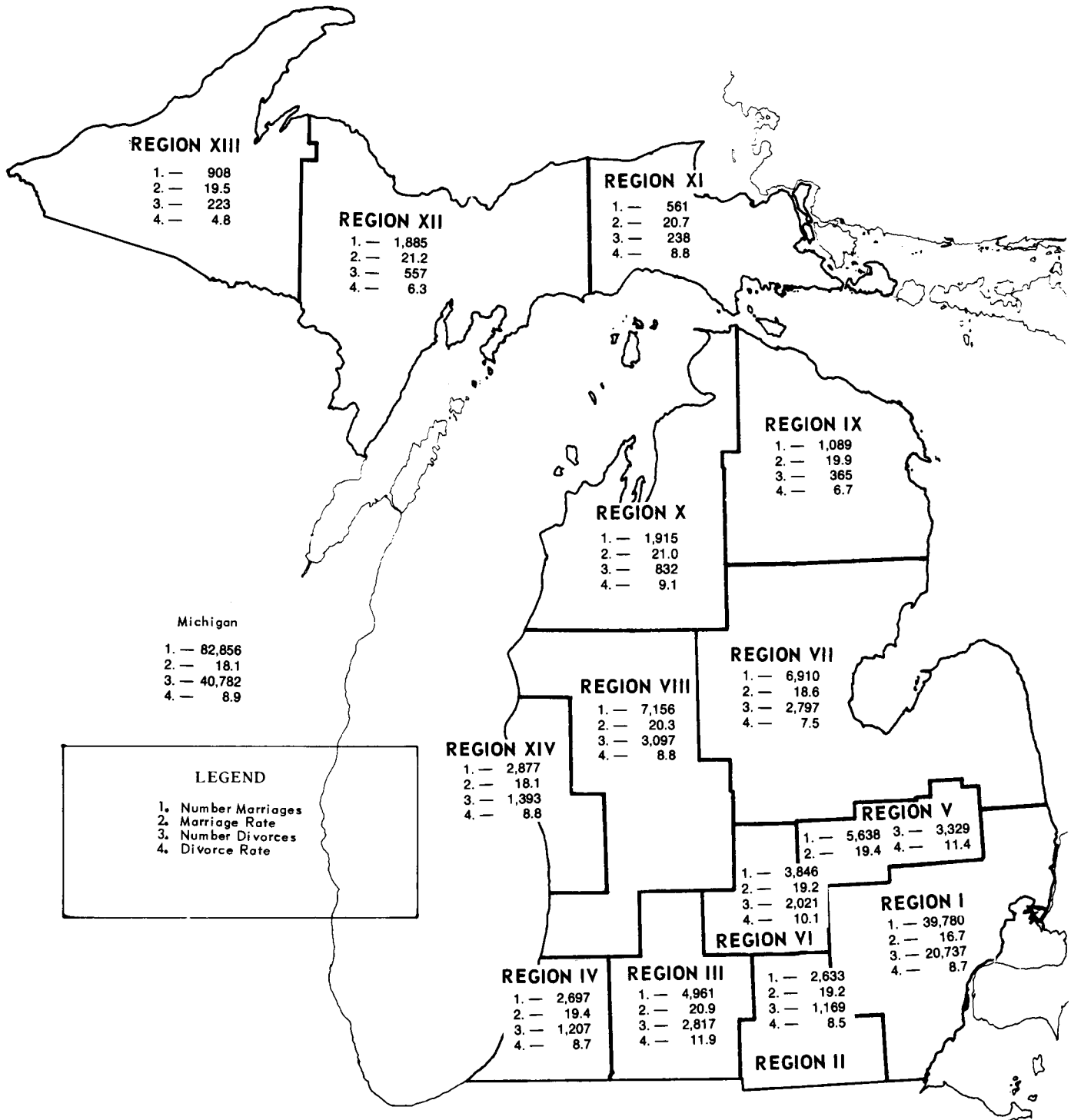
¹State Planning and Development Regions — August, 1973

FIGURE 4.5 — Leading Causes of Death; Death Rates by Region,¹
Michigan Residents, 1975



