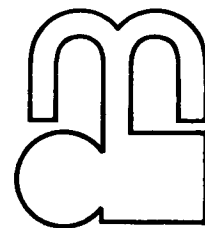


1970 MICHIGAN HEALTH STATISTICS



**MICHIGAN
DEPARTMENT OF
PUBLIC HEALTH**

ERRATA
 1970 MICHIGAN HEALTH STATISTICS
 (Annual Statistical Report 1970)
 Michigan Center for Health Statistics
 Michigan Department of Public Health
 Lansing, Michigan 48914

Please Replace Table 2.5 Page 35 with Attached Table 2.5
 Please Replace Table 2.9 Page 40 with Attached Table 2.9

TABLE 2.5

Low Weight Live Births and Ratios by Age of Mother and Race of Child
 Michigan Residents - 1970

AGE OF MOTHER			RACE OF CHILD			
	TOTAL		WHITE		NONWHITE	
	NO.	RATE	NO.	RATE	NO.	RATE
Under 15 Years	78	159.5	21	132.1	57	172.7
15-19 Years	3,103	104.3	1,774	82.5	1,329	161.0
20-24 Years	4,930	74.8	3,612	63.9	1,318	135.8
25-29 Years	3,074	66.4	2,438	59.5	636	119.9
30-39 Years	2,017	75.0	1,534	66.3	483	128.0
40 Years and Over	228	97.4	171	88.9	57	136.4
Not Stated	2	-	2	-	-	-
TOTAL	13,432	78.2	9,552	66.4	3,880	139.6
Median Age of Mother	23		24		22	

TABLE 2.9

Illegitimate Live Births and Rates
 By Age of Mother and Race of Child
 Michigan Residents 1970

AGE OF MOTHER			RACE OF CHILD			
	TOTAL		WHITE		NONWHITE	
	NO.	RATIO	NO.	RATIO	NO.	RATIO
Under 15 Years	450	920.2	127	798.7	323	978.8
15-19 Years	9,787	328.8	4,448	206.8	5,339	646.7
20-24 Years	5,622	85.9	2,930	52.2	2,732	281.4
25-29 Years	1,642	35.5	760	18.6	882	166.3
30-39 Years	1,050	39.0	477	20.6	573	151.9
40 and Over Years	116	49.6	68	35.4	48	114.8
Not Stated	5	-	2	-	3	-
Total	18,712	109.0	8,812	61.2	9,900	356.2
Median Age of Mother	19		19		19	

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INTRODUCTION

The 1970 Edition of Michigan Health Statistics is a statistical summary of population characteristics and vital events for calendar year 1970. 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 1970, 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 June 1, 1971 and all in-state certificates and records received prior to April 1, 1971. Although a few records for calendar year 1970 were received after these filing dates, their exclusion from this report is statistically insignificant.

The report is composed of the following sections and appendices:

- Technical Notes
- Demographic Section
- Natality Section
- Mortality Section
- Marriage and Divorce Section
- 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 Center for Health Statistics. The Center will make every attempt to comply with such requests within the limitation of staff and resources.

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Michigan Department of Public Health
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TECHNICAL NOTES

DEFINITIONS

Total Births	Live births and fetal deaths.
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.
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.
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.
Occurrence	Place where the event actually occurred.
Minor Civil Division	City, Village or Township.
Race	Race for mother, father, or decedent is as stated on certificate. Race of child is determined from the race of the parents.
Gestational Period	Number of weeks elapsed between the first day of the last menstrual period and date of delivery.
Birth Weight	Weight of fetus or infant at time of delivery (normally recorded in pounds and ounces).
Low-weight Birth	Birth wherein the birth weight is equivalent to 2,500 grams or less (approximately 5 lbs., 8 oz.).
Illegitimate Birth	Birth wherein there is no marital tie between mother and father.
Live-birth Order	Order number is equal to number of previous live births plus current birth.
Infant Death	Death occurring to individual of less than 1 year of age.

Neonatal Death	Death occurring to individual less than 28 days of age.
Perinatal Death	Fetal death or a death under 1 week of age.
Underlying Cause of Death	That condition giving rise to the chain of events leading to death.
Related Cause of Death	Condition other than the underlying cause of death which may have contributed to the death or was a noncontributory significant condition.
Maternal Deaths	Those deaths wherein the physician has designated a maternal condition as the underlying cause of death.

RATES AND RATIOS

Crude Birth Rate	= $\frac{\text{No. of Resident Live Births}}{\text{Total Resident Population}} \times 1,000$
Crude Death Rate	= $\frac{\text{No. of Resident Deaths}}{\text{Total Resident Population}} \times 1,000$
Age-Specific Birth Rate	= $\frac{\text{No. of Resident Live Births for a Specific Age of Mother}}{\text{Total Female Population of Specific Age}} \times 1,000$
Fertility Rate	= $\frac{\text{No. of Resident Live Births}}{\text{Total Female Population (15-44)}} \times 1,000$
Fetal Death Ratio	= $\frac{\text{No. of Resident Fetal Deaths}}{\text{Total Resident Live Births}} \times 1,000$
Fetal Death Rate	= $\frac{\text{No. of Resident Fetal Deaths}}{\text{Total Resident Live Births and Resident Fetal Deaths}} \times 1,000$
Illegitimacy Ratio	= $\frac{\text{No. of Resident Illegitimate Births}}{\text{Total Resident Live Births}} \times 1,000$
Low-Weight Birth Ratio	= $\frac{\text{No. of Low-Weight Births}}{\text{Total Resident Live Births}} \times 1,000$
Infant Death Rate	= $\frac{\text{No. of Infant Deaths}}{\text{Total Resident Live Births}} \times 1,000$
Neonatal Death Rate	= $\frac{\text{No. of Neonatal Deaths}}{\text{Total Resident Live Births}} \times 1,000$
Perinatal Death Rate	= $\frac{\text{No. of Perinatal Deaths}}{\text{Total Resident Live Births and Resident Fetal Deaths}} \times 1,000$
Maternal Death Rate	= $\frac{\text{No. of Maternal Deaths}}{\text{Total Resident Live Births}} \times 10,000$
Age-Specific Death Rate	= $\frac{\text{No. of Deaths in Specific Age Group}}{\text{Total Resident Population in Specific Age Group}} \times 100,000$
Age-Adjusted Death Rate	= $\Sigma (\text{Age-Specific Death Rates} \times \text{Proportion of Standard Population in Specific Age Group})$
Marriage Rate	= $\frac{\text{No. of Persons Married}}{\text{Total Resident Population}} \times 1,000$

Divorce Rate = $\frac{\text{No. of Persons (Divorces and Annulments)}}{\text{Total Resident Population}} \times 1,000$

Communicable Disease Case Rate = $\frac{\text{No. of Reported Cases (Specific Communicable Disease)}}{\text{Total Resident Population}} \times 100,000$

Sex Ratio = $\frac{\text{No. of Males}}{\text{No. of Females}} \times 100$

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 indicated 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.

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.

SECTION I

POPULATION CHARACTERISTICS AN OVERVIEW

Total Resident Population, April 1, 1970	-	8,875,083
Median Age, 1970	-	26.3
Sex Ratio, 1970	-	96.1
Percent Nonwhite Population, 1970	-	11.7%
Median Family Income, 1970	-	\$11,032
Percentage of Persons 14 or Over Employed, April 1, 1970	-	52.0%
Percentage of the Population Residing in Urban Areas, 1970	-	73.8%

HISTORICAL PERSPECTIVE

Results of the 1970 Census of Population and Housing indicate that the resident population of the State of Michigan as of April 1, 1970 was 8,875,083. This represents an increase of 1,051,889 or 13.4 percent over the 7,823,194 residents enumerated on April 1, 1960. Only during the depression years of the 1930's was Michigan's rate of population increase lower (Table 1.1).

TABLE 1.1
Population and Percent Change
Michigan 1900-1970

YEAR	POPULATION	CHANGE	% CHANGE
1900	2,420,982	-	-
1910	2,810,173	389,191	16.1
1920	3,668,412	858,239	30.5
1930	4,842,325	1,173,913	32.0
1940	5,256,106	413,781	8.5
1950	6,371,766	1,115,660	21.2
1960	7,823,194	1,451,428	22.8
1970	8,875,083	1,051,889	13.4

Michigan's population growth during the 1960's was due primarily to natural increase (the excess of resident live births over resident deaths). Net in-migration accounted for only 42,440 new residents or 4.0 percent of the increase during the decade (Table 1.2).

TABLE 1.2
Components of Resident Population Change
Michigan 1960-1970

DATE AND POPULATION		POP. CHANGE	RESIDENT BIRTHS	RESIDENT DEATHS	NATURAL INCREASE	NET MIGRATION
4/1/60	7,823,194	-	-	-	-	-
7/1/60	7,834,000	-	-	-	-	-
7/1/61	7,893,000	59,000	193,940	67,644	126,296	-71,100
7/1/62	7,933,000	40,000	187,808	68,713	119,095	-79,095
7/1/63	8,058,000	125,000	180,830	71,244	109,587	15,413
7/1/64	8,187,000	129,000	176,987	72,284	104,674	24,326
7/1/65	8,357,000	170,000	170,784	72,898	97,886	72,114
7/1/66	8,512,000	155,000	166,129	74,131	91,998	63,002
7/1/67	8,630,000	118,000	164,275	74,978	89,297	28,703
7/1/68	8,696,000	66,000	160,907	76,108	84,799	-18,799
7/1/69	8,781,000	85,000	162,409	76,775	85,634	- 634
7/1/70	8,901,000	120,000	168,714	76,507	92,907	+28,513
TOTAL CHANGE	7/1/60 to 7/1/70	1,067,000	1,732,783	731,278	1,001,505	50,384
4/1/70	8,875,083					
TOTAL CHANGE	4/1/60 to 4/1/70	1,051,889	1,738,630	729,181	1,009,449	42,440

Although Michigan's net in-migration amounted to only 42,440 inhabitants during the 1960's, Table 1.2 does illustrate that Michigan's net migration pattern was far from stable during the period. With substantial fluctuations such as this, it may be assumed that the composition of Michigan's population has changed significantly. Notice also (Table 1.2, Fig. 1.2) that except for 1969 and 1970 the natural increase has been decreasing steadily over the last decade. Between 1960 and 1961 the natural increase was 126,296 whereas between 1969 and 1970 the natural increase was only 92,207. This is to be expected when the number of births drop and the number of deaths increase.

FIG. 1.1
POPULATION GROWTH
MICHIGAN 1900 - 1970

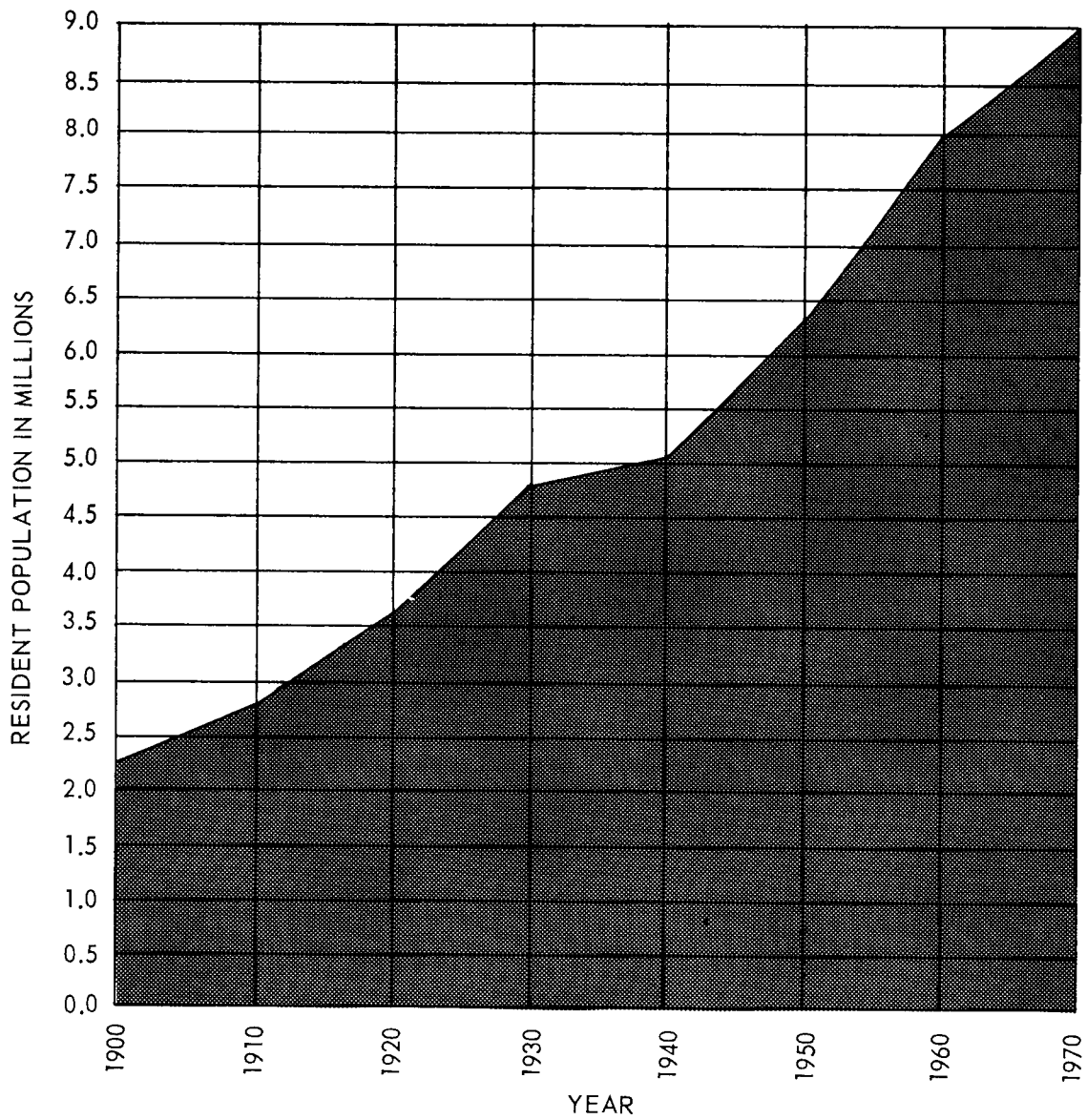
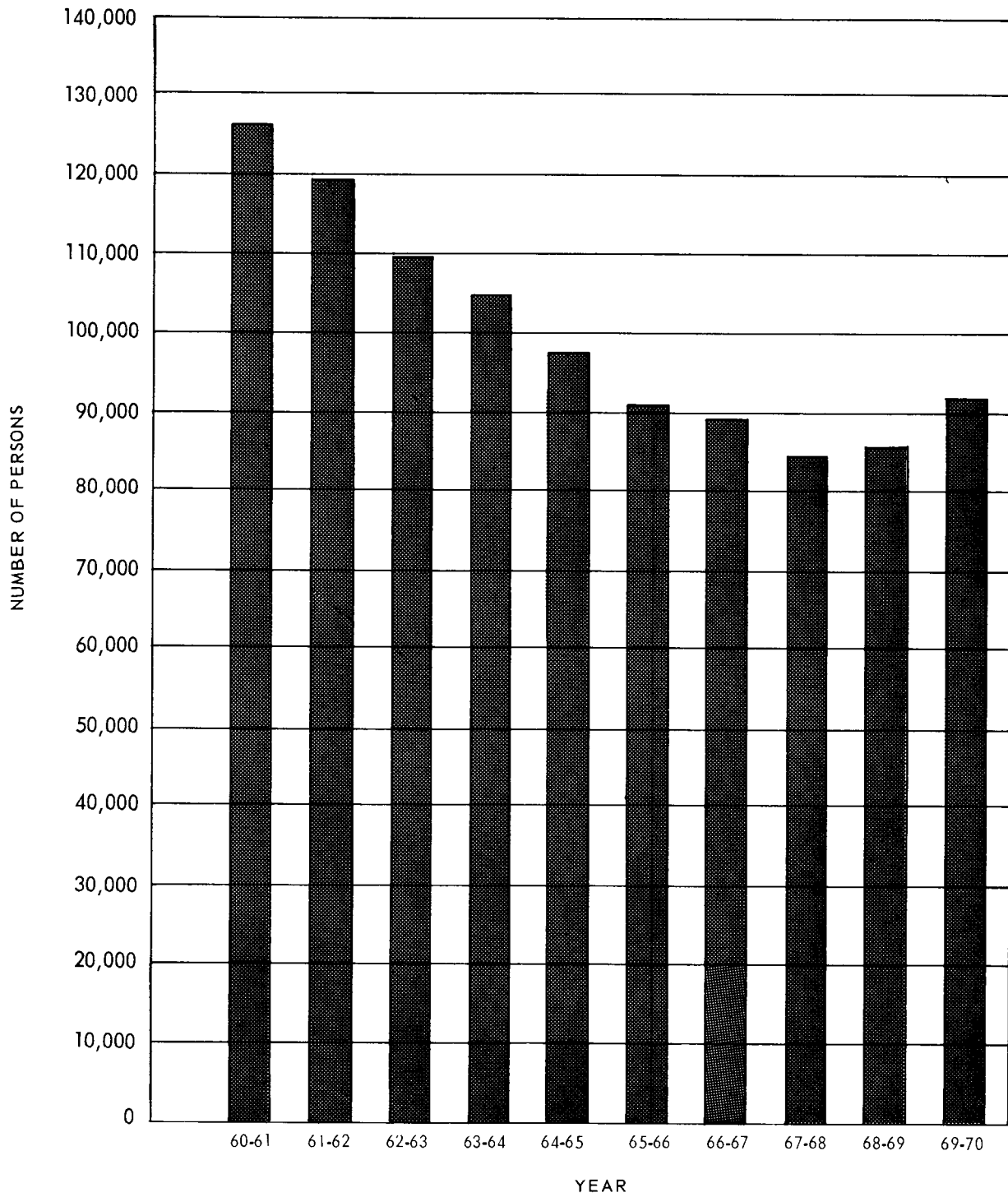


FIG. 1.2
NATURAL INCREASE
MICHIGAN 1960 - 1970



AGE COMPOSITION

Of particular importance is the changing age composition of Michigan's population. An age group comparison between Michigan's 1960 and 1970 populations is presented in Figure 1.3. As can be seen from the population pyramid the most significant changes in Michigan's resident population occurred in age groups that have considerable involvement with the health care system (the elderly and the young).