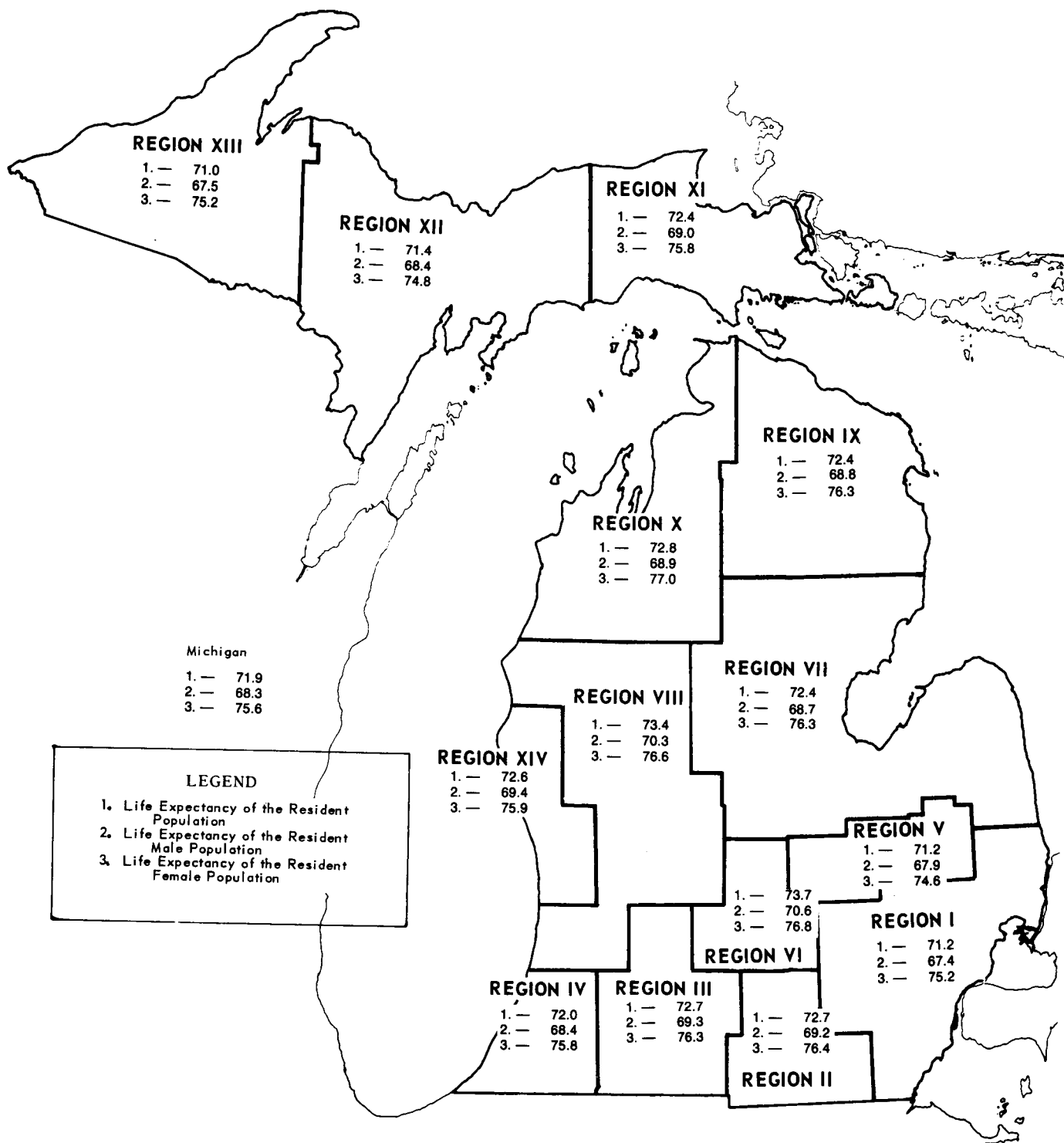
¹State Planning and Development Regions — August, 1973

**FIGURE 4.6 — Marriages and Marriage Rates, Divorces and Divorce Rates by Region,¹
Michigan Residents, 1975**



1. State Planning and Development Regions — August, 1973

FIGURE 4.7 — Life Expectancy at Birth By Sex By Region,¹
Michigan Residents, 1974-1975



¹State Planning and Development Regions — August, 1973

FIGURE 4.8

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
CERTIFICATE OF LIVE BIRTH 121 -

LOCAL FILE NUMBER		CHILD NAME		DATE OF BIRTH (MONTH, DAY, YEAR)	BIRTH NUMBER	
		FIRST	MIDDLE	LAST	HOUR	
					2a.	
					2b. M.	
CHILD	1	SEX		THIS BIRTH—SINGLE, TWIN, TRIPLET, ETC. (SPECIFY)	IF NOT SINGLE BIRTH—BORN FIRST, SECOND, THIRD, ETC. (SPECIFY)	
	3	4a	4b	COUNTY OF BIRTH		
		CITY, VILLAGE OR TOWNSHIP OF BIRTH		INSIDE CITY LIMITS (SPECIFY YES OR NO)	HOSPITAL—NAME (IF NOT IN HOSPITAL, GIVE STREET AND NUMBER)	
		5b	5c	5d		
MOTHER	6a. MOTHER—MAIDEN NAME		FIRST	MIDDLE	LAST	
	6b. RESIDENCE—STATE		COUNTY	CITY, VILLAGE OR TOWNSHIP	AGE (AT TIME OF THIS BIRTH)	
		7a	7b	7c	7d	
		7e. STREET AND NUMBER		STATE OF BIRTH (IF NOT IN U.S.A., NAME COUNTRY)		
FATHER	8a. FATHER—NAME		FIRST	MIDDLE	LAST	
	8b. AGE (AT TIME OF THIS BIRTH)		8c. STATE OF BIRTH (IF NOT IN U.S.A., NAME COUNTRY)		8d. RELATION TO CHILD	
		9a. INFORMANT		9b. DATE SIGNED		
		10a. SIGNATURE CERTIFIER—NAME (TYPE OR PRINT)		10b. MAILING ADDRESS (STREET OR R.F.D. NO., CITY OR TOWN, STATE, ZIP)	10c. ATTENDANT—M.D., D.O., MIDWIFE, OTHER (SPECIFY)	
		10d. REGISTRAR—SIGNATURE		10e. DATE RECEIVED BY LOCAL REGISTRAR		
		11a		11b. MONTH DAY YEAR		
CONFIDENTIAL INFORMATION FOR MEDICAL AND HEALTH USE ONLY						
FATHER	12. RACE—FATHER		EDUCATION—SPECIFY HIGHEST GRADE COMPLETED		PREVIOUS DELIVERIES—HOW MANY OTHER CHILDREN	
	WHITE, NEGRO, AMERICAN INDIAN, ETC. (SPECIFY)		ELEMENTARY (0, 1, 2, 3, 4, OR 5)	HIGH SCHOOL (1, 2, 3, OR 4)	COLLEGE (1, 2, 3, 4, OR 5+)	14a. ARE NOW LIVING
		15. RACE—MOTHER		EDUCATION—SPECIFY HIGHEST GRADE COMPLETED		14c. WERE BORN DEAD (FETAL DEATH AT ANY TIME AFTER CONCEPTION)
		WHITE, NEGRO, AMERICAN INDIAN, ETC. (SPECIFY)		ELEMENTARY (0, 1, 2, 3, 4, OR 5)	HIGH SCHOOL (1, 2, 3, OR 4)	COLLEGE (1, 2, 3, 4, OR 5+)
MOTHER	15. DATE LAST NORMAL MENSES BEGAN		MONTH OF PREGNANCY PRENATAL CARE BEGAN		PRENATAL VISITS TOTAL NUMBER	
	MONTH	DAY	YEAR	FIRST, SECOND, THIRD, ETC. (SPECIFY)	19a.	19b. (IF NONE, SO STATE)
		18. COMPLICATIONS RELATED TO PREGNANCY (DESCRIBE OR WRITE "NONE")		17a. DATE OF LAST LIVE BIRTH		17b. DATE OF LAST FETAL DEATH (Still Birth)
		19. COMPLICATIONS NOT RELATED TO PREGNANCY (DESCRIBE OR WRITE "NONE")		MONTH	DAY	YEAR
		20. COMPLICATIONS OF LABOR (DESCRIBE OR WRITE "NONE")		21. BIRTH WEIGHT		22. CONGENITAL MALFORMATIONS OR ANOMALIES OF CHILD (DESCRIBE OR WRITE "NONE")
		23. COMPLICATIONS OF LABOR (DESCRIBE OR WRITE "NONE")		24. LEGITIMATE (SPECIFY YES OR NO)		25. HAVE EYES OF CHILD BEEN TREATED WITH ONE PERCENT SOLUTION OF SILVER NITRATE?
		26. WAS MOTHER'S BLOOD TESTED FOR SYPHILIS DURING THIS PREGNANCY?		27. DATE OF TEST		28. IF BLOOD NOT TESTED, STATE REASON
		29. DEATH UNDER ONE YEAR OF AGE		30. MULTIPLE BIRTHS		31. ENTER STATE FILE NUMBER FOR THIS CHILD
		32. ENTER STATE FILE NUMBER FOR THIS CHILD		33. MULTIPLE BIRTHS		34. ENTER STATE FILE NUMBER FOR MATERNITY
		35. ENTER STATE FILE NUMBER FOR THIS CHILD		36. MULTIPLE BIRTHS		37. ENTER STATE FILE NUMBER FOR MATERNITY
		38. ENTER STATE FILE NUMBER FOR THIS CHILD		39. MULTIPLE BIRTHS		40. ENTER STATE FILE NUMBER FOR MATERNITY
		39. ENTER STATE FILE NUMBER FOR THIS CHILD		40. MULTIPLE BIRTHS		41. ENTER STATE FILE NUMBER FOR MATERNITY
		40. ENTER STATE FILE NUMBER FOR THIS CHILD		41. MULTIPLE BIRTHS		42. ENTER STATE FILE NUMBER FOR MATERNITY