The 15-19 year-old population increased by 54.7 percent, the 20-24 year-old population by 57.7 percent, and the 75-and-over population by 40.9 percent. The large increase in the 15-25 year-old group reflects the large number of post World War II births. Perhaps of most significance is the increase in the 75-and-over population as it is this group that has historically required an excess proportion of medical care. In 1970, the median age was 26.3. This represents a significant decline over the median age of 28.3 observed in 1960 and the 29.8 value recorded in 1950.

SEX COMPOSITION

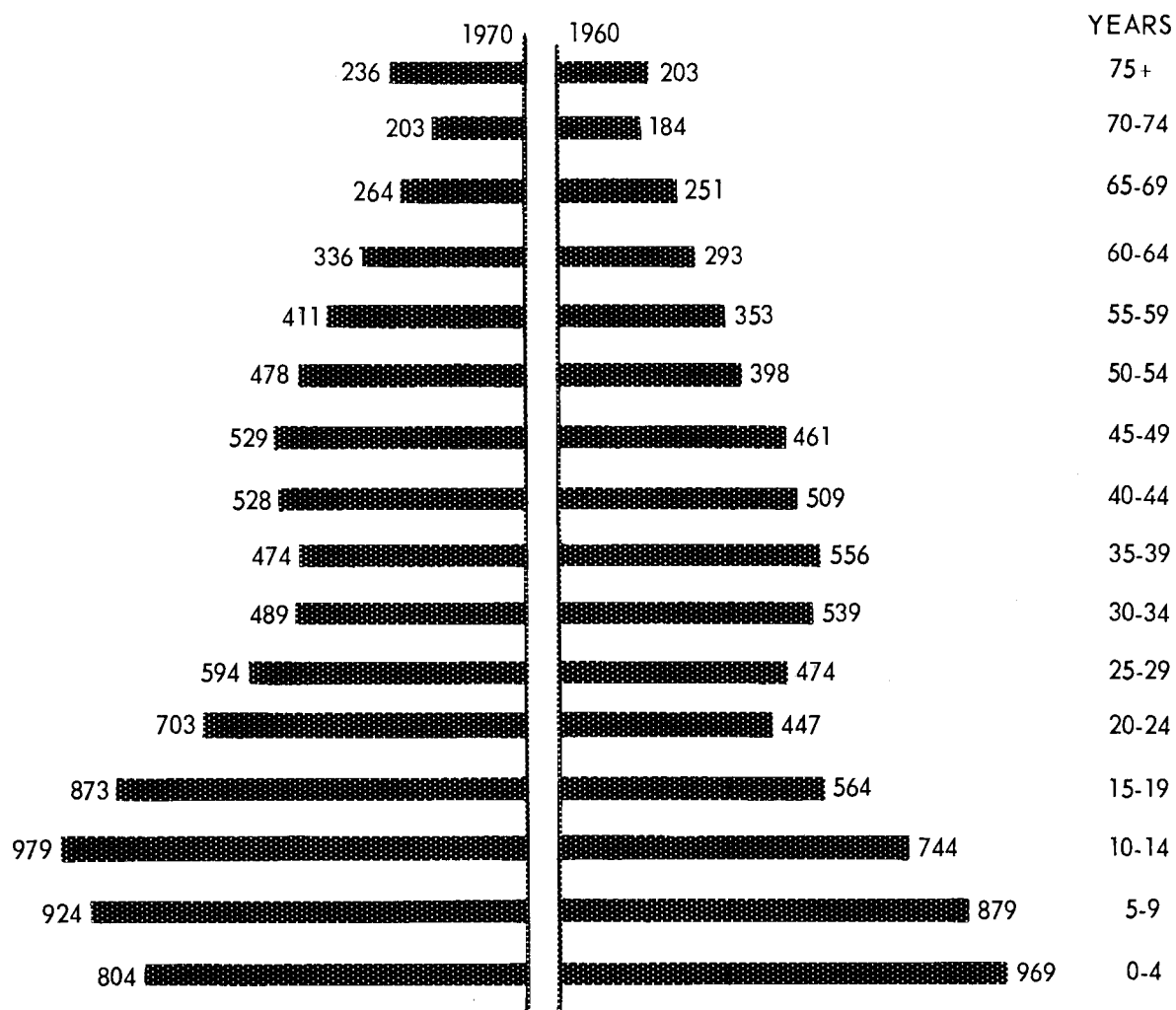
The sex ratio increased during the period from 1900-1920 coinciding with the rapid growth in Michigan's economy. This is probably due in some measure to a large in-migration of single males joining the labor force. The steady decrease observed since 1920 is the result of an increasing differential in life expectancy between males and females. In 1970, this differential was 7.4 years. The median age of females is greater than for males (27 compared to 25).

TABLE 1.3

Sex Ratio
Michigan 1900-1970

	YEARS							
	1900	1910	1920	1930	1940	1950	1960	1970
Sex Ratio (Males/Females) X 100	106.6	107.3	110.8	108.4	105.2	101.7	98.5	96.1

FIG. 1.3
POPULATION BY AGE: 1970 and 1960
MICHIGAN
NUMBER IN THOUSANDS



RACE COMPOSITION

The racial composition of Michigan's population continues to change. From 1960 to 1970, Michigan's white population increased 10.6 percent, whereas Michigan's black population increased by a substantial 38.1 percent (Table 1.4). However, the increases observed for each race in 1970 are significantly lower than comparative figures for 1960. Between 1950 and 1960 the white population increased 19.7 percent whereas the black population increased 62.2 percent.

In 1960 nonwhite races accounted for 9.4 percent of Michigan's resident population (blacks comprised the majority of this group at 9.2 percent of the resident population). By 1970, the nonwhite portion of the population had grown to 11.7 percent with the black population comprising 11.2 percent.

The percentage of the various racial groups residing in urban areas changed very little between 1960 and 1970. In 1960, 95.7 percent of Michigan's black population resided in places classified as urban, whereas in 1970 the percentage had increased slightly to 96.9 percent. Comparable figures for the white population are 71.1 percent in 1960 and 70.9 percent in 1970. Although the relative urban-rural distribution has not changed, increases in the numbers of persons in each racial group was greatest in urban areas.

TABLE 1.4

Population Change by Race
Michigan 1900-1970

YEAR	TOTAL	% CHANGE	WHITE	% CHANGE	NEGRO	% CHANGE	OTHER	% CHANGE
1900	2,420,982	-	2,398,563	-	15,816	-	6,603	-
1910	2,810,173	16.1	2,785,247	16.1	17,115	8.2	7,811	18.3
1920	3,668,412	30.5	3,601,627	29.3	60,082	251.1	6,703	-14.2
1930	4,842,325	32.0	4,663,507	29.5	169,453	182.0	9,365	39.7
1940	5,256,106	8.5	5,039,643	8.1	208,345	23.0	8,118	-13.3
1950	6,371,766	21.2	5,917,825	17.4	442,296	112.3	11,645	43.4
1960	7,823,194	22.8	7,085,865	19.7	717,581	62.2	19,748	69.6
1970	8,875,083	13.4	7,833,474	10.6	991,066	38.1	50,543	155.9

INCOME

The median income of Michigan families has risen from \$6,256 in 1960 to \$11,032 in 1970 (an increase of 76.3 percent). The median income of unrelated individuals has risen by 65.9 percent (from \$1,596 to \$2,647) during this same period of time. Although these increases appear substantial the rate of inflation must be taken into account when analyzing the economic gains of Michigan's residents. The Consumer Price Index has risen from 88.7 in 1960 to 116.3 in 1970 an increase of 31.1 percent. In terms of the purchasing power of the dollar this simply means that it cost \$1.31 in 1970 to purchase the same goods it cost \$1.00 to purchase in 1960. Considering the impact of inflation, the increase in median income was 45.2 percent instead of 76.3 percent.

EMPLOYMENT

Another changing characteristic of Michigan's population is the employment status of Michigan's work-age population. One of the major employment changes to occur during the last decade has been the increasing number of women actively employed in the civilian labor force. Of women 14 and over 35.7 percent were employed in 1970 as compared to 30.4 percent in 1960.

In addition to a higher percentage of women in the labor force, there has been an increase in all persons holding professional, clerical and service jobs and a decrease in the percentage of persons holding managerial, sales, craftsmen, operatives (not transport), and household jobs (Table 1.5).

TABLE 1.5

Employment by Occupation Groups
Total Employed, 14 Years Old & Over
Michigan 1960 & 1970

OCCUPATION GROUPS	1970		1960	
	TOTAL EMPLOYED	% OF EMPLOYED	TOTAL EMPLOYED	% OF EMPLOYED
Professional, technical, & kindred workers	443,841	13.5	302,193	11.1
Managers and administrators, except farms	220,273	6.7	209,522	7.7
Sales Workers	219,394	6.7	202,261	7.4
Clerical and kindred workers	525,091	16.0	371,596	13.6
Craftsmen, foremen, and kindred workers	473,196	14.4	427,031	15.7
Operatives, except transport	532,044	16.2	479,460	17.6
Transport equipment operatives	117,712	3.6	105,628	3.9
Laborers, except farms	124,279	3.8	117,064	4.3
Farmers and farm managers	29,416	0.9	60,159	2.2
Farm Laborers and foremen	16,337	0.5	26,946	1.0
Service workers, except private household	364,540	11.1	250,561	9.2
Private household workers	32,597	1.0	58,418	2.1
Occupation not reported	192,149	5.8	116,025	4.3
TOTAL	3,290,869	100.0	2,726,864	100.0

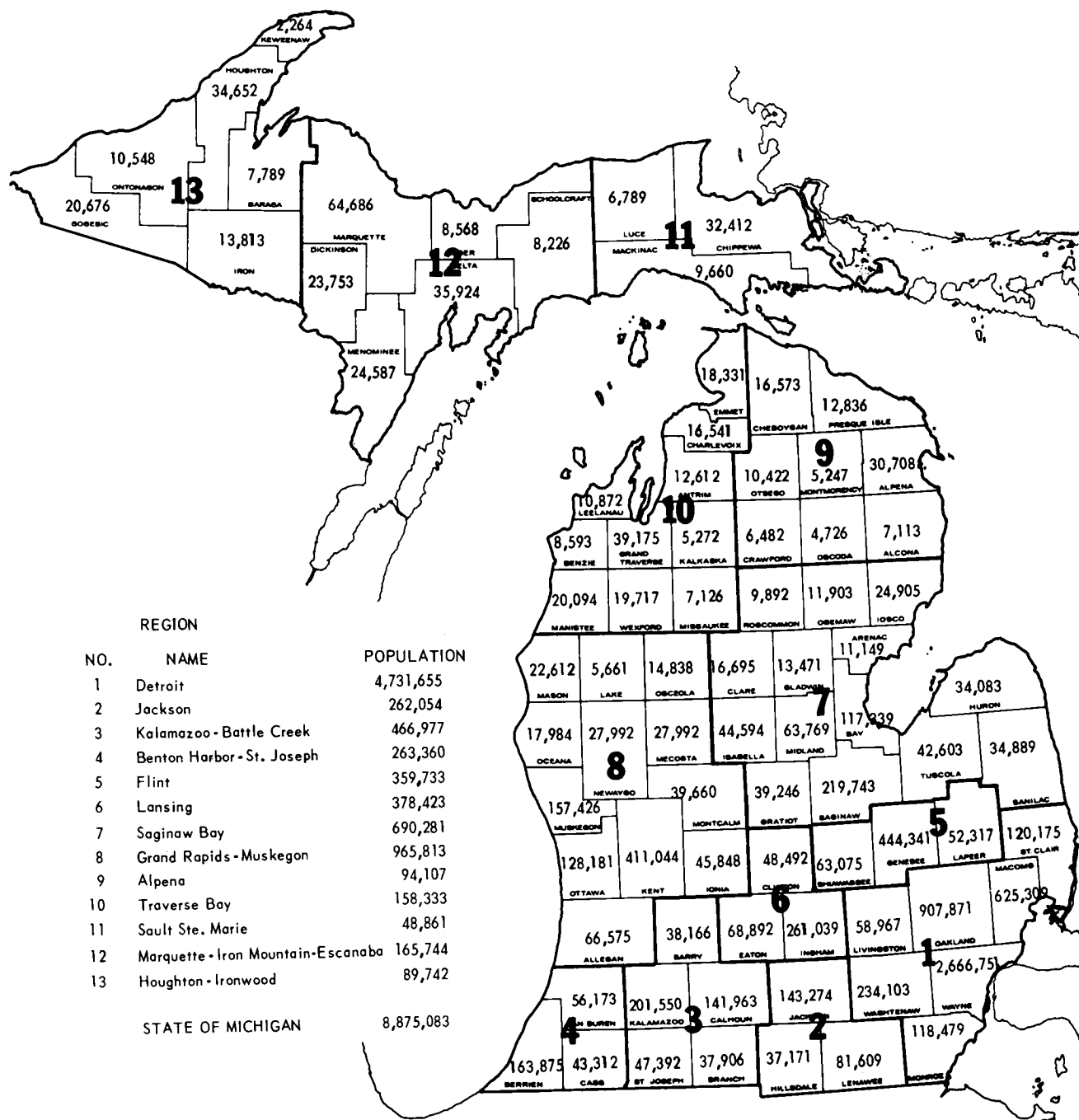
GEOGRAPHIC DISTRIBUTION

Throughout Michigan's history, the largest concentration of Michigan's population has been located in the southeastern lower peninsula. It is evident from Fig. 1.4 and Table 1.6 that the southern half of the lower peninsula continues to exhibit the greatest population growth in the state.

TABLE 1.6
Population Change by Planning and Development Regions
Michigan 1960-1970

REGION	1960 POPULATION	1970 POPULATION	DIFFERENCE	% CHANGE
Detroit	4,181,354	4,731,655	550,301	13.2
Jackson	244,525	262,054	17,529	7.2
Kalamazoo-Battle Creek	417,543	466,977	49,434	11.8
Benton Harbor-St. Joseph	235,192	263,360	28,168	12.0
Flint	469,685	559,733	90,048	19.2
Lansing	298,949	378,423	79,474	26.6
Saginaw Bay	596,890	690,281	93,391	15.6
Grand Rapids-Muskegon	851,125	965,813	114,688	13.5
Alpena	82,962	94,107	11,145	13.4
Traverse Bay	139,017	158,333	19,316	13.9
Sault Ste. Marie	51,335	48,861	-2,474	-4.8
Marquette-Iron Mountain-Escanaba	157,257	165,744	8,487	5.4
Houghton-Ironwood	97,360	89,742	-7,618	-7.8
State of Michigan	7,823,194	8,875,083	1,051,889	13.4

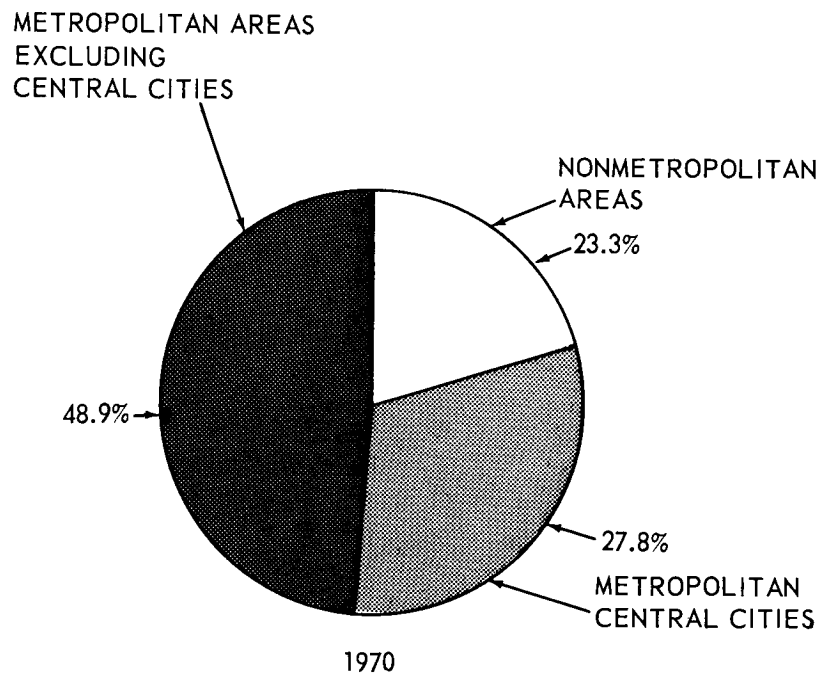
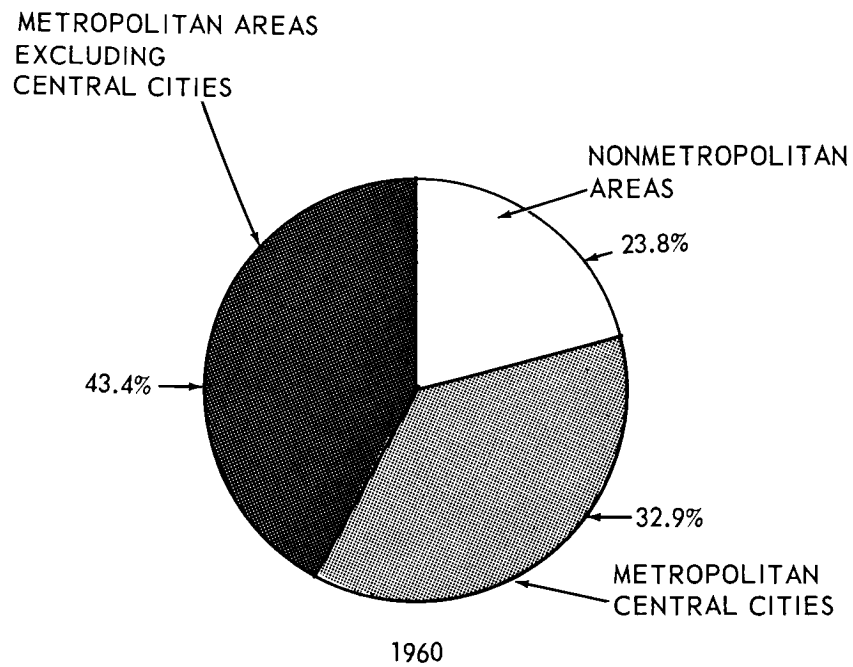
FIG. 1.4
RESIDENT POPULATION BY COUNTY
AND PLANNING & DEVELOPMENT REGION
MICHIGAN APRIL 1, 1970



The geographic distribution of Michigan's population is consistent with patterns emerging nationwide. During the period from 1960 to 1970 Michigan's urban population increased by 14.2 percent while Michigan's rural population increased by 11.4 percent. As can be seen from Table 5.7 most of the growth taking place in Michigan's smaller, more rural, counties is due to natural increase. Since Michigan experienced relatively little net migration during this period of time, it follows that a portion of the urban growth is due to a rural-to-urban shift in population. In addition, those counties with relatively smaller populations (namely those with less than 50,000 resident population) experienced a lower percentage increase in population than did the state as a whole. Just as many small states suffered this last decade from significant out-migration so did many Michigan counties. The Upper Peninsula of Michigan was particularly affected. Of the 13 Michigan counties which lost population during the period April 1, 1960 to April 1, 1970, 12 were located in Michigan's Upper Peninsula. Thirteen of Michigan's Upper Peninsula counties experienced a net out-migration and two of these same counties experienced more deaths than births.