		41. ENTER STATE FILE NUMBER FOR THIS CHILD		42. MULTIPLE BIRTHS		43. ENTER STATE FILE NUMBER FOR MATERNITY
		42. ENTER STATE FILE NUMBER FOR THIS CHILD		43. MULTIPLE BIRTHS		44. ENTER STATE FILE NUMBER FOR MATERNITY
		43. ENTER STATE FILE NUMBER FOR THIS CHILD		44. MULTIPLE BIRTHS		45. ENTER STATE FILE NUMBER FOR MATERNITY
		44. ENTER STATE FILE NUMBER FOR THIS CHILD		45. MULTIPLE BIRTHS		46. ENTER STATE FILE NUMBER FOR MATERNITY
		45. ENTER STATE FILE NUMBER FOR THIS CHILD		46. MULTIPLE BIRTHS		47. ENTER STATE FILE NUMBER FOR MATERNITY
		46. ENTER STATE FILE NUMBER FOR THIS CHILD		47. MULTIPLE BIRTHS		48. ENTER STATE FILE NUMBER FOR MATERNITY
		47. ENTER STATE FILE NUMBER FOR THIS CHILD		48. MULTIPLE BIRTHS		49. ENTER STATE FILE NUMBER FOR MATERNITY
		48. ENTER STATE FILE NUMBER FOR THIS CHILD		49. MULTIPLE BIRTHS		50. ENTER STATE FILE NUMBER FOR MATERNITY
		49. ENTER STATE FILE NUMBER FOR THIS CHILD		50. MULTIPLE BIRTHS		51. ENTER STATE FILE NUMBER FOR MATERNITY
		50. ENTER STATE FILE NUMBER FOR THIS CHILD		51. MULTIPLE BIRTHS		52. ENTER STATE FILE NUMBER FOR MATERNITY
		51. ENTER STATE FILE NUMBER FOR THIS CHILD		52. MULTIPLE BIRTHS		53. ENTER STATE FILE NUMBER FOR MATERNITY
		52. ENTER STATE FILE NUMBER FOR THIS CHILD		53. MULTIPLE BIRTHS		54. ENTER STATE FILE NUMBER FOR MATERNITY
		53. ENTER STATE FILE NUMBER FOR THIS CHILD		54. MULTIPLE BIRTHS		55. ENTER STATE FILE NUMBER FOR MATERNITY
		54. ENTER STATE FILE NUMBER FOR THIS CHILD		55. MULTIPLE BIRTHS		56. ENTER STATE FILE NUMBER FOR MATERNITY
		55. ENTER STATE FILE NUMBER FOR THIS CHILD		56. MULTIPLE BIRTHS		57. ENTER STATE FILE NUMBER FOR MATERNITY
		56. ENTER STATE FILE NUMBER FOR THIS CHILD		57. MULTIPLE BIRTHS		58. ENTER STATE FILE NUMBER FOR MATERNITY
		57. ENTER STATE FILE NUMBER FOR THIS CHILD		58. MULTIPLE BIRTHS		59. ENTER STATE FILE NUMBER FOR MATERNITY
		58. ENTER STATE FILE NUMBER FOR THIS CHILD		59. MULTIPLE BIRTHS		60. ENTER STATE FILE NUMBER FOR MATERNITY
		59. ENTER STATE FILE NUMBER FOR THIS CHILD		60. MULTIPLE BIRTHS		61. ENTER STATE FILE NUMBER FOR MATERNITY
		60. ENTER STATE FILE NUMBER FOR THIS CHILD		61. MULTIPLE BIRTHS		62. ENTER STATE FILE NUMBER FOR MATERNITY
		61. ENTER STATE FILE NUMBER FOR THIS CHILD		62. MULTIPLE BIRTHS		63. ENTER STATE FILE NUMBER FOR MATERNITY
		62. ENTER STATE FILE NUMBER FOR THIS CHILD		63. MULTIPLE BIRTHS		64. ENTER STATE FILE NUMBER FOR MATERNITY
		63. ENTER STATE FILE NUMBER FOR THIS CHILD		64. MULTIPLE BIRTHS		65. ENTER STATE FILE NUMBER FOR MATERNITY
		64. ENTER STATE FILE NUMBER FOR THIS CHILD		65. MULTIPLE BIRTHS		66. ENTER STATE FILE NUMBER FOR MATERNITY
		65. ENTER STATE FILE NUMBER FOR THIS CHILD		66. MULTIPLE BIRTHS		67. ENTER STATE FILE NUMBER FOR MATERNITY
		66. ENTER STATE FILE NUMBER FOR THIS CHILD		67. MULTIPLE BIRTHS		68. ENTER STATE FILE NUMBER FOR MATERNITY
		67. ENTER STATE FILE NUMBER FOR THIS CHILD		68. MULTIPLE BIRTHS		69. ENTER STATE FILE NUMBER FOR MATERNITY
		68. ENTER STATE FILE NUMBER FOR THIS CHILD		69. MULTIPLE BIRTHS		70. ENTER STATE FILE NUMBER FOR MATERNITY
		69. ENTER STATE FILE NUMBER FOR THIS CHILD		70. MULTIPLE BIRTHS		71. ENTER STATE FILE NUMBER FOR MATERNITY
		70. ENTER STATE FILE NUMBER FOR THIS CHILD		71. MULTIPLE BIRTHS		72. ENTER STATE FILE NUMBER FOR MATERNITY
		71. ENTER STATE FILE NUMBER FOR THIS CHILD		72. MULTIPLE BIRTHS		73. ENTER STATE FILE NUMBER FOR MATERNITY
		72. ENTER STATE FILE NUMBER FOR THIS CHILD		73. MULTIPLE BIRTHS		74. ENTER STATE FILE NUMBER FOR MATERNITY
		73. ENTER STATE FILE NUMBER FOR THIS CHILD		74. MULTIPLE BIRTHS		75. ENTER STATE FILE NUMBER FOR MATERNITY
		74. ENTER STATE FILE NUMBER FOR THIS CHILD		75. MULTIPLE BIRTHS		76. ENTER STATE FILE NUMBER FOR MATERNITY
		75. ENTER STATE FILE NUMBER FOR THIS CHILD		76. MULTIPLE BIRTHS		77. ENTER STATE FILE NUMBER FOR MATERNITY
		76. ENTER STATE FILE NUMBER FOR THIS CHILD		77. MULTIPLE BIRTHS		78. ENTER STATE FILE NUMBER FOR MATERNITY
		77. ENTER STATE FILE NUMBER FOR THIS CHILD		78. MULTIPLE BIRTHS		79. ENTER STATE FILE NUMBER FOR MATERNITY
		78. ENTER STATE FILE NUMBER FOR THIS CHILD		79. MULTIPLE BIRTHS		80. ENTER STATE FILE NUMBER FOR MATERNITY
		79. ENTER STATE FILE NUMBER FOR THIS CHILD		80. MULTIPLE BIRTHS		81. ENTER STATE FILE NUMBER FOR MATERNITY
		80. ENTER STATE FILE NUMBER FOR THIS CHILD		81. MULTIPLE BIRTHS		82. ENTER STATE FILE NUMBER FOR MATERNITY
		81. ENTER STATE FILE NUMBER FOR THIS CHILD		82. MULTIPLE BIRTHS		83. ENTER STATE FILE NUMBER FOR MATERNITY
		82. ENTER STATE FILE NUMBER FOR THIS CHILD		83. MULTIPLE BIRTHS		84. ENTER STATE FILE NUMBER FOR MATERNITY
		83. ENTER STATE FILE NUMBER FOR THIS CHILD		84. MULTIPLE BIRTHS		85. ENTER STATE FILE NUMBER FOR MATERNITY
		84. ENTER STATE FILE NUMBER FOR THIS CHILD		85. MULTIPLE BIRTHS		86. ENTER STATE FILE NUMBER FOR MATERNITY
		85. ENTER STATE FILE NUMBER FOR THIS CHILD		86. MULTIPLE BIRTHS		87. ENTER STATE FILE NUMBER FOR MATERNITY
		86. ENTER STATE FILE NUMBER FOR THIS CHILD		87. MULTIPLE BIRTHS		88. ENTER STATE FILE NUMBER FOR MATERNITY
		87. ENTER STATE FILE NUMBER FOR THIS CHILD		88. MULTIPLE BIRTHS		89. ENTER STATE FILE NUMBER FOR MATERNITY
		88. ENTER STATE FILE NUMBER FOR THIS CHILD		89. MULTIPLE BIRTHS		90. ENTER STATE FILE NUMBER FOR MATERNITY
		89. ENTER STATE FILE NUMBER FOR THIS CHILD		90. MULTIPLE BIRTHS		91. ENTER STATE FILE NUMBER FOR MATERNITY
		90. ENTER STATE FILE NUMBER FOR THIS CHILD		91. MULTIPLE BIRTHS		92. ENTER STATE FILE NUMBER FOR MATERNITY
		91. ENTER STATE FILE NUMBER FOR THIS CHILD		92. MULTIPLE BIRTHS		93. ENTER STATE FILE NUMBER FOR MATERNITY
		92. ENTER STATE FILE NUMBER FOR THIS CHILD		93. MULTIPLE BIRTHS		94. ENTER STATE FILE NUMBER FOR MATERNITY
		93. ENTER STATE FILE NUMBER FOR THIS CHILD		94. MULTIPLE BIRTHS		95. ENTER STATE FILE NUMBER FOR MATERNITY
		94. ENTER STATE FILE NUMBER FOR THIS CHILD		95. MULTIPLE BIRTHS		96. ENTER STATE FILE NUMBER FOR MATERNITY
		95. ENTER STATE FILE NUMBER FOR THIS CHILD		96. MULTIPLE BIRTHS		97. ENTER STATE FILE NUMBER FOR MATERNITY
		96. ENTER STATE FILE NUMBER FOR THIS CHILD		97. MULTIPLE BIRTHS		98. ENTER STATE FILE NUMBER FOR MATERNITY
		97. ENTER STATE FILE NUMBER FOR THIS CHILD		98. MULTIPLE BIRTHS		99. ENTER STATE FILE NUMBER FOR MATERNITY
		98. ENTER STATE FILE NUMBER FOR THIS CHILD		99. MULTIPLE BIRTHS		100. ENTER STATE FILE NUMBER FOR MATERNITY