Although there is a population flow to urban areas, it appears that there is also a flow away from the central cities and to the outlying metropolitan area. This so-called flight to suburbia is characteristic of many large urban areas in the United States (Fig. 1.5).

FIG. 1.5
METROPOLITAN AND NONMETROPOLITAN POPULATION DISTRIBUTION
MICHIGAN 1960 & 1970



MICHIGAN AND THE UNITED STATES

As can be seen in Table 1.7, Michigan ranks 7th among all states in the nation in resident population size. Of the ten largest states in the nation, Michigan experienced the 5th largest growth rate between 1960 and 1970. Only Florida, California, New Jersey and Texas had higher growth rates.

TABLE 1.7

Resident Population and Percent Change in Population
Ten Largest States
1960-1970

STATE*	POPULATION		PERCENT CHANGE
	1960	1970	
United States	179,323,175	203,211,926	13.3
Florida	4,951,560	6,789,443	37.1
California	15,717,204	19,953,134	27.0
New Jersey	6,066,782	7,168,164	18.2
Texas	9,579,677	11,196,730	16.9
Michigan	7,823,194	8,875,083	13.4
Massachusetts	5,148,578	5,689,170	10.5
Illinois	10,081,158	11,113,976	10.2
Ohio	9,706,397	10,652,017	9.7
New York	16,782,304	18,236,967	8.7
Pennsylvania	11,319,366	11,793,909	4.2

* These 10 states comprised 54.9 percent of the nation's total population in 1970 with Michigan accounting for 4.4 percent.

SECTION II

NATALITY AN OVERVIEW

Total Deliveries - 1970	-	173,727
Total Resident Live Births - 1970	-	171,667
Total Resident Fetal Deaths - 1970	-	2,060
Crude Birth Rate - 1970	-	19.3
Fetal Death Ratio - 1970	-	12.0
Fertility Rate - 1970	-	91.7
Illegitimacy Ratio - Live Births - 1970	-	109.0
Illegitimacy Ratio - Fetal Deaths - 1970	-	188.8
First Order Births (Percent of Total Live Births) - 1970	-	37.4
No Prenatal Care Ratio - 1970	-	22.6
Nonwhite Births (Percent of Total Live Births) - 1970	-	16.2%
Median Age of Mother (Live Births) - 1970	-	24
Median Age of Mother (Fetal Deaths) - 1970	-	25

HISTORICAL PERSPECTIVE

Between 1900 and 1970, the number of total births occurring each year varied considerably. This pattern has not been totally consistent for the two component parts (live births and fetal deaths) of deliveries. The smallest number of live births recorded this century was 43,221. This occurred in 1901. The greatest number was 208,488 recorded 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 2.1 and 2.2 portray the changes that have taken place in the number of live births and fetal deaths recorded each year since 1900.

Another view of the changing pattern in the total births may be obtained through the examination of changes in the crude birth rate and the fetal death ratio. The crude birth rate has ranged from a low of 16.2 in 1933 to a high of 27.4 in 1956. The fetal death ratio has ranged from a low of 12.0 in 1970 to a high of 43.5 in 1905.

Figure 2.3 is a graphic portrayal of the trends in resident live birth rates and fetal death ratios for Michigan since 1900. As can be observed quite clearly from the graph, birth rates have shown considerable fluctuation whereas fetal death ratios have declined more or less steadily from the very high levels of the late 1920's.

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 to mid-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 trend noted in 1969 and 1970. This upward trend is due to the large number of women born in the mid-1950's who are currently reaching the childbearing ages.

From 1900 through 1940, Michigan's crude birth rate lagged behind that of the United States as a whole. By 1950 Michigan's crude birth rate exceeded that of the Nation and continues to do so up till the present (Table 2.1).

FIG. 2.1
LIVE BIRTHS
MICHIGAN RESIDENTS 1900 - 1970

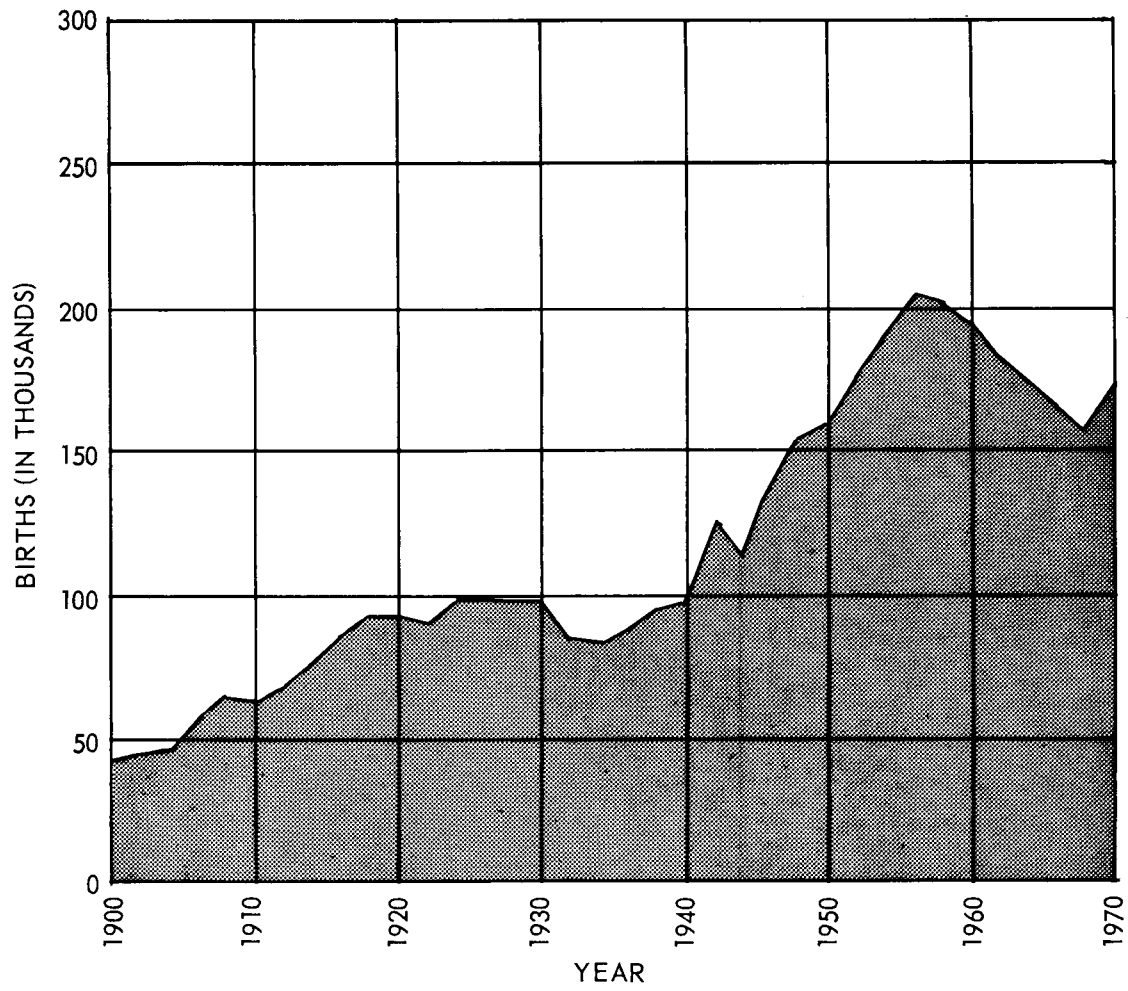


FIG. 2.2
FETAL DEATHS
MICHIGAN RESIDENTS 1900 - 1970

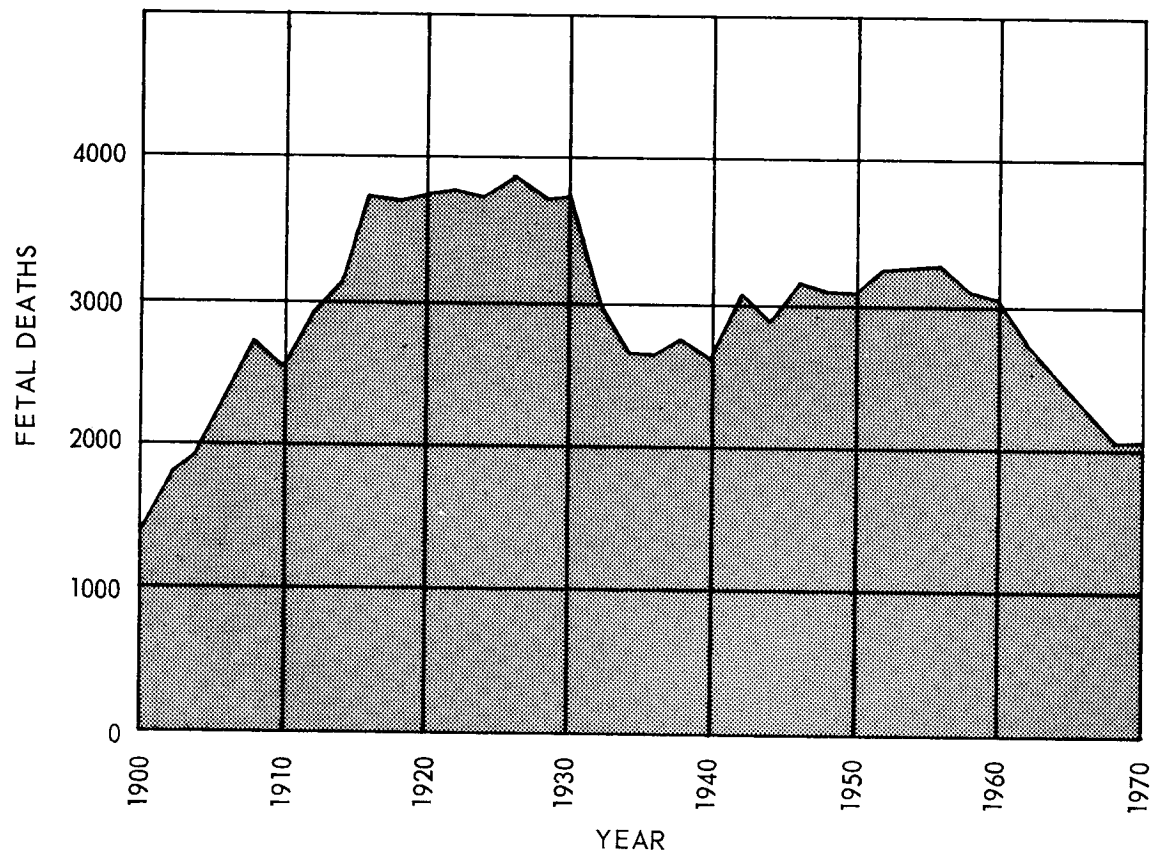


FIG. 2.3
LIVE BIRTH RATE AND FETAL DEATH RATIO
MICHIGAN RESIDENTS 1900 - 1970

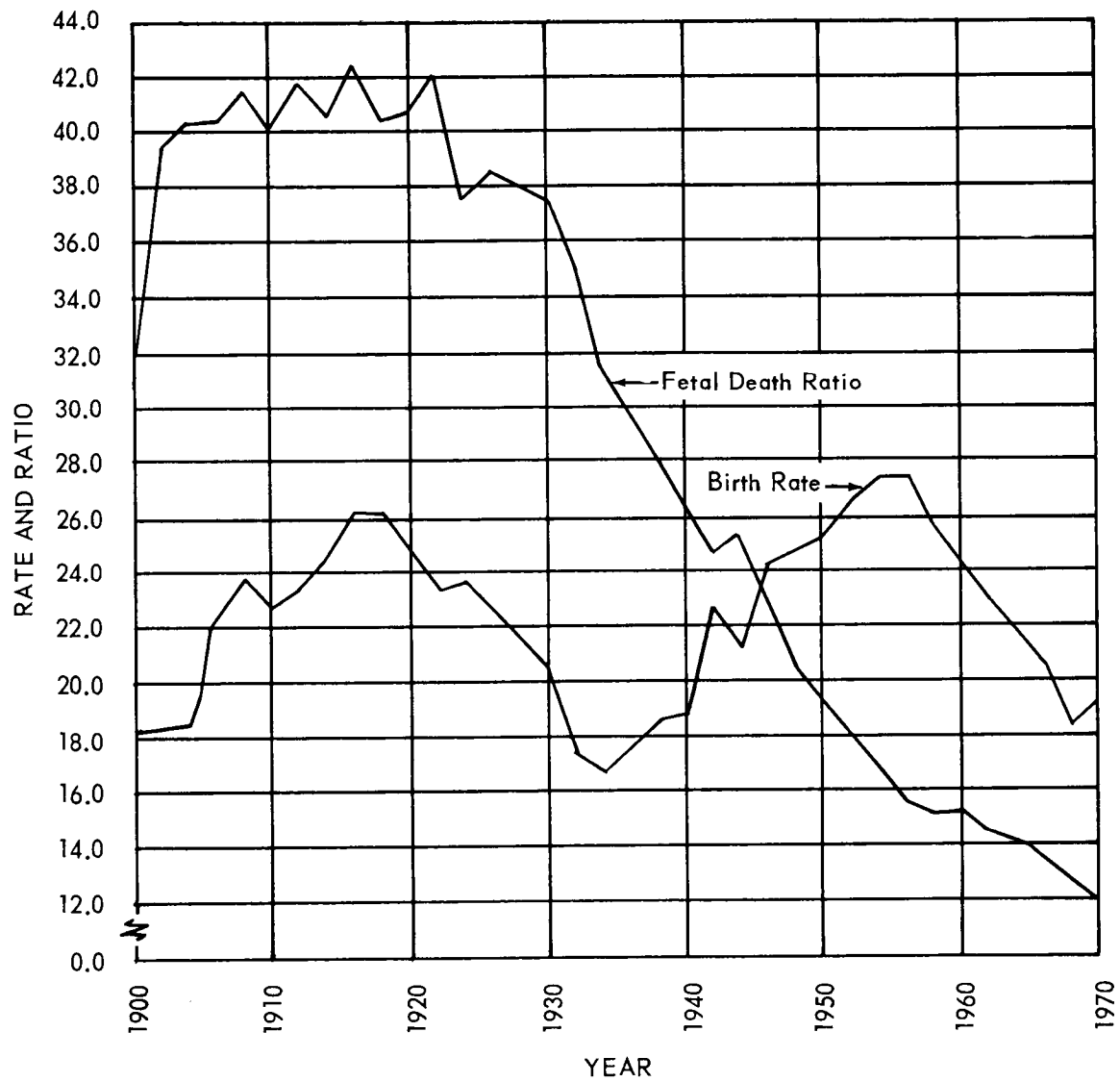


TABLE 2.1

Resident Live Births and Crude Birth Rates
Michigan and the United States - Selected Years - 1900-1970

UNITED STATES		YEAR	MICHIGAN	
LIVE BIRTHS	RATE		LIVE BIRTHS	RATE
N/A	N/A	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
3,571,000 Pr.	17.7 Pr.	1969	165,760	19.0
3,718,000 Pr.	18.2 Pr.	1970	171,667	19.3

FERTILITY

It is impossible to determine from the crude birth rate whether changes are occurring as a result of a changing population structure or from other factors. Changes in the number of women in the prime childbearing ages may have a significant impact upon the crude birth rate, thus presenting a somewhat distorted picture of fecundity for a given period of time or a given geographical area. A measure for analyzing changing birth patterns that is more precise than the crude birth rate is the fertility rate. Since the fertility rate relates the number of live births to the female population of childbearing age, more valid comparisons for various periods of time and various locations can be made.

A comparison of fertility rates for Michigan and the United States for selected years is presented in Table 2.2.

TABLE 2.2
Fertility Rates
Michigan and the U.S. Selected Years 1900-1970

FERTILITY RATE - UNITED STATES	YEAR	FERTILITY RATE - MICHIGAN
N/A	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
87.6	1970	91.7

TABLE 2.3

Age Specific Birth Rates
Michigan Residents 1960 and 1970

AGE GROUP	LIVE BIRTHS		RATE		PERCENT DECREASE
	1960	1970	1960	1970	
Under 20 *	22,972	30,253	79.9	69.4	13.1
20 - 24	65,108	65,892	273.1	176.2	35.5
25 - 29	51,842	46,262	213.0	154.2	27.6
30 - 34	33,228	19,003	121.8	76.2	37.4
35 - 39	17,410	7,904	61.5	32.4	47.3
40 & over **	4,490	2,341	17.3	8.7	49.7
Not Stated	6	12	-	-	-
Total***	195,056	171,667	123.1	91.7	25.5
Median age of Mother	25	24			

* Age-Specific Birth Rate for Under 20 Based on Female Population 15-19

** Age-Specific Birth Rate for 40 and Over Based on Female Population 40-44

*** Total Fertility Rate Based on Female Population 15-44

As can be observed from Table 2.3 fertility is decreasing for all age groups of mothers. The smallest decrease in fertility appears to have taken place in the under 20 age group. Significant declines are also noted in the 35-39 and 40-and-over groups.

RACIAL COMPOSITION OF RESIDENT MICHIGAN BIRTHS

During the decade from 1960 to 1970 the racial composition of births in Michigan was also changing. As was noted in the previous section of this report, Michigan's nonwhite population increased by 41.3 percent. As can be seen from Table 2.4, during this same period of time the number of nonwhite births increased by 29.3 percent from 21,503 in 1960 to 27,796 in 1970. In addition to the fact that nonwhite births were increasing in absolute terms, an inspection of Table 2.4 indicates that nonwhite births are an increasing percentage of all births. In 1960 nonwhite births accounted for 11.0 percent of all births to Michigan residents. In 1970, 16.2 percent of all births were recorded as nonwhite.

As has been pointed out previously, the general fertility rate for Michigan declined during the period 1960 to 1970. Both the white and nonwhite fertility rates decreased. The white fertility rate decreased by 27.8 percent from 121.9 to 88.0 while the nonwhite decreased 12.0 percent (from 133.7 to 117.6).

TABLE 2.4

Live Births and Fertility Rates by Race Michigan Residents 1960-1970

YEAR	Number	TOTAL BIRTHS % of all Births	Fertility Rate	Number	WHITE BIRTHS % of all Births	Fertility Rate	Number	NON-WHITE BIRTHS % of all Births	Fertility Rate
1960	195,056	100.0	123.1	173,553	89.0	121.9	21,503	11.0	133.7
1961	192,825	100.0	-	171,584	89.0	-	21,241	11.0	-
1962	182,790	100.0	-	162,554	88.9	-	20,236	11.1	-
1963	178,871	100.0	-	158,914	88.8	-	19,957	11.2	-
1964	175,103	100.0	-	154,790	88.4	-	20,313	11.6	-
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	91.7	143,871	83.8	88.0	27,796	16.2	117.6

ILLEGITIMATE LIVE BIRTHS

In 1900, resident 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 and it was not until 1933 that the ratio became greater than 20.0. By 1960 the ratio had reached 36.9. Between 1960 and 1970 the illegitimacy ratio increased from 36.9 to 109.0, an increase of 195.4 percent (Figure 2.4).

Mothers of illegitimate children tend to be somewhat younger than the mothers of legitimate children (Table 2.5). The median age of mothers having illegitimate births is 19 compared to a median age of 24 for all live births. The median age for nonwhite mothers who have illegitimate births is 19 compared to an overall nonwhite median age of 22.

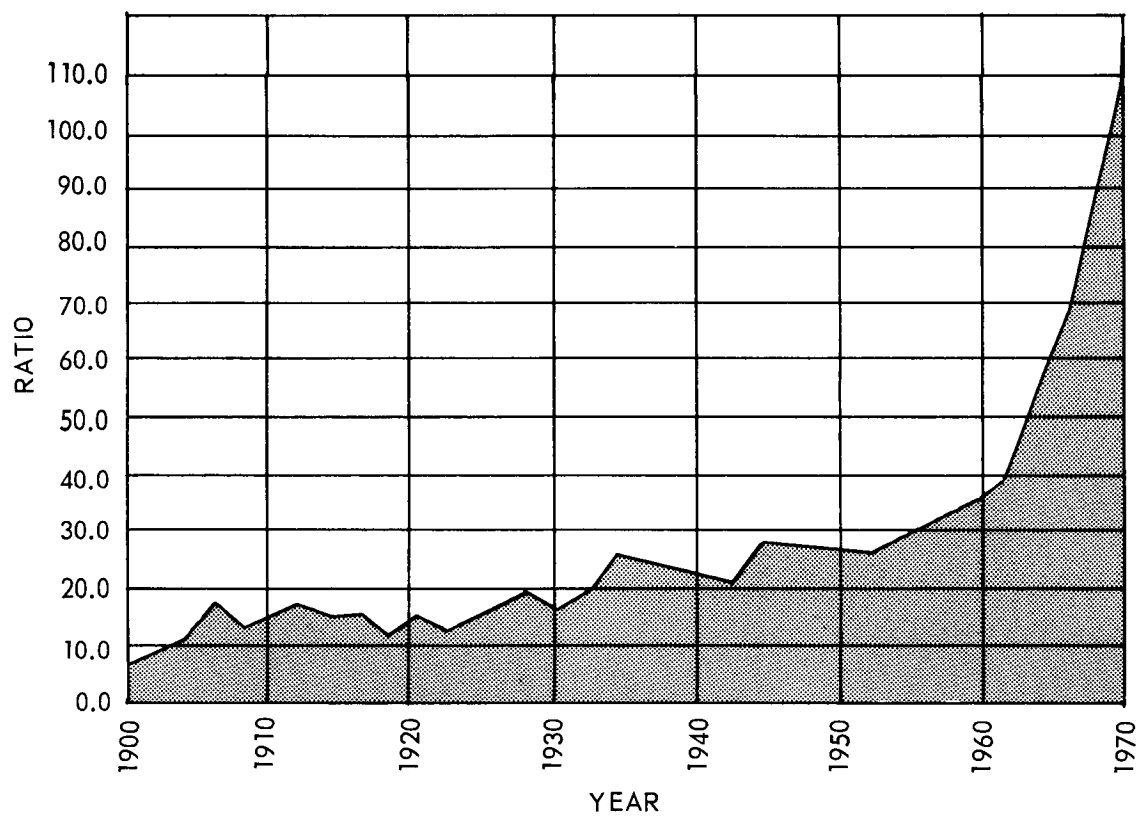
Nonwhite mothers account for approximately 53 percent of all illegitimate births and it can be observed (Table 2.5) that young nonwhite mothers, in particular, have a greater proportion of illegitimate births.

TABLE 2.5

Illegitimate Live Births and Ratios by Age of Mother and Race of Child
Michigan Residents - 1970

AGE OF MOTHER	RACE OF CHILD					
	TOTAL		WHITE		NONWHITE	
	NO.	RATE	NO.	RATE	NO.	RATE
Under 15 Years	78	159.5	21	132.1	57	172.7
15-19 Years	3,103	104.3	1,774	82.5	1,329	161.0
20-24 Years	4,930	74.8	3,612	63.9	1,318	135.8
25-29 Years	3,074	66.4	2,438	59.5	636	119.9
30-39 Years	2,017	75.0	1,534	66.3	483	128.0
40 Years and Over	228	97.4	171	88.9	57	136.4
Not Stated	2	-	2	-	-	-
TOTAL	13,432	78.2	9,552	66.4	3,880	139.6
Median Age of Mother	23		24		22	

FIG. 2.4
ILLEGITIMATE BIRTH RATIO
MICHIGAN RESIDENTS 1900 - 1970



As can be observed from Table 2.6, illegitimate births are more likely to be low weight (13.4 percent of all illegitimate births compared to 7.1 percent of all legitimate births). Of all illegitimate births, 54.7 percent occurred to mothers of less than 20 years of age while the comparable percentage among legitimate births was only 13.1 percent. Although differences are small, complications of labor, pregnancy, and those not related to pregnancy occur more frequently among illegitimate births.

TABLE 2.6
Illegitimate Births by Selected Characteristics
Michigan Residents - 1970

SELECTED CHARACTERISTICS	TOTAL LIVE BIRTHS		ILLEGITIMATE LIVE BIRTHS		LEGITIMATE LIVE BIRTHS	
		% OF TOTAL		% OF ILLEGITIMATE		% OF LEGITIMATE
Low-Weight Birth (2500 grams or less)	13,432	7.9	2,499	13.4	10,933	7.1
Mother's Age <20 Years	30,253	17.6	10,237	54.7	20,016	13.1
Mother's Education - 8th Grade or <	6,496	3.8	N/A	-	N/A	-
Complications of Labor	19,254	11.2	2,321	12.4	16,933	11.1
Complications Related to Pregnancy	12,873	7.5	1,585	8.5	11,288	7.4
Complications Not Related to Pregnancy	<u>3,652</u>	<u>2.1</u>	<u>484</u>	<u>2.6</u>	<u>3,168</u>	<u>2.1</u>
Total	171,667	100.0	18,712	100.0	152,955	100.0

Similar increases in illegitimacy ratios have been noted nationwide. Table 2.7 contains a comparison of illegitimate birth ratios for Michigan and the United States for the period 1960-1970.

TABLE 2.7

Illegitimate Live Births and Illegitimacy Ratios
Michigan and U.S. Residents 1960-1970

UNITED STATES		YEAR	MICHIGAN	
NO. OF ILLEGITIMATE BIRTHS	RATIO		NO. OF ILLEGITIMATE BIRTHS	RATIO
224,300	52.7	1960	7,200	36.9
240,200	56.3	1961	8,017	41.6
245,100	58.8	1962	7,998	43.8
259,400	63.3	1963	8,769	49.0
275,700	68.5	1964	9,724	55.5
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
N/A	N/A	1969	16,329	98.5
N/A	N/A	1970	18,712	109.0

BIRTH WEIGHT

The mean weight for all live births is 3,298 grams or approximately 7 lbs., 4 oz. The median weight is 3,323 grams or approximately 7 lbs., 5 oz. (Table 2.8). As was alluded to previously, birth weights among illegitimates are slightly lower. The median and mean birth weights for illegitimate births are respectively 3,152 grams (approximately 6 lbs., 15 oz.) and 3,087 grams (6 lbs., 12 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 consideration of the gestational period has come into use and births 2,500 grams or less are now called low-weight births.

TABLE 2.8

Birth Weight by Legitimacy Status
Michigan Residents 1970

WEIGHT AT BIRTH	LEGITIMACY STATUS		
	TOTAL	LEGITIMATE	ILLEGITIMATE
500 Grams or Less	216	168	48
501-1000 Grams	840	665	175
1001-1500 Grams	1,185	903	282
1501-2000 Grams	2,651	2,129	522
2001-2500 Grams	8,540	7,068	1,472
2501-3000 Grams	30,810	26,084	4,726
3001-3500 Grams	64,300	57,282	7,018
3501-4000 Grams	46,472	42,911	3,561
4001-4500 Grams	13,573	12,841	732
4501 and Over	2,922	2,784	138
Not Stated	<u>158</u>	<u>120</u>	<u>38</u>
TOTAL	171,667	152,955	18,712
Mean Weight	3,298	3,324	3,087
Median Weight	3,323	3,344	3,152

The incidence of low weight births appears to be most significant among the young, the older and the nonwhite mothers (Table 2.9).

TABLE 2.9

Low Weight Live Births and Rates
By Age of Mother and Race of Child
Michigan Residents 1970

AGE OF MOTHER			RACE OF CHILD			
	TOTAL		WHITE		NONWHITE	
	NO.	RATIO	NO.	RATIO	NO.	RATIO
Under 15 Years	450	920.2	127	798.7	323	978.8
15-19 Years	9,787	328.8	4,448	206.8	5,339	646.7
20-24 Years	5,622	85.9	2,930	52.2	2,732	281.4
25-29 Years	1,642	35.5	760	18.6	882	166.3
30-39 Years	1,050	39.0	477	20.6	573	151.9
40 and Over Years	116	49.6	68	35.4	48	114.8
Not Stated	5	-	2	-	3	-
Total	18,712	109.0	8,812	61.2	9,900	356.2
Median Age of Mother	19		19		19	

As can be observed from Table 2.10 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 a slight 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 (a decrease from 19.7 percent in 1960 to 10.1 percent in 1970).

The relative increase in first-order births is not unique to Michigan. As can be observed from Table 2.11 the percentage of first-order births is increasing nationwide. Also the relative proportion of first-order births is higher for the United States as a whole (37.5 percent in 1968) than is the case for Michigan residents (32.8 percent in 1968).

As can be observed from Table 2.12, the frequency of high-order births increases with the age of mother. The median age of mother among first-order births is 21 compared to a median age of 32 among fifth-order or greater births. The median age of all mothers is 24.

TABLE 2.10

Total Live Births by Birth Order
Michigan Residents 1960 and 1970

LIVE BIRTH ORDER	NO. OF BIRTHS		PERCENT	
	1960	1970	1960	1970
First Birth	44,711	64,222	22.9	37.4
Second Birth	44,776	46,875	23.0	27.3
Third Birth	39,012	28,119	20.0	16.4
Fourth Birth	28,032	14,875	14.4	8.7
Fifth Birth or Greater	38,435	17,423	19.7	10.1
Not Stated	90	153	0.1	0.1
TOTAL	195,056	171,667	100.0	100.0

TABLE 2.11

First Births
Michigan and the United States Residents 1960 - 1970

UNITED STATES		YEAR	MICHIGAN	
FIRST BIRTHS	% OF ALL BIRTHS		FIRST BIRTHS	% OF ALL BIRTHS
1,090,152	25.6	1960	44,711	22.9
1,099,688	25.8	1961	45,656	23.7
1,086,312	26.1	1962	43,426	23.8
1,122,138	27.4	1963	44,069	24.6
1,164,548	28.9	1964	46,172	26.4
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
N/A	N/A	1969	56,497	34.1
N/A	N/A	1970	64,222	37.4

TABLE 2.12

Total Live Births by Live Birth Order & Age of Mother
Michigan Residents - 1970

LIVE BIRTH ORDER	AGE OF MOTHER						TOTAL	MEDIAN AGE
	<20 YEARS	20-24 YEARS	25-29 YEARS	30-39 YEARS	40 AND > YEARS	N/S		
First Birth	24,061	29,099	9,017	1,918	119	8	64,222	21
Second Birth	5,221	23,776	13,918	3,817	142	1	46,875	23
Third Birth	813	9,267	12,261	4,551	227	-	28,119	26
Fourth Birth	119	2,623	6,400	5,407	324	2	14,875	28
Fifth Birth or >	13	1,060	4,634	10,188	1,527	1	17,423	32
Not Stated	26	67	32	26	2	-	153	23
TOTAL	30,253	65,892	46,262	26,907	2,341	12	171,667	24

PRENATAL CARE

In 1970, 3,886 resident live births (2.3 percent) occurred without the mother having any prenatal care. These cases include only those where no prenatal care was specified. However, an additional 7,585 (4.4 percent) certificates either contained no information or insufficient information to determine whether or not prenatal care had been received. Those mothers receiving no prenatal care are for the most part younger (median age of 22) mothers. Also the lack of prenatal care is disproportionately high among nonwhites. The relative percentage of nonwhites receiving no prenatal care is over twice as large as among whites. This disparity seems to be largest in the age groups between 20 and 39 years of age (Table 2.13).

TABLE 2.13

Live Births With No Prenatal Care
By Age of Mother and Race of Child
Michigan Residents - 1970

AGE OF MOTHER	RACE OF CHILD					
	TOTAL		WHITE		NONWHITE	
	NO.	RATIO	NO.	RATIO	NO.	RATIO
Under 15 Years	38	77.7	7	44.0	31	93.9
15-19 Years	1,134	38.1	524	24.4	610	73.9
20-24 Years	1,380	20.9	836	14.9	544	56.0
25-29 Years	716	15.5	459	11.2	257	48.4
30-39 Years	543	20.2	351	15.2	192	50.9
40 Years & Over	75	32.0	47	24.4	28	67.0
Not Stated	-	-	-	-	-	-
TOTAL	3,886	22.6	2,224	15.5	1,662	59.8
Median Age of Mother	22		23		21	

FETAL DEATHS

In 1970, there were 2,060 resident Michigan fetal deaths. This is the lowest resident fetal death figure recorded since 1905. The 1970 crude fetal death ratio for Michigan was 12.0. This is the lowest level for this ratio in this century (Table 2.14).

TABLE 2.14

Fetal Deaths and Fetal Death Ratios
Michigan Residents 1900-1970

FETAL DEATHS	YEAR	FETAL DEATH RATIOS
1,325	1900	30.3
2,559	1910	39.9
3,770	1920	40.9
3,714	1930	37.6
2,602	1940	26.3
3,095	1950	19.3
3,008	1960	15.4
2,735	1961	14.2
2,703	1962	14.8
2,540	1963	14.2
2,466	1964	14.1
2,475	1965	14.9
2,295	1966	13.8
2,195	1967	13.5
2,064	1968	13.0
2,175	1969	13.1
2,060	1970	12.0

A further inspection of Figure 2.3 (page 30) reveals that the fetal death ratio remained at relatively high levels throughout the first 20-30 years of the century. In the 1930's significant declines were observed in the fetal death ratio. However, since the 1950's, declines in the fetal death ratio have been much more moderate.

A classification of fetal deaths by underlying cause of death is contained in Table 2.15.

TABLE 2.15
Resident Fetal Deaths
by Cause of Death (Underlying) and Cause-Specific Ratios
Michigan Residents - 1970

ICDA LIST NO.	CAUSE OF DEATH	FREQUENCY	RATIO*
740	Anencephalus	46	26.8
741	Spina Bifida	14	8.2
742	Congenital Hydrocephalus	21	12.2
743	Other Congenital Anomalies of Nervous System	3	1.7
746	Congenital Anomalies of Heart	5	2.9
747	Other Congenital Anomalies of Circulatory System	1	0.6
748	Congenital Anomalies of Respiratory System	1	0.6
751	Other Congenital Anomalies of Digestive System	3	1.7
752	Congenital Anomalies of Genital Organs	1	0.6
753	Congenital Anomalies of Urinary System	5	2.9
755	Other Congenital Anomalies of Limbs	1	0.6
756	Other Congenital Anomalies of Musculoskeletal System	5	2.9
758	Other and Unspecified Congenital Anomalies	3	1.7
759	Congenital Syndromes Affecting Multiple Systems	20	11.7
760	Chronic Circulatory and Genito-Urinary Diseases in Mother	18	10.5
761	Other Maternal Conditions Unrelated to Pregnancy	114	66.4
762	Toxemia of Pregnancy	80	46.6
763	Maternal Ante- and Intra-Partum Infection	34	19.8
764	Difficult Labor with Abnormality of Bones, Organs, and Tissues of Pelvis	3	1.7
765	Difficult Labor with Disproportion, but no Mention of Abnormality of Pelvis	11	6.4
766	Difficult Labor with Malposition of Fetus	38	22.1
767	Difficult Labor with Abnormality of Forces of Labor	2	1.2
768	Difficult Labor with Other and Unspecified Complications	7	4.1
769	Other Complications of Pregnancy and Childbirth	187	108.9
770	Conditions of Placenta	513	298.8
771	Conditions of Umbilical Cord	295	171.8
772	Birth Injury without Mention of Cause	1	0.6
773	Termination of Pregnancy	2	1.2
775	Hemolytic Disease of Newborn without Mention of Kernicterus	81	47.2
776	Anoxic and Hypoxic Conditions not Elsewhere Classifiable	136	79.2
777	Immaturity, Unqualified	101	58.8
778	Other Conditions of Fetus and Newborn	24	14.0
779	Fetal Death of Unknown Cause	284	165.4

* Ratio per 100,000 Resident Live Births.

Due to a relatively large number of deaths allocated to unspecific causes (e.g., 284 deaths were assigned to unknown causes in 1970) the reader should exercise caution in attempting to draw specific inferences regarding cause of death among fetal deaths.