SAMPLE COPY

B-213
7-68
300M

DETACH INSTRUCTIONS BEFORE FILING CERTIFICATE WITH REGISTRAR

TYPE OR PRINT (EXCEPT SIGNATURES) IN BLACK INK—THIS IS A PERMANENT RECORD

Michigan Public Act 343 of 1925, as amended, requires that certificates of birth be filed with the registrar of the district in which the birth occurred within five days after the event.

Many important legal, personal, public health, and social welfare interests require complete and accurate registration of all births. Individuals need certification of the facts of birth for evidence of age, of citizenship, and of family relationship. Social and health agencies need medical and social information concerning the child and his parents for administrative and statistical purposes. In order to protect the privacy of the individual to whom this certificate applies, most of the information of the latter type has been placed in a section of the certificate labeled: "Confidential Information for Medical and Health Use Only."

In case of more than one child at birth, a SEPARATE RETURN must be made for each and the number of each in order of birth stated. Accurate recording of the residence (not mailing address) of the mother is particularly important as it is used extensively for statistical purposes.

FIGURE 4.9

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
CERTIFICATE OF FETAL DEATH

LOCAL FILE NUMBER		STATE FILE NUMBER	
1. FETUS—NAME FIRST MIDDLE LAST			DATE OF DELIVERY (MONTH, DAY, YEAR)
2a. HOUR			2b. M.
3. SEX	4a. THIS DELIVERY—SINGLE, TWIN, TRIPLET, ETC. (SPECIFY)	4b. IF NOT SINGLE DELIVERY BORN FIRST, SECOND, THIRD, ETC. (SPECIFY)	5a. COUNTY OF DELIVERY
5b. CITY, VILLAGE OR TOWNSHIP OF BIRTH	5c. INSIDE CITY LIMITS (SPECIFY YES OR NO)	5d. HOSPITAL—NAME (IF NOT IN HOSPITAL, GIVE STREET AND NUMBER)	
6a. MOTHER—MAIDEN NAME FIRST MIDDLE LAST			6b. AGE (AT TIME OF THIS DELIVERY)
6c. STATE OF BIRTH (IF NOT IN U.S.A., NAME COUNTRY)			
7a. RESIDENCE—STATE	7b. COUNTY	7c. CITY, VILLAGE OR TOWNSHIP	7d. INSIDE CITY LIMITS (SPECIFY YES OR NO)
7e. STREET AND NUMBER			
8a. FATHER—NAME FIRST MIDDLE LAST			8b. AGE (AT TIME OF THIS DELIVERY)
8c. STATE OF BIRTH (IF NOT IN U.S.A., NAME COUNTRY)			
9. PART I. FETAL DEATH WAS CAUSED BY: [ENTER ONLY ONE CAUSE PER LINE FOR (a), (b), AND (c)]			
FETAL OR MATERNAL CONDITION CAUSING FETAL DEATH			SPECIFY FETAL OR MATERNAL
(a) IMMEDIATE CAUSE			
(b) DUE TO, OR AS A CONSEQUENCE OF:			
(c) DUE TO, OR AS A CONSEQUENCE OF:			
10. PART II. OTHER SIGNIFICANT CONDITIONS OF FETUS OR MOTHER: CONDITIONS CONTRIBUTING TO FETAL DEATH BUT NOT RELATED TO CAUSE GIVEN IN PART I (a)			
11. I CERTIFY THAT THIS DELIVERY OCCURRED ON THE DATE STATED ABOVE AND THE FETUS WAS DEAD AT THE TIME OF DELIVERY, UNKNOWN (SPECIFY)		11a. AUTOPSY (SPECIFY YES OR NO)	11b. IF YES, WERE FINDINGS CONSIDERED IN DETERMINING CAUSE OF DEATH
12a. SIGNATURE		12b. ATTENDANT—M.D., D.O., MIDWIFE, OTHER (SPECIFY)	
12c. CERTIFIER—MAILING ADDRESS (STREET OR R.F.D. NO., CITY OR TOWN, STATE, ZIP)		12d. AUTHORIZED OFFICIAL (IF DELIVERY NOT ATTENDED BY PHYSICIAN)	
13a. BURIAL, CREMATION, OR REMOVAL (SPECIFY)		13b. CEMETERY OR CREMATIONARY NAME	
13c. DATE (MONTH, DAY, YEAR)		13d. LOCATION (CITY OR TOWN, STATE)	
14a. DATE (MONTH, DAY, YEAR)		14b. FUNERAL HOME—NAME AND ADDRESS (STREET OR R.F.D. NO., CITY OR TOWN, STATE, ZIP)	
14c. DATE (MONTH, DAY, YEAR)		14d. FUNERAL DIRECTOR—SIGNATURE	
15a. REGISTRAR—SIGNATURE		15b. DATE RECEIVED BY LOCAL REGISTRAR (MONTH DAY YEAR)	
16. CONFIDENTIAL INFORMATION FOR MEDICAL AND HEALTH USE ONLY			
17. RACE—FATHER (WHITE, NEGRO, AMERICAN INDIAN, ETC. (SPECIFY))		18. EDUCATION—SPECIFY HIGHEST GRADE COMPLETED (ELEMENTARY (0, 1, 2, 3, 4, ... OR 8), HIGH SCHOOL (1, 2, 3, OR 4), COLLEGE (1, 2, 3, 4, OR 5 +))	
19. PREVIOUS DELIVERIES—HOW MANY OTHER CHILDREN		20. DATE OF LAST LIVE BIRTH (MONTH DAY YEAR)	
21. RACE—MOTHER (WHITE, NEGRO, AMERICAN INDIAN, ETC. (SPECIFY))		22. DATE OF LAST FETAL DEATH (MONTH DAY YEAR)	
23. DATE LAST NORMAL MENSES BEGAN (MONTH, DAY, YEAR)		24. MONTH OF PREGNANCY PRENATAL CARE BEGAN (1ST, 2D, ETC. (SPECIFY))	
25. PRENATAL VISITS TOTAL NUMBER (IF NONE, BIRTH SO STATE)		26. LEGITIMATE (SPECIFY YES OR NO)	
27. BIRTH WEIGHT		28. BIRTH INJURIES TO FETUS (DESCRIBE OR WRITE "NONE")	
29. COMPLICATIONS RELATED TO PREGNANCY (DESCRIBE OR WRITE "NONE")		30. CONGENITAL MALFORMATIONS OR ANOMALIES OF FETUS (DESCRIBE OR WRITE "NONE")	
31. COMPLICATIONS NOT RELATED TO PREGNANCY (DESCRIBE OR WRITE "NONE")		32. COMPLICATIONS OF LABOR (DESCRIBE OR WRITE "NONE")	
33. MULTIPLE BIRTHS (ENTER STATE FILE NUMBER FOR MATERNAL)		34. LIVE BIRTH(S) FETAL DEATH(S)	

SAMPLE COPY

34. IF BLOOD NOT TESTED, STATE REASON
 33. DATE OF TEST
 32. WAS MOTHER'S BLOOD TESTED FOR SYPHILIS DURING THIS PREGNANCY?

DETACH INSTRUCTIONS BEFORE FILING CERTIFICATE WITH REGISTRAR

TYPE OR PRINT (EXCEPT SIGNATURES) IN BLACK INK—THIS IS A PERMANENT RECORD

Michigan Public Act 343 of 1925, as amended, requires that the attending physician, or in the absence of an attending physician, a coroner shall fill out and sign the medical certificate of fetal death (stillbirth) within 24 hours after death.

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.