Of 2,060 resident fetal deaths, only 129 or approximately 6 percent were reported as due to congenital malformations, 246 or approximately 12 percent were due to conditions attributable to the mother, and 248 (12 percent) were reported as due to problems with the pregnancy or delivery. Conditions of the placenta and conditions of the umbilical cord accounted for 808 or 39 percent of all fetal deaths. Immaturity (unqualified), other conditions of fetus, and deaths from unknown causes accounted for 409 or approximately 20 percent of all fetal deaths.

It appears that the young, the older, and the nonwhite mothers have a greater risk for 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 (Tables 2.16 and 2.17).

TABLE 2.16

Fetal Deaths by Age of Mother and Race of Fetus
Michigan Residents - 1970

AGE GROUP	RACE OF FETUS							
	TOTAL	%	WHITE	%	BLACK	%	OTHER	%
Under 15	10	0.5	3	0.2	7	1.4	-	0
15-19	360	17.5	226	14.8	125	25.4	9	23.1
20-24	642	31.2	487	31.9	145	29.4	10	25.6
25-29	516	25.0	425	27.8	83	16.8	8	20.5
30-34	263	12.8	192	12.6	67	13.6	4	10.3
35-39	169	8.2	130	8.5	38	7.7	1	2.6
40-44	79	3.8	56	3.7	20	4.1	3	7.7
45 and Over	8	0.4	4	0.3	3	0.6	1	2.6
Not Stated	13	0.6	5	0.3	5	1.0	3	7.7
TOTAL *	2,060	100.0	1,528	100.0	493	100.0	39	100.0
Median Age	25		25		23		**	

* Total may not add to 100 percent due to rounding

**Not computed due to limited number of occurrences

TABLE 2. 17

Fetal Death Ratios
by Age of Mother and Race of Fetus
Michigan Residents - 1970

AGE OF MOTHER AND RACE OF FETUS	FETAL DEATHS	LIVE BIRTHS	AGE-RACE SPECIFIC RATIOS PER 1,000 LIVE BIRTHS
Under 15 years	10	489	20.4
White	3	159	18.9
NonWhite	7	330	21.2
15-19 years	360	29,764	12.1
White	226	21,508	10.5
NonWhite	134	8,256	16.2
20-24 years	642	65,892	9.7
White	487	56,183	8.7
NonWhite	155	9,709	16.0
25-29 years	516	46,262	11.2
White	425	40,957	10.4
NonWhite	91	5,305	17.2
30-39 years	432	26,907	16.1
White	322	23,134	13.9
NonWhite	110	3,773	29.2
40 and Over	87	2,341	37.2
White	60	1,923	31.2
NonWhite	27	418	64.6
Not Stated	13	12	-
White	5	7	-
NonWhite	8	5	-
TOTAL	2,060	171,667	12.0
White	1,528	143,871	10.6
NonWhite	532	27,796	19.1

Among live births, the percentage of children weighing 5 lbs., 8 oz. or less at birth was 7.8 percent. The comparable percentage among fetal deaths was 53.0 percent. The distribution of birth weight by plurality is presented in Table 2.18.

TABLE 2.18

Fetal Deaths by Fetal Weight and Plurality
Michigan Residents - 1970

WEIGHT	TOTAL FETALS	CUM. %	SINGLE DELIVERY	TWIN DELIVERY	TRIPL DELIVERY
500 Grams or Less	168	8.1	135	33	-
501-1,000 Grams	358	25.5	329	26	3
1,001-1,500 Grams	187	34.6	176	11	-
1,501-2,000 Grams	176	43.1	161	14	1
2,001-2,500 Grams	203	52.9	196	7	-
2,501-3,000 Grams	199	62.6	187	12	-
3,001-3,500 Grams	175	71.1	170	5	-
3,501-4,000 Grams	119	76.9	118	1	-
4,001-4,500 Grams	56	79.6	56	-	-
4,501-5,000 Grams	27	80.9	27	-	-
5,001 and Over Grams	22	82.0	22	-	-
Not Stated	370	100.0	340	30	-
TOTAL	2,060		1,917	139	4

Illegitimate fetal deaths comprised 18.9 percent of all fetal deaths. Illegitimate ratios are particularly high among the young and the nonwhite. Table 2.19 presents illegitimacy ratios for fetal deaths and Table 2.20 contains a comparison of age-specific fetal mortality ratios by legitimacy status.

TABLE 2.19
Illegitimate Fetal Deaths and Ratios*
by Age of Mother and Race of Fetus
Michigan Residents - 1970

AGE GROUP	TOTAL	RATIO	WHITE	RATIO	BLACK	RATIO	OTHER	RATIO
Under 15	10	1,000.0	3	1,000.0	7	1,000.0	-	-0-
15-19	172	477.8	74	327.4	93	744.0	5	555.6
20-24	111	172.9	55	112.9	54	372.4	2	200.0
25-29	45	87.2	25	58.8	19	228.9	1	125.0
30-34	31	117.9	13	67.7	18	268.7	-	-0-
35-39	13	76.9	6	46.2	7	184.2	-	-0-
40-44	5	63.3	2	35.7	3	150.0	-	-0-
45 and Over	1	125.0	-	-0-	1	333.3	-	-0-
Not Stated	1	76.9	-	-	1	200.0	-	-
TOTAL	389	188.8	178	116.5	203	411.8	8	205.1

* Ratio computed as = (No. of Illegitimate Fetal Deaths/Total Fetal Deaths) x 1,000.

TABLE 2.20

Fetal Deaths and Live Births
By Age of Mother and Legitimacy Status
Michigan Residents 1970

AGE OF MOTHER AND LEGITIMACY STATUS	FETAL DEATHS	LIVE BIRTHS	AGE-SPECIFIC RATIO PER 1,000 LIVE BIRTHS
Under 15 Years	10	489	20.4
Legitimate	-	39	-0-
Illegitimate	10	450	22.2
15-19 Years	360	29,764	12.1
Legitimate	188	19,977	9.4
Illegitimate	172	9,787	17.6
20-24 Years	642	65,892	9.7
Legitimate	531	60,230	8.8
Illegitimate	111	5,662	19.6
25-29 Years	516	46,262	11.2
Legitimate	471	44,620	10.6
Illegitimate	45	1,642	27.4
30-39 Years	432	26,907	16.1
Legitimate	388	25,857	15.0
Illegitimate	44	1,050	41.9
40 and Over	87	2,341	37.2
Legitimate	81	2,225	36.4
Illegitimate	6	116	51.7
Not Stated	13	12	-
Legitimate	12	7	-
Illegitimate	1	5	-
TOTAL	2,060	171,667	12.0
Legitimate	1,671	152,955	10.9
Illegitimate	389	18,712	20.8

Of the 2,060 fetal deaths recorded for 1970, 560 or 27.1 percent of the mothers reported no prenatal visits or did not state the number of prenatal visits.

The month of pregnancy that prenatal care is started among women having stillbirths is most frequently the second month (Table 2.21). Of those reporting, a relatively large percentage (67 percent) had received care before the 6th month of pregnancy.

TABLE 2.21

Month Prenatal Care Began
by Number of Prenatal Visits
Michigan Resident Stillbirth 1970

MONTH CARE BEGAN	NUMBER OF VISITS							
	TOTAL	NONE	UNDER 5	5-9	10-14	15-19	20 AND OVER	NOT STATED
No Care	291	277	3	2	2	1	-	6
1st Month	149	6	26	41	50	14	6	6
2nd Month	482	6	50	175	175	37	21	18
3rd Month	409	2	71	162	134	21	5	14
4th Month	216	5	63	79	51	9	5	4
5th Month	132	6	47	49	23	4	-	3
6th Month	66	4	28	22	5	3	1	3
7th Month	38	1	17	15	3	2	-	-
8th Month	30	4	15	10	1	-	-	-
9th Month	13	1	11	1	-	-	-	-
Unknown	234	17	17	12	7	4	-	177
TOTAL	2,060	329	348	568	451	95	38	231

SECTION III

MORTALITY AN OVERVIEW

Total Resident Deaths - 1970	- 76,321
Crude Death Rate	- 8.6
Total Infant Deaths - 1970	- 3,492
Infant Death Rate	- 20.3
Total Neonatal Deaths - 1970	- 2,683
Neonatal Death Rate	- 15.6
Total Perinatal Deaths - 1970	- 4,522
Perinatal Death Rate	- 26.0
Median Age at Death - 1970	- 69
Deaths from Heart Disease - 1970	- 29,204
Deaths from Cancer - 1970	- 13,551
Deaths from Stroke - 1970	- 7,691
Deaths from Accidents - 1970	- 4,428

HISTORICAL PERSPECTIVE

From 1900 to 1970 the number of deaths occurring to Michigan residents each year increased from 32,453 to 76,321. The 31,472 deaths recorded in 1902 was the lowest number of resident deaths in this century, while the greatest number was recorded in 1968 when total resident deaths numbered 76,855. Although the total number of deaths increased between 1900 to 1970, the crude death rate decreased. The crude death rate in 1900 was 13.4 while the rate in 1970 was 8.6. The lowest crude death rate observed since 1900 was 8.4. This rate was observed both in 1958 and 1959. 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 1970 heart, cancer and stroke death numbered 29,204, 13,551, and 7,691 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 1970 are 329.1, 152.7 and 86.7.

MORTALITY

In 1970, 76,321 deaths were recorded as having occurred to residents of Michigan. The crude death rate for 1970 was 8.6. There has been no significant change in the absolute number of deaths or the crude death rate over the past few years (Figure 3.1). This rather static pattern in the crude death rate is not unique to Michigan, as it is similar to a pattern that has emerged across the nation. A comparison of deaths and crude death rates for Michigan and the United States for the period 1960-1970 is presented in Table 3.1.

The static pattern in deaths is to be expected given the fact that the vast majority of deaths are due to chronic conditions or conditions that are a function of age. As the number of deaths from chronic diseases may be considered to some extent largely a function of age and sex, one can reasonably expect that the total number of deaths is not likely to change significantly without a concomitant change in the size or composition of the population as a whole or until such time as significant advances are made in reducing mortality to heart disease, cancer and stroke.

Of the 76,321 resident deaths that occurred in 1970, 43,704 occurred to males and 32,617 occurred to females. The median age at death for males was 67 compared to a significantly higher figure for females of 72. White deaths numbered 67,274 and accounted for 88 percent of all deaths. Negro deaths numbered 8,731 while 316 deaths occurred to members of all other races (Table 3.2).

FIG. 3.1
CRUDE DEATH RATE
MICHIGAN RESIDENTS 1900 - 1970

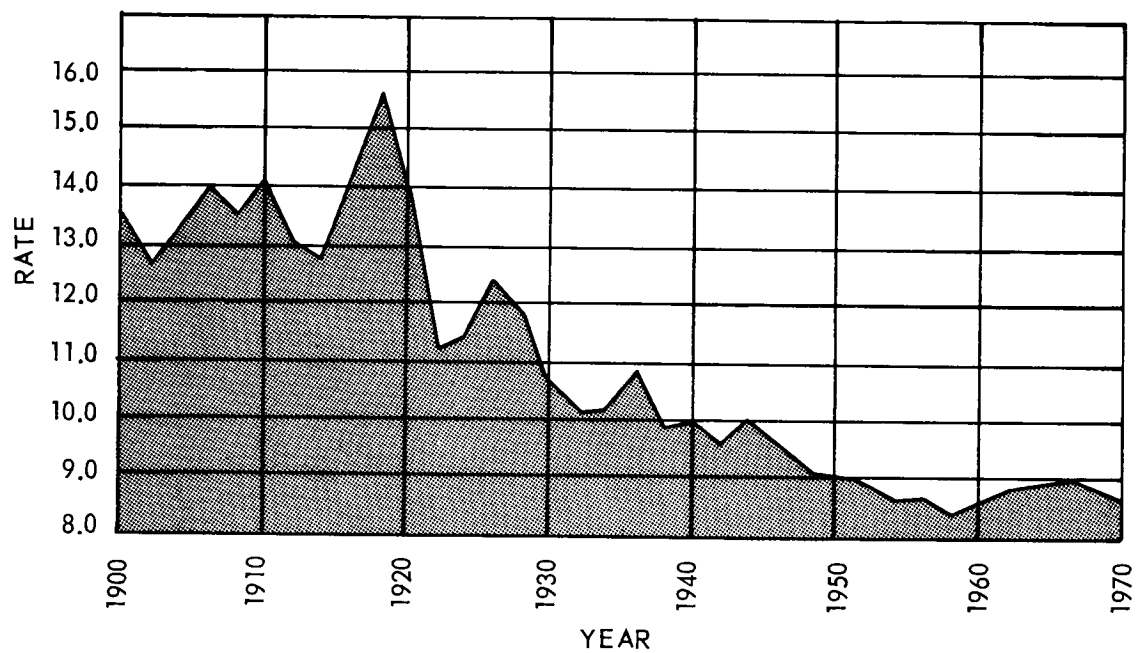


TABLE 3.1

Number of Deaths and Crude Death Rates
Michigan and the United States Residents 1960-1970

UNITED STATES		YEAR	MICHIGAN	
NO.	RATE		NO.	RATE
1,711,982	9.5	1960	67,912	8.7
1,701,522	9.3	1961	67,375	8.5
1,756,720	9.5	1962	70,049	8.8
1,813,549	9.6	1963	72,438	9.0
1,798,051	9.4	1964	72,129	8.9
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
1,916,000 Prov.	9.5 Prov.	1969	76,693	8.8
1,921,000 Prov.	9.4 Prov.	1970	76,321	8.6

TABLE 3.2

Deaths by Age, Race and Sex
Michigan Residents 1970

AGES	TOTAL			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year	3,492	1,970	1,522	2,662	1,517	1,145	811	442	369	19	11	8
1-4 Years	490	254	236	360	190	170	127	64	63	3	-	3
5-9 Years	354	217	137	292	183	109	57	32	25	5	2	3
10-14 Years	359	239	120	289	194	95	64	40	24	6	5	1
15-19 Years	911	636	275	745	512	233	160	120	40	6	4	2
20-24 Years	1,069	777	292	784	571	213	276	202	74	9	4	5
25-29 Years	761	535	226	534	380	154	221	152	69	6	3	3
30-34 Years	767	508	259	541	349	192	218	156	62	8	3	5
35-39 Years	1,141	695	446	801	475	326	330	212	118	10	8	2
40-44 Years	2,001	1,245	756	1,519	949	570	472	291	181	10	5	5
45-49 Years	3,015	1,876	1,139	2,411	1,493	918	573	359	214	31	24	7
50-54 Years	4,056	2,534	1,522	3,371	2,127	1,244	663	392	271	22	15	7
55-59 Years	5,540	3,575	1,965	4,761	3,110	1,651	754	446	308	25	19	6
60-64 Years	6,897	4,542	2,355	6,043	4,039	2,004	823	485	338	31	18	13
65-69 Years	8,211	5,191	3,020	7,220	4,605	2,615	952	561	391	39	25	14
70-74 Years	9,168	5,387	3,781	8,277	4,878	3,399	863	489	374	28	20	8
75-79 Years	10,143	5,546	4,597	9,496	5,181	4,315	619	342	277	28	23	5
80-84 Years	8,901	4,328	4,573	8,473	4,107	4,366	409	207	202	19	14	5
85-89 Years	5,815	2,449	3,366	5,602	2,363	3,239	208	84	124	5	2	3
90 and Over	3,221	1,195	2,026	3,085	1,144	1,941	130	47	83	6	4	2
Not Stated	9	5	4	8	4	4	1	1	-	-	-	-
Total	76,321	43,704	32,617	67,274	38,371	28,903	8,731	5,124	3,607	316	209	107
Median Age	69	67	72	70	68	74	57	56	59	59	60	57

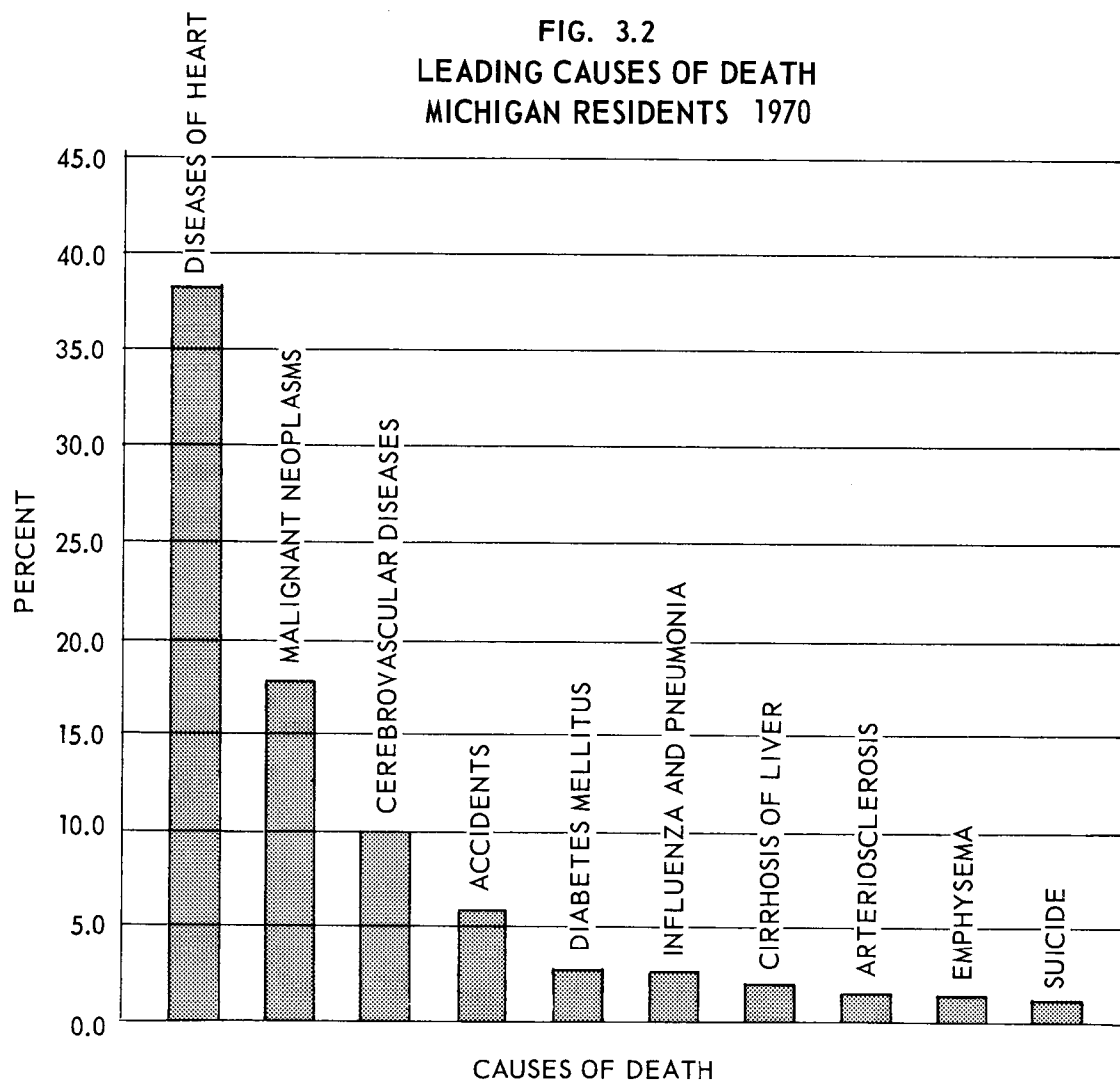
LEADING CAUSES OF DEATH

The principal causes of death in Michigan in 1970 remained much the same as they have in the recent past. The ten leading causes of death and cause-specific rates per 100,000 population are displayed in Table 3.3. Leading causes of death as a percent of all deaths are illustrated in Fig. 3.2. A detailed tabulation of deaths by specific condition for 1970 is included in Section 5. Also included in Section 5 is a tabulation by County of Residence of selected causes of death.

TABLE 3.3

Leading causes of Death and Cause-Specific Rates
Michigan and United States Residents 1970

RANK	CAUSE OF DEATH	NUMBER OF DEATHS		RATE	
		MICHIGAN	U.S.	MICHIGAN	U.S.
1	Diseases of Heart	29,204	736,060	329.1	360.3
2	Malignant Neoplasms	13,551	330,840	152.7	162.0
3	Cerebrovascular Diseases	7,691	207,800	86.7	101.7
4	Accidents	4,428	110,720	49.9	54.2
5	Diabetes Mellitus	2,180	37,820	24.6	18.5
6	Influenza and Pneumonia	2,101	62,320	23.7	30.5
7	Cirrhosis of Liver	1,558	32,260	17.6	15.8
8	Arteriosclerosis	1,174	32,400	13.2	15.9
9	Emphysema	1,130	22,630	12.7	11.1
10	Suicide	992	22,630	11.2	11.1
	Sub Total	64,009	1,595,480		
	All Other Causes	12,312	325,520		
	TOTAL	76,321	1,921,000	859.9	940.4



DISEASES OF THE HEART

In 1970, 29,204 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 three largest causes combined (cancer, stroke and accidents). By far the most prevalent condition in this group is an acute myocardial infarction (15,614 deaths in 1970) commonly referred to as a "coronary" (Table 3.4).

TABLE 3.4

Deaths Due to Diseases of the Heart by Detailed Causes
Michigan Residents 1970

ICDA LIST NO.	CAUSE OF DEATH	NUMBER OF DEATHS	PERCENT
390	Rheumatic fever without mention of heart involvement	1	.0034
391	Rheumatic fever with heart involvement	7	.0239
392	Chorea	1	.0034
393	Diseases of pericardium	3	.0102
394	Diseases of mitral valve	153	.5239
395	Diseases of aortic valve	134	.4588
396	Diseases of mitral and aortic valve	55	.1883
397	Diseases of other endocardial structures	27	.0924
398	Other heart disease specified as rheumatic	217	.7430
402	Hypertensive heart disease	427	1.4621
404	Hypertensive heart and renal disease	153	.5239
410	Acute myocardial infarction	15,614	53.4652
411	Other acute and subacute forms of ischemic heart disease	82	.2807
412	Chronic ischemic heart disease	11,083	37.9502
413	Angina pectoris	8	.0273
420	Acute pericarditis, non-rheumatic	2	.0068
421	Acute and subacute endocarditis	33	.1129
422	Acute myocarditis	16	.0547
423	Chronic disease of pericardium, non-rheumatic	24	.0821
424	Chronic disease of endocardium	58	.1986
425	Cardiomyopathy	89	.3047
426	Pulmonary heart disease	24	.0821
427	Symptomatic heart disease	757	2.5921
428	Other myocardial insufficiency	127	.4348
429	Ill-defined heart disease	109	.3732
	TOTAL	29,204	100.0000*

* Sum of conditions may not add to 100% due to rounding errors.

Of the 29,204 deaths due to diseases of the heart in 1970, 16,942 were males and 12,262 were females. The median age at death for males was 70 compared to a figure of 77 for females. The median age at death for all heart disease deaths was 73 (Table 3.5).

TABLE 3.5
Deaths Due to Diseases of the Heart by Age, by Race and Sex
Michigan Residents 1970

AGE GROUP	TOTAL			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year	10	6	4	6	4	2	4	2	2	-	-	-
1-4 Years	10	4	6	4	2	2	6	2	4	-	-	-
5-9 Years	2	-	2	2	-	2	-	-	-	-	-	-
10-14 Years	5	2	3	3	1	2	2	1	1	-	-	-
15-19 Years	12	7	5	11	6	5	1	1	-	-	-	-
20-24 Years	22	11	11	16	9	7	5	2	3	1	-	1
25-29 Years	24	20	4	15	12	3	9	8	1	-	-	-
30-34 Years	79	48	31	52	30	22	25	18	7	2	-	2
35-39 Years	185	135	50	135	104	31	49	30	19	1	1	-
40-44 Years	492	384	108	387	314	73	103	69	34	2	1	1
45-49 Years	924	716	208	764	614	150	147	91	56	13	11	2
50-54 Years	1,384	996	388	1,181	881	300	198	111	87	5	4	1
55-59 Years	2,100	1,555	545	1,849	1,403	446	237	141	96	14	11	3
60-64 Years	2,835	2,008	827	2,500	1,822	678	321	179	142	14	7	7
65-69 Years	3,534	2,315	1,219	3,158	2,094	1,064	354	205	149	22	16	6
70-74 Years	4,118	2,440	1,678	3,771	2,243	1,528	329	184	145	18	13	5
75-79 Years	4,610	2,468	2,142	4,334	2,319	2,015	268	142	126	8	7	1
80-84 Years	4,327	2,018	2,309	4,137	1,928	2,209	183	85	98	7	5	2
85-89 Years	2,848	1,199	1,649	2,742	1,152	1,590	103	45	58	3	2	1
90 and Over	1,681	609	1,072	1,612	586	1,026	66	21	45	3	2	1
Not Stated	2	1	1	1	-	1	1	1	-	-	-	-
TOTAL	29,204	16,942	12,262	26,680	15,524	11,156	2,411	1,338	1,073	113	80	33
Median Age at Death	73	70	77	74	71	78	66	65	67	66	66	64

CANCER

Of 76,321 Michigan resident deaths, 13,551 died from cancer in 1970. Although not the leading cause of death in Michigan and the United States, cancer affects persons of all ages and all of the human body's major systems (Table 3.6).

TABLE 3.6
Malignant Neoplasms by Site Affected
Michigan Residents - 1970

ICDA LIST NO.	CAUSE AND SITE	NUMBER OF DEATHS	PERCENT
140	Malignant Neoplasm of Lip	4	0.0
141	Malignant Neoplasm of Tongue	69	0.5
142	Malignant Neoplasm of Salivary Gland	21	0.2
143	Malignant Neoplasm of Gum	7	0.1
144	Malignant Neoplasm of Floor of Mouth	21	0.2
145	Malignant Neoplasm of Other and Unspecified Parts of the Mouth	46	0.3
146	Malignant Neoplasm of Oropharynx	33	0.2
147	Malignant Neoplasm of Nasopharynx	27	0.2
148	Malignant Neoplasm of Hypopharynx	17	0.1
149	Malignant Neoplasm of Pharynx, Unspecified	42	0.3
150	Malignant Neoplasm of Esophagus	266	2.0
151	Malignant Neoplasm of Stomach	674	5.0
152	Malignant Neoplasm of Small Intestine, Including Duodenum	30	0.2
153	Malignant Neoplasm of Large Intestine, Except Rectum	1,470	10.8
154	Malignant Neoplasm of Rectum and Rectosigmoid Junction	387	2.9
155	Malignant Neoplasm of Liver and Intrahepatic Bile Ducts, Specified as Primary	78	0.6
156	Malignant Neoplasm of Gall Bladder and Bile Ducts	216	1.6
157	Malignant Neoplasm of Pancreas	665	4.9
158	Malignant Neoplasm of Peritoneum and Retroperitoneal Tissue	26	0.2
159	Malignant Neoplasm of Unspecified Digestive Organs	22	0.2
160	Malignant Neoplasm of Nose, Nasal Cavities, Middle Ear and Accessory Sinuses	23	0.2
161	Malignant Neoplasm of Larynx	110	0.8
162	Malignant Neoplasm of Trachea, Bronchus and Lung	2,663	19.7
163	Malignant Neoplasm of Other and Unspecified Respiratory Organs	19	0.1
170	Malignant Neoplasm of Bone	61	0.5

ICDA LIST NO.	CAUSE AND SITE	NUMBER OF DEATHS	PERCENT
171	Malignant Neoplasm of Connective and Other Soft Tissue	84	0.6
172	Malignant Melanoma of Skin	86	0.6
173	Other Malignant Neoplasm of Skin	46	0.3
174	Malignant Neoplasm of Breast	1,209	8.9
180	Malignant Neoplasm of Cervix Uteri	228	1.7
181	Chorionepithelioma	-	0.0
182	Other Malignant Neoplasm of Uterus	240	1.8
183	Malignant Neoplasm of Ovary, Fallopian Tube and Broad Ligament	397	2.9
184	Malignant Neoplasm of Other and Unspecified Female Genital Organs	36	0.3
185	Malignant Neoplasm of Prostate	734	5.4
186	Malignant Neoplasm of Testis	38	0.3
187	Malignant Neoplasm of Other and Unspecified Male Genital Organs	7	0.1
188	Malignant Neoplasm of Bladder	380	2.8
189	Malignant Neoplasm of Other and Unspecified Urinary Organs	287	2.1
190	Malignant Neoplasm of Eye	15	0.1
191	Malignant Neoplasm of Brain	328	2.4
192	Malignant Neoplasm of Other Parts of Nervous System	36	0.3
193	Malignant Neoplasm of Thyroid Gland	46	0.3
194	Malignant Neoplasm of Other Endocrine Glands	14	0.1
195	Malignant Neoplasm of Ill-Defined Sites	116	0.9
196	Secondary and Unspecified Malignant Neoplasm of Lymph Nodes	7	0.1
197	Secondary Malignant Neoplasm of Respiratory and Digestive Systems	248	1.8
198	Other Secondary Malignant Neoplasm	69	0.5
199	Malignant Neoplasm without Specification of Site	454	3.4
200	Lymphosarcoma and Reticulum-Cell Sarcoma	283	2.1
201	Hodgkin's Disease	149	1.1
202	Other Neoplasms of Lymphoid Tissue	135	1.0
203	Multiple Myeloma	187	1.4
204	Lymphatic Leukemia	174	1.3
205	Myeloid Leukemia	246	1.8
206	Monocytic Leukemia	39	0.3
207	Other and Unspecified Leukemia	184	1.4
208	Polycythemia Vera	22	0.2
209	Myelofibrosis	30	0.2
	TOTAL	13,551	100.0

Of the 13,551 cancer deaths in 1970 occurring to Michigan residents 7,631 were males while 5,920 occurred to females. The median age at death among males was 66 compared to a figure of 65 among females. The median age at death for all cancer deaths was 66 (Table 3.7).

TABLE 3.7

Deaths Due to Cancer by Age, by Race and Sex
Michigan Residents 1970

AGES	TOTAL			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year	11	4	7	8	3	5	3	1	2	-	-	-
1-4 Years	44	28	16	39	26	13	5	2	3	-	-	-
5-9 Years	70	47	23	63	41	22	7	6	1	-	-	-
10-14 Years	49	29	20	41	26	15	7	2	5	1	1	-
15-19 Years	61	39	22	55	34	21	6	5	1	-	-	-
20-24 Years	64	40	24	53	31	22	11	9	2	-	-	-
25-29 Years	69	44	25	62	42	20	5	1	4	2	1	1
30-34 Years	102	59	43	91	51	40	10	7	3	1	1	-
35-39 Years	184	83	101	154	70	84	29	12	17	1	1	-
40-44 Years	417	186	231	357	160	197	59	26	33	1	-	1
45-49 Years	730	335	395	629	278	351	99	55	44	2	2	-
50-54 Years	1,090	552	538	938	470	468	151	81	70	1	1	-
55-59 Years	1,564	870	694	1,352	742	610	211	127	84	1	1	-
60-64 Years	1,757	1,053	704	1,558	921	637	193	127	66	6	5	1
65-69 Years	1,884	1,158	726	1,668	1,019	649	211	135	76	5	4	1
70-74 Years	1,826	1,104	722	1,659	989	670	165	114	51	2	1	1
75-79 Years	1,714	993	721	1,601	916	685	108	72	36	5	5	-
80-84 Years	1,196	670	526	1,130	626	504	65	43	22	1	1	-
85-89 Years	535	255	280	511	244	267	24	11	13	-	-	-
90 and Over	183	82	101	174	76	98	8	6	2	1	-	1
Not Stated	1	-	1	1	-	1	-	-	-	-	-	-
TOTAL	13,551	7,631	5,920	12,144	6,765	5,379	1,377	842	535	30	24	6
Median Age at Death	66	66	65									

CEREBROVASCULAR DISEASES

Deaths due to cerebrovascular diseases (stroke) accounted for 7,691 (10.1 percent) deaths among Michigan residents in 1970. Stroke is the third leading cause of death.

TABLE 3.8

Deaths Due to Cerebrovascular Diseases Michigan Residents 1970

ICDA LIST NO.	CAUSE OF DEATH	NUMBER OF DEATHS	PERCENT
430	Subarachnoid Hemorrhage	439	5.7
431	Cerebral Hemorrhage	1,438	18.7
432	Cerebral Occlusion	125	1.6
433	Cerebral Thrombosis	2,409	31.3
434	Cerebral Embolism	23	0.3
435	Transient Cerebral Ischemia	2	0.0
436	Acute but Ill-defined Cerebrovascular Disease	2,303	29.9
437	Generalized Ischemic Cerebrovascular Disease	905	11.8
438	Other and Ill-defined Cerebrovascular Disease	47	0.6
	TOTAL	7,691	100.0

Of the 7,691 deaths due to cerebrovascular diseases in 1970, 3,570 were males while 4,121 were females. The median age at death for males was 75 while the median age among females was significantly higher (78). The median age for all deaths from cerebrovascular diseases was 77 (Table 3.9).

TABLE 3.9

Deaths Due to Cerebrovascular Diseases by Age, by Race and Sex
Michigan Residents 1970

AGES	TOTAL			WHITE			BLACK			OTHER		
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
Under 1 Year	4	3	1	4	3	1	-	-	-	-	-	-
1-4 Years	-	-	-	-	-	-	-	-	-	-	-	-
5-9 Years	5	1	4	4	1	3	1	-	1	-	-	-
10-14 Years	9	5	4	9	5	4	-	-	-	-	-	-
15-19 Years	7	2	5	5	1	4	2	1	1	-	-	-
20-24 Years	11	4	7	7	2	5	3	2	1	1	-	1
25-29 Years	21	14	7	15	10	5	6	4	2	-	-	-
30-34 Years	23	9	14	16	6	10	6	3	3	1	-	1
35-39 Years	56	22	34	40	18	22	16	4	12	-	-	-
40-44 Years	116	59	57	69	34	35	46	24	22	1	1	-
45-49 Years	169	85	84	120	57	63	47	26	21	2	2	-
50-54 Years	232	108	124	184	83	101	46	23	23	2	2	-
55-59 Years	312	163	149	245	125	120	66	38	28	1	-	1
60-64 Years	525	299	226	445	260	185	78	38	40	2	1	1
65-69 Years	743	416	327	606	338	268	134	77	57	3	1	2
70-74 Years	1,037	508	529	913	458	455	123	50	73	1	-	1
75-79 Years	1,397	668	729	1,288	619	669	101	43	58	8	6	2
80-84 Years	1,459	644	815	1,383	613	770	74	30	44	2	1	1
85-89 Years	1,040	403	637	1,003	392	611	35	11	24	2	-	2
90 and Over	525	157	368	503	152	351	22	5	17	-	-	-
Not Stated	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	7,691	3,570	4,121	6,859	3,177	3,682	806	379	427	26	14	12
Median Age at Death	77	75	78									

ACCIDENTS

In 1970, accidents accounted for 4,428 resident deaths in Michigan. Although this total is somewhat reduced from the number of such deaths recorded in 1968 and 1969, accidental deaths still comprise a significant proportion (5.8 percent) of all deaths.

The type of accident that continues to claim the greatest number of lives is the motor vehicle traffic accident. This type of accident accounted for 51.4 percent of all accidental deaths in 1970 to Michigan residents. The second major cause (16.4 percent in 1970) of accidental deaths occurring to Michigan residents is accidental falls (Table 3.10).

The median age at death for all accidents was 39 years and the median age for motor vehicle traffic accident deaths was 33 years. Both of these are considerably lower than the median age for all deaths (69 years).

TABLE 3.10
Accidental Deaths by Type of Accident
Michigan Residents 1970

ICDA LIST NO.	TYPE OF ACCIDENTS	NUMBER OF DEATHS	PERCENT
E800-E807	Railway Accidents	19	0.4
E810-E819	Motor Vehicle Traffic Accidents	2,275	51.4
E820-E823	Motor Vehicle Non-traffic Accidents	34	0.8
E825-E827	Other Road Vehicle Accidents	4	0.1
E830-E838	Water Transport Accidents	67	1.5
E840-E845	Air and Space Transport Accidents	42	0.9
E850-E859	Accidental Poisonings by Drugs and Medicaments	86	1.9
E860-E869	Accidental Poisoning by Other Solid & Liquid Substances	26	0.6
E870-E877	Accidental Poisoning by Gases and Vapors	98	2.2
E880-E887	Accidental Falls	724	16.4
E890-E899	Accidents Caused by Fires and Flames	236	5.3
E900-E909	Accidents Due to Natural and Environmental Factors	29	0.7
E910-E929	Other Accidents	723	16.3
E930-E936	Surgical and Medical Complications and Misadventures	27	0.6
E940-E949	Late Effects of Accidental Injury	38	0.9
	TOTAL	4,428	100.0

INFANT DEATHS

Of the 76,321 deaths occurring to Michigan residents in 1970, 3,492 occurred to individuals less than one year of age. Significant reductions in infant mortality were recorded during the first half of this century both for Michigan and the United States (Table 3.11). This probably was due in large part to an ever-increasing number of births attended by physicians which occurred in more modern well-equipped hospitals.