Many important legal, personal, public health, and social welfare interests require complete and accurate registration of all fetal deaths. Social and health agencies need medical and social information concerning the child and his parents for administrative and statistical purposes. In order to protect the privacy of the individual to whom this certificate applies, most of the information of this type has been placed in a section of the certificate labeled: "Confidential Information for Medical and Health Use Only."

B-35
1-68
25M

FIGURE 4.10

CERTIFICATE OF DEATH

Michigan Department of Public Health

LOCAL FILE NUMBER

STATE FILE NUMBER

1. DECEASED—NAME		FIRST	MIDDLE	LAST	2. SEX	3. DATE OF DEATH (MONTH, DAY, YEAR)		
4. RACE WHITE, NEGRO, AMERICAN INDIAN, ETC. (SPECIFY)		5a. AGE—LAST BIRTHDAY (YEARS)		5b. UNDER 1 YEAR MOS. DAYS	5c. UNDER 1 DAY HOURS MIN.	6. DATE OF BIRTH (MONTH, DAY, YEAR)		
7a. CITY, VILLAGE, OR TOWNSHIP OF DEATH		7c. INSIDE CITY LIMITS (SPECIFY YES OR NO)		7b. HOSPITAL OR OTHER INSTITUTION—NAME (IF NOT IN EITHER, GIVE STREET AND NUMBER)				
8. STATE OF BIRTH (IF NOT IN U.S.A., NAME COUNTRY)		9. CITIZEN OF WHAT COUNTRY		10. MARRIED, NEVER MARRIED, WIDOWED, DIVORCED (SPECIFY)		11. SURVIVING SPOUSE (IF WIFE, GIVE MAIDEN NAME)		
12. SOCIAL SECURITY NUMBER		13a. USUAL OCCUPATION (GIVE KIND OF WORK DONE DURING MOST OF WORKING LIFE, EVEN IF RETIRED)				13b. KIND OF BUSINESS OR INDUSTRY		
14a. RESIDENCE—STATE		14b. COUNTY	14c. CITY, VILLAGE OR TOWNSHIP		14d. INSIDE CITY LIMITS (SPECIFY YES OR NO)		14e. STREET AND NUMBER	
15. FATHER—NAME				FIRST	MIDDLE	LAST	16. MOTHER—MAIDEN NAME	
17a. INFORMANT—NAME				17b. MAILING ADDRESS (STREET OR R.F.D. NO., CITY OR TOWN, STATE, ZIP)				
PART I. DEATH WAS CAUSED BY: (ENTER ONLY ONE CAUSE PER LINE FOR (a), (b), AND (c))							APPROXIMATE INTERVAL BETWEEN ONSET AND DEATH	
18. IMMEDIATE CAUSE								
(a) DUE TO, OR AS A CONSEQUENCE OF:								
CONDITIONS, IF ANY, WHICH GAVE RISE TO IMMEDIATE CAUSE (a), STATING THE UNDERLYING CAUSE LAST								
(b) DUE TO, OR AS A CONSEQUENCE OF:								
(c) DUE TO, OR AS A CONSEQUENCE OF:								
PART II. OTHER SIGNIFICANT CONDITIONS: CONDITION CONTRIBUTING TO DEATH BUT NOT RELATED TO CAUSE GIVEN IN PART I (G)							19a. AUTOPSY (YES OR NO)	
							19b. IF YES WERE FINDINGS CONSIDERED IN DETERMINING CAUSE OF DEATH	
20a. ACCIDENT, SUICIDE, HOMICIDE, (SPECIFY)		20b. DATE OF INJURY (MONTH, DAY, YEAR)		20c. HOUR	20d. HOW INJURY OCCURRED (ENTER NATURE OF INJURY IN PART I OR PART II, ITEM 18)			
20e. INJURY AT WORK (SPECIFY YES OR NO)		20f. PLACE OF INJURY AT HOME, FARM, STREET, FACTORY, OFFICE BLDG., ETC. (SPECIFY)		20g. LOCATION (STREET OR R.F.D. NO., CITY OR TOWN, STATE)				
21a. CERTIFICATION—PHYSICIAN: I ATTENDED THE DECEASED FROM		MONTH	DAY	YEAR	21b. TO	MONTH	DAY	YEAR
21c. AND LAST SAW HIM/HER ALIVE ON		MONTH	DAY	YEAR	21d. I DID/DID NOT VIEW THE BODY AFTER DEATH.	21e. DEATH OCCURRED (HOUR)		21f. AT THE PLACE, ON THE DATE, AND, TO THE BEST OF MY KNOWLEDGE, DUE TO THE CAUSE(S) STATED.
22a. CERTIFICATION—MEDICAL EXAMINER OR CORONER: ON THE BASIS OF THE EXAMINATION OF THE BODY AND/OR THE INVESTIGATION, IN MY OPINION, DEATH OCCURRED ON THE DATE AND DUE TO THE CAUSE(S) STATED.							22b. HOUR OF DEATH	
							22c. THE DECEDENT WAS PRONOUNCED DEAD	
							MONTH	
							DAY	
							YEAR	
							HOUR	
23a. CERTIFIER—NAME (TYPE OR PRINT)				23b. SIGNATURE		23c. DEGREE OR TITLE		
23d. MAILING ADDRESS—CERTIFIER				23e. STREET OR R.F.D. NO.		23f. CITY OR TOWN		
						23g. STATE		
						23h. ZIP		
24a. BURIAL, CREMATION, REMOVAL (SPECIFY)		24b. CEMETERY OR CREMATORY—NAME			24c. LOCATION			
					CITY, VILLAGE, TWP. OR COUNTY			
					STATE			
24d. DATE (MONTH, DAY, YEAR)		24e. FUNERAL HOME—NAME AND ADDRESS (STREET OR R.F.D. NO., CITY OR TOWN, STATE, ZIP)						
25a. FUNERAL DIRECTOR—SIGNATURE				25b. REGISTRAR—SIGNATURE		25c. DATE RECEIVED BY LOCAL REGISTRAR		
						25d.		