TABLE 3.11

Infant Deaths and Infant Mortality Rates
Michigan and the United States 1960-1970

UNITED STATES		YEAR	MICHIGAN	
NO.	RATE		NO.	RATE
110,873	26.0	1960	4,702	24.1
107,956	25.3	1961	4,604	23.9
105,479	25.3	1962	4,367	23.9
103,390	25.2	1963	4,150	23.2
99,783	24.8	1964	4,043	23.1
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
74,100 Prov.	20.7	1969	3,356	20.2
73,700 Prov.	19.8	1970	3,492	20.3

As can be seen from Table 3.11 rather moderate declines have occurred in infant death rates for Michigan residents and for the United States as a whole during the period from 1960 to 1970.

There are three subclassifications of infant death:

- Deaths Under 1 Day - (1,367 in 1970)
- Deaths Under 7 Days - (2,462 in 1970)
- Deaths Under 28 Days - (2,683 in 1970)

Total Infant Deaths (Under 1 Year) - (3,492 in 1970)

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, we have hypothetically eliminated most accidental and environmental causes of death. In 1970, Michigan resident perinatal deaths numbered 4,522 and the perinatal death rate was 26.0

Another major type of infant death classification is by cause of death. As with fetal deaths there is some non-specific reporting. The number of deaths allocated to "Other Diseases of Early Infancy" was 1,172 (33.6 percent) in 1970. Congenital anomalies in 1970 numbered 537. Asphyxia of newborn numbered 439 and immaturity deaths numbered 435. Influenza and pneumonia deaths numbered 240 while accidental deaths numbered 99. As can be observed from Table 3.12 the vast majority of infant deaths are attributable to causes restricted to the fetus and newborn but there still remain other major causes of death particularly in three areas: (1) Infective and parasitic diseases; (2) respiratory diseases and (3) accidents.

TABLE 3.12
Infant Deaths by Cause
Michigan Residents 1970

ICDA LIST NO.	CAUSE	FREQUENCY
008, 009	Enteritis and Other Diarrheal Diseases	23
010-019	Tuberculosis	2
Residual 000-136	Other Infective and Parasitic Diseases	63
140-209	Malignant Neoplasms	11
210-239	Benign Neoplasms	2
250	Diabetes Mellitus	1
280-285	Anemias	2
320	Meningitis	24
390-398, 402, 404 410-429	Heart Disease	10
430-438	Cerebrovascular Disease	4
466	Acute Bronchitis and Bronchiocitis	10
470-474, 480-486	Influenza and Pneumonia	240
490, 491	Chronic and Unqualified Bronchitis	3
531-533	Peptic Ulcer	3
550-553, 560	Hernia and Intestinal Obstruction	21
571	Cirrhosis of Liver	2
580-584	Nephritis and Nephrosis	2
740-759	Congenital Anomalies	537
764-768 (.0-.8), 772	Birth Injuries	82
776-9	Asphyxia of Newborn	439
777	Immaturity Unqualified	435
Residual 770-778	Other Diseases of Early Infancy	1,172
E800-E949	Accidents	99
E960-E978	Homicide	7
E980-E999	All Other External Causes	6
	All Other Diseases	292
	TOTAL	3,492

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 and streptococcal sore throat, smallpox, typhoid fever, measles, poliomyelitis and others have been virtually eliminated not only in Michigan, but across the nation. Table 5.5 in Section V illustrates trends in deaths from the major communicable diseases.

In 1970, deaths from all infective and parasitic diseases numbered 610. As can be observed from Table 3.13 the four major causes of death in this group are tuberculosis (180 deaths), septicemia (128 deaths), diarrheal disease (105 deaths) and infectious hepatitis (42 deaths).

Of particular importance is the fact that infants accounted for 14.4 percent of all infective and parasitic disease deaths while accounting for only 4.6 percent of all deaths. The median age at death for these dying due to infective and parasitic diseases is 58 years.

TABLE 3.13

Deaths from Selected Infective and Parasitic Diseases
Michigan Residents 1970

ICDA LIST NO.	CAUSE	FREQUENCY
009	Diarrheal Disease	105
010-019	Tuberculosis	180
034	Streptococcal Sore Throat & Scarlet Fever	2
036	Meningococcal Infections	15
037	Tetanus	4
038	Septicemia	128
044	Late Effects of Acute Poliomyelitis	10
052	Chickenpox	6
054	Herpes Simplex	6
055	Measles	1
056	Rubella	1
065	Viral Encephalitis	15
070	Infectious Hepatitis	42
072	Mumps	2
075	Infectious Mononucleosis	3
084	Malaria	1
090	Congenital Syphilis	1
093	Cardiovascular Syphilis	8
094	Syphilis of Central Nervous System	6
097	Other and Unspecified Syphilis	2
098	Gonococcal Infections	2
	All Other	70
	TOTAL	610

SECTION IV

MARRIAGE AND DIVORCE AN OVERVIEW

Total Marriages - 1970	- 91,933
Total Divorces and Annulments - 1970	- 29,934
Marriage Rate - 1970	- 20.7
Divorce Rate - 1970	- 6.7
Median Age of the Bride - 1970	- 21
Median Age of the Groom - 1970	- 23
Median Duration of Marriages Ending in 1970	- 7 years

HISTORICAL PERSPECTIVE

The number of marriages and divorces occurring annually in Michigan has increased considerably since 1900. This is to be expected given a concurrent increase in population. The smallest number of marriages and the smallest number of divorces and annulments recorded this century in Michigan were recorded in 1900. The number of marriages that year was 23,295 while divorces and annulments numbered 2,435. Of marriages, 93,392 were recorded in Michigan in 1969 (the greatest number recorded this century). Of divorces and annulments, 29,934 were recorded in 1970. This also marked an all time high for Michigan.

Since 1900 there have been noticeable shifts in the marriage rate. The rate has varied from a low of 11.6 persons married per 1,000 population (1932) to a high of 27.7 (1920). The overall trend has been in the direction of an increasing rate over the last decade (Figure 4.1).

Changes in the divorce rate have not generally been as pronounced as those that have occurred with respect to the marriage rate. From 1960 to 1970 the rate of persons divorced per 1,000 population increased from 4.3 to 6.7. The divorce rate has varied from a low of 2.0 (1900 and 1901) to a high of 10.2 (1946).

FIG. 4.1

MARRIAGE AND DIVORCE RATES PER 1000 POPULATION
MICHIGAN OCCURRENCES 1900 - 1970

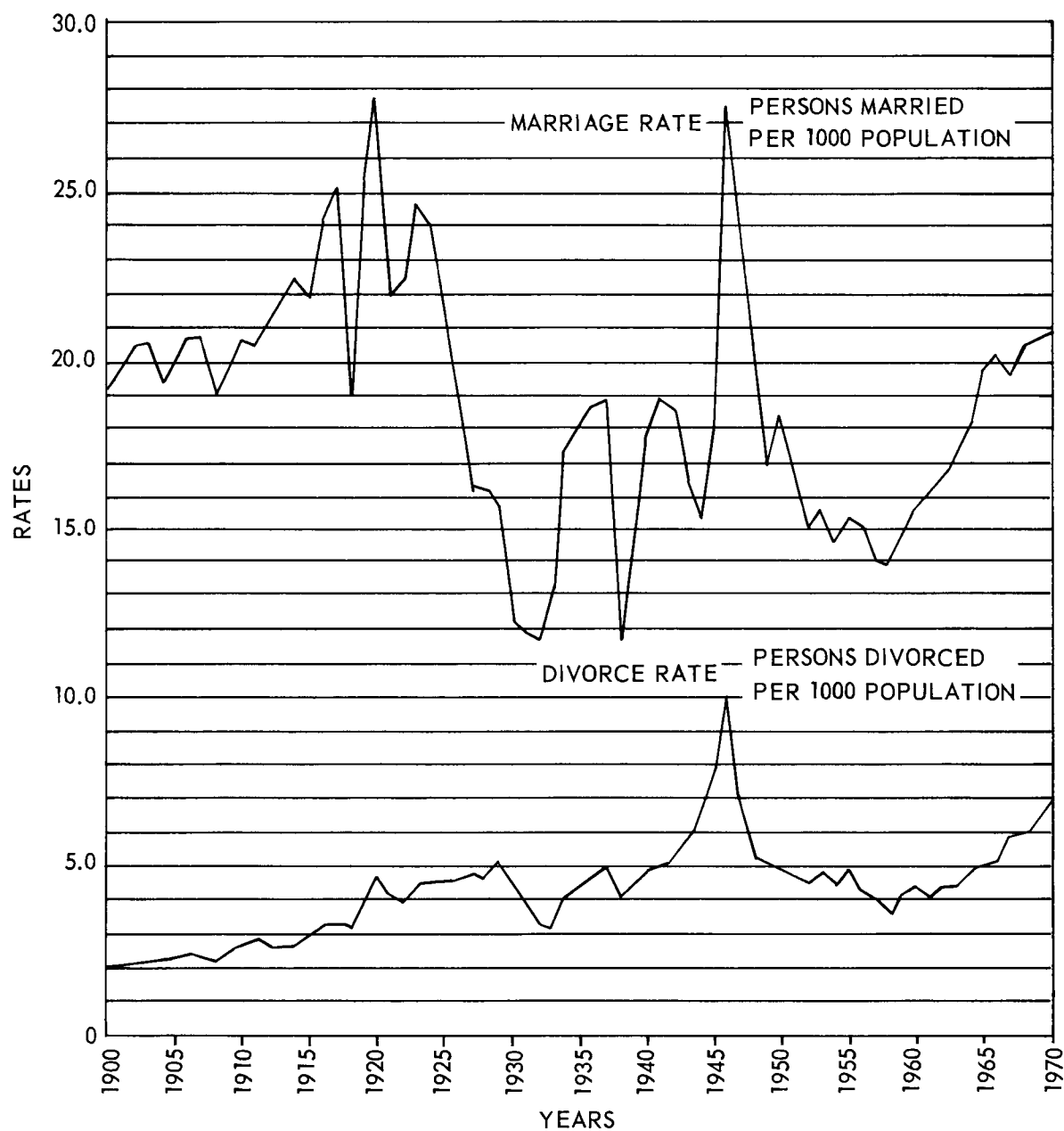


TABLE 4.1

Marriages, Divorces and Annulments
Michigan and United States Occurrences
Selected Years, 1920 - 1970

YEAR	MICHIGAN		MICHIGAN		UNITED STATES	
	MARRIAGES	DIVORCES AND ANNULMENTS	MARRIAGE RATE	DIVORCE AND ANNULMENT RATE	MARRIAGE RATE	DIVORCE AND ANNULMENT RATE
1920	50,805	8,679	27.7	4.7	23.9	3.2
1930	29,482	10,639	12.2	4.4	18.3	3.2
1940	46,342	12,054	17.6	4.6	24.2	4.0
1950	58,180	15,979	18.3	5.0	22.1	5.1
1960	61,090	16,656	15.6	4.3	17.0	4.4
1961	63,320	16,219	16.0	4.1	16.9	4.5
1962	65,002	17,500	16.4	4.4	17.0	4.4
1963	68,160	17,479	17.0	4.4	17.5	4.5
1964	73,911	19,400	18.2	4.8	18.0	4.7
1965	81,247	20,305	19.8	5.0	18.6	4.9
1966	83,903	21,727	20.2	5.2	19.0	5.1
1967	84,363	23,620	19.6	5.9	19.5	5.3
1968	90,984	25,400	20.5	5.9	20.7	5.8
1969	93,392	28,347	20.8	6.5	21.2 Prov	6.4 Prov
1970	91,933	29,934	20.7	6.7	21.4 Prov	7.0 Prov

RESIDENCE OF COUPLES MARRYING IN MICHIGAN

In general, most of the couples marrying in Michigan are residents of the state. This pattern has not changed markedly over the last decade (Table 4.2)

TABLE 4.2
Marriages by Residence Status of Bride and Groom
Michigan Occurrences 1960 and 1970

<u>Residence Status</u>	<u>1960</u>		<u>1970</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Both Bride and Groom Residents	55,027	90.1	82,617	89.9
Bride Resident, Groom Non-Resident	2,400	3.9	3,726	4.1
Groom Resident, Bride Non-Resident	695	1.1	1,046	1.1
Both Bride and Groom Non-Residents	2,968	4.9	4,525	4.9
Residence Status, Not Stated	---	0.0	19	0.0
Total	61,090	100.0	91,933	100.0

The data in Table 4.2 indicate that characteristics of marriages occurring in Michigan are broadly representative of marriage patterns for Michigan residents.

AGE AT MARRIAGE

Marriage rates based on populations containing married individuals or individuals too young to marry may be non-comparable due to population distribution differences from place to place and time period to time period.

TABLE 4.3
Age Specific Marriage Rates for Males and Females
Michigan Residents 1970

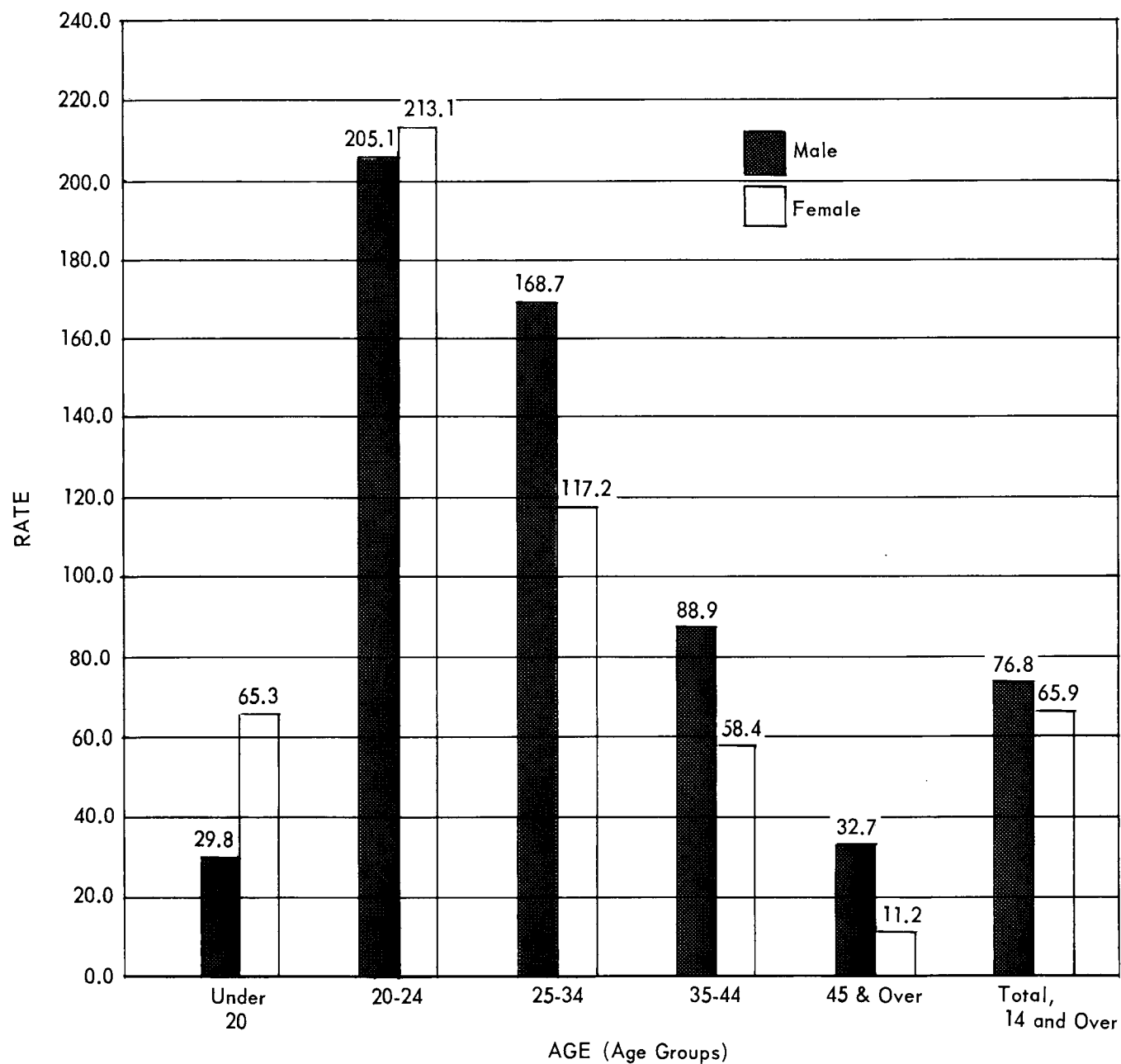
Age	Eligible Population		Number of Marriages		Rate per 1,000 Eligibles	
	Male	Female	Male**	Female**	Male	Female
Under 20*	519,486	486,333	15,478	31,774	29.8	65.3
20 - 24	184,746	154,776	37,899	32,983	205.1	213.1
25 - 34	103,632	97,206	17,486	11,397	168.7	117.2
35 - 44	63,987	79,811	5,689	4,663	88.9	58.4
45 and over	217,275	492,199	7,111	5,526	32.7	11.2
Total	1,089,486	1,310,325	83,663	86,343	76.8	65.9
Median Age	20	25	23	21		

* 14 and over

** Adjusted to exclude non-residents

Examination of data in Table 4.3 reveals that females tend to marry at a younger age on the average than do males. More than twice the number of eligible females under 20 marry each year than do their eligible male counterparts. For the age group 20-24, however, the propensity for marriage is nearly equal. For ages 25 and over eligible males marry more frequently than their female counterparts.

FIG. 4.2
AGE SPECIFIC MARRIAGE RATES
MICHIGAN OCCURRENCES 1970



ORDER OF MARRIAGE

The data indicate that there is a trend towards younger first marriages by males, older first marriages by females, and a younger age for remarriages among both males and females (Tables 4.4 and 4.5).