SAMPLE COPY

USUAL RESIDENCE WHERE DECEASED LIVED. IF DEATH OCCURRED IN INSTITUTION, GIVE RESIDENCE BEFORE ADMISSION.

DETACH INSTRUCTIONS BEFORE FILING CERTIFICATE WITH REGISTRAR

TYPE OR PRINT (EXCEPT SIGNATURES) IN BLACK INK—THIS IS A PERMANENT RECORD

Michigan Public Act 343 of 1925, as amended, requires that the attending physician, or in the absence of an attending physician, a coroner shall fill out and sign the medical certificate of death within 24 hours after death.

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.

Many important legal, personal, public health and social welfare interests require complete and accurate registration of all deaths. Individuals need certification of the facts of death for insurance claims, liquidation of estates, to prove name of spouse and parents and other general legal use. Social and health agencies need information on the causes of death for purposes of planning health programs; they need information on the number of births and deaths in making population estimates; and they need birth and death statistics to measure the fertility and mortality of various racial, economic or social groups.

FIGURE 4.11

Marriage License
 COUNTY, MICHIGAN

To any person legally authorized to solemnize marriage in the State of Michigan,
 greeting:
 Marriage must be solemnized within 30 days of date of issue in the State of Michigan between _____ and _____

Full name of male _____ Full name of female _____
 Age at last birthday _____ Date of birth _____ Date of birth _____
 Residence No. _____ Street _____ Residence No. _____ Street _____
 City _____ State _____ Zip Code _____ City _____ State _____ Zip Code _____
 Birthplace—city and state _____ Birthplace—city and state _____
 Occupation _____ Occupation _____
 Number of times previously married _____ Number of times previously married _____
 Father's full name _____ Father's full name _____
 Mother's maiden name _____ Mother's maiden name _____

parent's or guardian's consent, in case she has not attained the age of eighteen years, has been filed in my office. An affidavit has been filed in this office, as provided by Public Act No. 128, Laws of 1937, as amended, by which it appears that said statements are true.

In witness whereof, I have signed and sealed these presents,
 this _____ day of _____ A. D. 19 _____

[L.S.] _____
 County Clerk
 Deputy County 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, at _____ day of _____, county of _____, MICHIGAN, on the _____ day of _____ A. D. 19 _____. In the presence of _____ and _____ of _____ Residence—city and state _____ and _____ of _____ Residence—city and state _____ as witnesses. _____ Residence—city and state _____
 Signature of magistrate or clergyman _____ Official title _____
 Post office address _____

This marriage license VOID 30 days after date of issue.

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.

This space reserved for binding.

Blank must be completed by typewriter or printed legibly. Act 94, P.A. 1935

B138 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 liber _____ 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 4.12

RECORD OF
DIVORCE OR ANNULMENT

MICHIGAN DEPARTMENT OF PUBLIC HEALTH
VITAL RECORDS SECTION

STATE FILE NO.

DOCKET NO.

COUNTY

HUSBAND—NAME		FIRST	MIDDLE	LAST
1		RESIDENCE—STATE		COUNTY
2a		2b		2c
2d		3		4
WIFE—NAME		FIRST	MIDDLE	LAST
5a		RESIDENCE—STATE		COUNTY
6a		6b		6c
6d		7		8
9a		9b		9c
10		11		12
13a		13b		13c
14a		14b		14c
14d		14e		14f
14g		14h		14i

SAMPLE COPY

CONFIDENTIAL INFORMATION						
HUSBAND	NUMBER OF THIS MARRIAGE FIRST, SECOND, ETC. (SPECIFY)	IF PREVIOUSLY MARRIED HOW MANY ENDED BY		EDUCATION — SPECIFY HIGHEST GRADE COMPLETED		
		DEATH (SPECIFY IF NONE)	DIVORCE OR ANNULMENT (SPECIFY IF NONE)	ELEMENTARY (0, 1, 2, 3, 4, . . . OR 8)	HIGH SCHOOL (1, 2, 3, OR 4)	COLLEGE (1, 2, 3, 4, OR 5 +)
15.		16.		17.		
WIFE	NUMBER OF THIS MARRIAGE FIRST, SECOND, ETC. (SPECIFY)	IF PREVIOUSLY MARRIED HOW MANY ENDED BY		EDUCATION — SPECIFY HIGHEST GRADE COMPLETED		
		DEATH (SPECIFY IF NONE)	DIVORCE OR ANNULMENT (SPECIFY IF NONE)	ELEMENTARY (0, 1, 2, 3, 4, . . . OR 8)	HIGH SCHOOL (1, 2, 3, OR 4)	COLLEGE (1, 2, 3, 4, OR 5 +)
18.		19.		20.		

B-42 1/69

Names and Ages of All Children in Family

Name Age

Name Age

Name Age

Name Age

Name Age

Name Age