TABLE 4.4 *Groom*
Age at First Marriage and Remarriage: ~~Bride~~
Michigan Occurrences *1961 and 1970

Ages	1961			1970		
	Total	First Marriage	Remarriage	Total	First Marriage	Remarriage
Under 20	10,222	10,129	45	16,962	16,865	52
Percent	16.1	20.7	0.3	18.5	24.2	0.2
20 - 24	27,507	26,361	1,127	41,672	39,249	2,410
Percent	43.4	53.9	7.9	45.3	56.4	10.8
25 - 29	9,576	7,528	2,043	13,811	9,423	4,387
Percent	15.1	15.4	14.2	15.0	13.5	19.7
30 - 34	4,606	2,503	2,102	5,441	2,130	3,310
Percent	7.3	5.1	14.7	5.9	3.1	14.9
35 - 44	5,234	1,615	3,617	6,223	1,264	4,959
Percent	8.3	3.3	25.2	6.8	1.8	22.3
45 and Over	6,165	765	5,405	7,824	705	7,118
Percent	9.7	1.5	37.7	8.5	1.0	32.0
Not Stated	10	4	6	-	-	-
Percent	0.0	0.0	0.0	0	0	0
Total	63,320	48,896	14,345	91,933	69,636	22,236
Percent	100.0	100.0	100.0	100.0	100.0	100.0

* 1960 data not available

TABLE 4.5

Bride

Age at First Marriage and Remarriage: ~~Groom~~
Michigan Occurrences *1961 and 1970

Ages	1961			1970		
	Total	First Marriage	Remarriage	Total	First Marriage	Remarriage
Under 20	25,961	25,497	386	33,870	33,384	437
Percent	41.0	52.7	2.6	36.8	47.5	2.0
20 - 24	20,271	18,130	2,131	35,089	30,823	4,260
Percent	32.0	37.5	14.4	38.2	43.8	19.8
25 - 29	4,928	2,726	2,197	8,284	4,079	4,204
Percent	7.8	5.6	14.8	9.0	5.8	19.5
30 - 34	3,067	955	2,111	3,862	995	2,867
Percent	4.8	2.0	14.2	4.2	1.4	13.3
35 - 44	4,442	714	3,724	4,956	636	4,318
Percent	7.0	1.5	25.1	5.4	0.9	20.0
45 and over	4,634	377	4,255	5,867	396	5,469
Percent	7.3	0.8	28.7	6.4	0.6	25.4
Not Stated	17	5	12	5	4	1
Percent	0.0	0.0	0.1	0.0	0.0	0.0
Total	63,320	48,404	14,816	91,933	70,317	21,556
Percent	100.0	100.0	100.0	100.0	100.0	100.0

* 1960 data not available

DIVORCES AND ANNULMENTS

The number of divorces in both Michigan and the United States has increased substantially over the last 10 years (Table 4.6).

One of the major changes that has taken place with respect to divorces and annulments is that the duration of the marriage has on the average been declining. The median duration of all marriages terminating in divorce decreased from eight years in 1960 to seven years in 1970. The increase in the percentage of marriages ending in divorce and lasting less than 10 years was 3.6 (Table 4.6).

TABLE 4.6

Divorces and Annulments by Duration of Marriage Michigan Occurrences 1960 and 1970

DURATION IN YEARS	1960			1970		
	NO.	PERCENT	CUMULATIVE PERCENT	NO.	PERCENT	CUMULATIVE PERCENT
Under 1 Year	214	1.3	1.3	373	1.2	1.2
1-4	4,880	29.3	30.6	9,868	33.0	34.2
5-9	4,516	27.1	57.7	8,107	27.1	61.3
10-14	3,077	18.5	76.2	4,274	14.3	75.6
15-19	1,671	10.0	86.2	2,851	9.5	85.1
20-24	1,146	6.9	93.1	2,430	8.1	93.2
25-29	585	3.5	96.6	1,147	3.8	97.0
30-34	293	1.8	98.4	515	1.7	98.7
35-39	142	0.8	99.2	184	0.6	99.3
40-44	62	0.4	99.6	86	0.3	99.6
45-49	33	0.2	99.8	34	0.1	99.7
50 and Over	7	0.0	99.8	12	0.0	99.7
Not Stated	30	0.2	100.0	58	0.2	100.0
TOTAL	16,656	100.0		29,934	100.0	
Median Duration	8			7		

The number of children under 18 affected by divorce has more than doubled since 1960. While the percentage of divorces with no children present has actually decreased, the opposite is true for marital unions with children present (Table 4.7).

TABLE 4.7

Divorces and Annulments by Children Under 18 Present
Michigan Occurrences 1960 and 1970

NUMBER OF CHILDREN	DIVORCES AND ANNULMENTS				PERCENTS	
	1960	ESTIMATED TOTAL CHILDREN	1970	ESTIMATED TOTAL CHILDREN	1960	1970
Zero	7,521	0	11,459	0	45.2	38.3
One	3,638	3,638	6,941	6,941	21.8	23.2
Two	2,772	5,544	5,688	11,376	16.6	19.0
Three	1,570	4,710	2,968	8,904	9.4	9.9
Four	688	2,752	1,580	6,320	4.1	5.3
Five or More	461	2,305	1,298	6,490	2.8	4.3
Not Stated	<u>6</u>	<u> </u>	<u>-</u>	<u> </u>	<u>0.0</u>	<u>0.2</u>
Total	16,656	18,949+	29,934	40,031+	100.0	100.0
Pop. <18 Years		2,958,723		3,251,370		
Age Specific Rate		6.4		12.3		

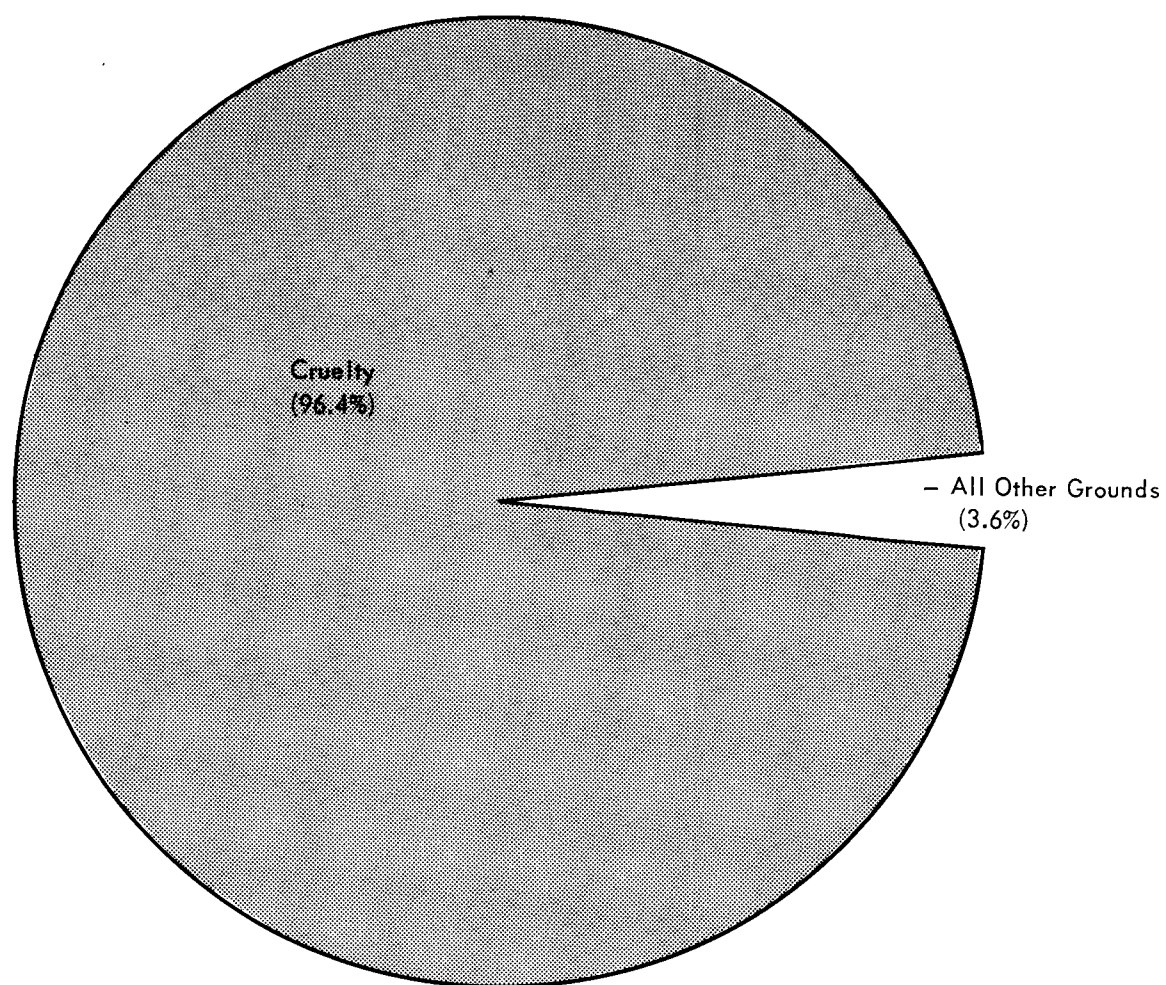
Legal ground for divorce in Michigan changed little from 1960 to 1970. Cruelty continued to be the ground for divorce in the vast majority of cases.

TABLE 4.8

**Divorces and Annulments by Legal Grounds for Decree
Michigan Occurrences 1960 and 1970**

<u>LEGAL GROUNDS</u>	<u>1960</u>		<u>1970</u>	
	<u>NO.</u>	<u>PERCENT</u>	<u>NO.</u>	<u>PERCENT</u>
Cruelty	15,272	91.7	28,850	96.4
Desertion	799	4.8	376	1.3
Nonsupport	291	1.7	209	0.7
Fraud	101	0.6	238	0.8
Bigamy	28	0.2	11	0.0
Conviction of Crime	28	0.2	16	0.1
Adultery	22	0.1	6	0.0
Drunkenness	18	0.1	6	0.0
Other	50	0.3	48	0.2
Not Stated	<u>47</u>	<u>0.3</u>	<u>174</u>	<u>0.6</u>
Total	16,656	100.0	29,934	100.0

FIG. 4.3
DIVORCES AND ANNULMENTS BY LEGAL GROUNDS
MICHIGAN OCCURRENCES - 1970



SECTION V

REFERENCE APPENDIX

TABLE 5.1 - POPULATION; LIVE BIRTHS - TOTAL AND ILLEGITIMATE; DEATHS - ALL AGES, INFANT, NEONATAL, PERINATAL, FETAL, MATERNAL, AND DEATHS DUE TO IMMATURITY; MARRIAGES; AND DIVORCES
MICHIGAN RESIDENTS, 1900 - 1970

(Deaths exclusive of fetal deaths. Perinatal deaths include deaths under 1 week and fetal deaths. Divorces include annulments.)

Year	Population*	LIVE BIRTHS		DEATHS							Marriages	Divorces
		Total	Illegitimate	All Ages	Under 1 Yr	Under 28 Days	Perinatal	Due to Immaturity	Fetal	Maternal		
1900	2,420,982	43,699	332	32,453	6,866			620	1,325	452	23,295	2,435
1901	2,459,901	43,221	365	32,834	6,319			524	1,501	531	24,079	2,448
1902	2,498,820	45,546	383	31,472	5,949			608	1,793	468	25,653	2,828
1903	2,537,739	46,020	490	33,176	6,488			542	1,814	427	26,029	2,945
1904	2,576,658	47,508	562	34,494	6,419			632	1,911	436	24,918	2,808
1905	2,615,578	46,976	444	34,679	7,054			751	2,044	416	26,307	2,825
1906	2,654,497	58,599	1,090	37,033	7,952			830	2,358	400	27,519	3,192
1907	2,693,416	59,029	1,041	36,701	6,906			855	2,358	391	27,940	3,107
1908	2,732,335	64,772	888	36,761	7,697			975	2,694	440	25,765	3,020
1909	2,771,254	64,323	1,068	36,313	7,443			1,152	2,540	405	27,353	3,516
1910	2,810,173	64,109	1,054	39,913	7,998			2,050	2,559	431	29,039	3,716
1911	2,895,997	65,756	1,083	38,007	7,131			2,223	2,716	451	29,859	4,125
1912	2,981,821	69,537	1,222	38,804	6,985			2,340	2,906	396	31,694	3,838
1913	3,067,645	73,058	1,227	40,827	7,659			2,480	2,953	528	33,529	3,978
1914	3,153,469	76,761	1,192	39,906	7,431			2,391	3,113	507	35,316	4,395
1915	3,239,293	81,100	1,363	40,441	6,943			2,207	3,357	488	35,527	4,757
1916	3,325,116	87,062	1,351	46,047	8,415			2,498	3,689	503	40,143	5,540
1917	3,410,940	89,419	1,101	47,236	7,916			2,369	3,550	586	42,791	5,627
1918	3,496,764	91,261	1,142	54,617	8,197			2,362	3,686	709	33,260	5,493
1919	3,582,588	84,062	1,002	45,636	7,560			2,183	3,361	578	45,579	7,469
1920	3,668,412	92,245	1,445	51,982	8,587			2,512	3,770	795	50,805	8,679
1921	3,785,799	96,035	1,346	44,186	7,584			2,481	3,669	605	41,508	7,676
1922	3,903,186	90,042	1,180	43,817	6,730			1,793	3,779	551	43,561	7,591
1923	4,020,573	92,956	1,210	49,333	7,477			1,911	3,657	583	49,569	8,745
1924	4,137,960	98,187	1,443	47,304	7,088	4,119	6,791	1,970	3,703	636	49,788	9,400
1925	4,255,347	98,983	1,258	49,417	7,498	4,022	6,667	1,987	3,670	629	46,276	9,650
1926	4,372,734	98,289	1,669	54,080	7,620	4,054	6,773	1,986	3,816	631	39,788	9,795
1927	4,490,121	99,940	1,872	50,600	6,766	3,915	6,794	1,911	3,834	667	36,276	10,617
1928	4,607,508	97,462	1,853	54,755	6,806	3,739	6,594	1,846	3,701	603	37,300	10,615
1929	4,724,895	98,695	1,632	56,117	6,605	3,777	6,613	1,853	3,710	617	36,816	12,094
1930	4,842,325	98,882	1,600	51,561	6,213	3,624	6,518	1,805	3,714	597	29,482	10,639
1931	4,883,703	90,547	1,633	49,068	5,187	3,084	5,643	1,473	3,220	539	28,856	9,507
1932	4,925,081	85,254	1,697	49,569	4,630	2,798	5,210	1,372	2,980	493	28,552	7,889
1933	4,966,459	80,482	2,041	48,507	4,094	2,591	4,906	1,364	2,776	447	33,132	7,671
1934	5,007,837	83,944	2,124	50,440	4,377	2,717	4,781	1,419	2,607	450	43,241	10,124
1935	5,049,216	87,403	2,194	51,051	4,170	2,550	4,832	1,389	2,717	438	45,313	10,844
1936	5,090,594	88,457	2,157	54,777	4,479	2,647	4,726	1,395	2,625	425	47,023	11,419
1937	5,131,972	91,566	2,234	53,468	4,374	2,700	4,919	1,415	2,707	326	47,954	12,472
1938	5,173,350	96,962	2,331	50,678	4,319	2,734	4,984	1,484	2,732	345	30,105	10,646
1939	5,214,728	94,432	2,217	52,017	3,952	2,594	4,706	1,396	2,572	280	37,725	11,589
1940	5,256,106	99,106	2,280	52,092	4,022	2,629	4,749	1,298	2,602	292	46,342	12,054
1941	5,437,546	107,498	2,370	52,671	4,166	2,687	4,991	1,353	2,769	298	50,989	13,317
1942	5,538,857	124,068	2,532	52,738	4,606	3,091	5,581	1,575	3,067	260	51,582	14,085
1943	5,377,329	125,441	2,569	56,774	4,804	2,979	5,563	1,488	3,213	237	44,385	15,259
1944	5,377,329	113,586	3,115	54,016	4,326	2,784	5,140	1,412	2,874	198	41,678	18,356
1945	5,435,092	111,557	3,485	53,641	4,008	2,670	4,906	1,339	2,703	166	48,329	21,133
1946	5,708,415	138,572	3,908	54,856	4,541	3,323	5,978	1,735	3,168	163	78,808	29,158
1947	6,069,000	160,275	4,311	56,807	5,055	3,677	6,583	1,953	3,422	173	71,319	21,386
1948	6,195,000	153,726	4,310	56,520	4,617	3,352	5,968	1,820	3,132	120	61,986	16,017
1949	6,352,000	156,469	3,953	57,107	4,520	3,232	5,746	1,795	2,994	105	53,109	16,274
1950	6,371,766	160,055	4,425	57,567	4,214	3,043	5,781	1,096	3,095	91	58,180	15,979
1951	6,545,000	172,451	4,367	59,181	4,505	3,296	6,088	1,232	3,158	94	53,411	15,446
1952	6,708,000	177,835	4,513	59,138	4,689	3,414	6,266	1,256	3,224	82	50,487	14,925
1953	6,852,000	182,968	4,770	62,087	4,728	3,389	6,188	1,114	3,180	79	53,308	16,537
1954	7,024,000	192,104	5,610	60,706	4,795	3,560	6,415	1,298	3,249	94	51,243	16,281
1955	7,236,000	196,294	5,883	63,087	4,873	3,707	6,381	1,272	3,029	61	55,698	17,676
1956	7,516,000	206,068	6,494	64,352	5,047	3,796	6,655	1,244	3,245	84	57,068	16,228
1957	7,803,000	208,488	6,789	66,435	5,093	3,884	6,668	1,322	3,154	79	55,121	15,442
1958	7,866,000	202,690	6,816	65,899	4,980	3,789	6,516	1,208	3,101	69	55,159	14,040
1959	7,960,000	198,301	6,729	66,812	4,846	3,674	6,250	1,201	2,928	72	58,826	16,168
1960	7,823,194	195,056	7,200	67,912	4,702	3,580	6,247	1,148	3,008	75	61,090	16,656
1961	7,903,000	192,825	8,017	67,375	4,604	3,475	5,875	1,003	2,735	78	63,320	16,219
1962	7,939,000	182,790	7,998	70,049	4,367	3,251	5,669	907	2,703	56	65,002	17,500
1963	8,030,000	178,871	8,769	72,438	4,150	3,109	5,407	816	2,540	71	68,160	17,479
1964	8,100,000	175,103	9,724	72,129	4,043	3,071	5,293	807	2,466	62	73,911	19,400
1965	8,199,283	166,464	10,888	73,665	3,936	2,909	5,139	768	2,475	54	81,247	20,305
1966	8,314,070	165,794	12,299	74,596	3,751	2,830	4,909	819	2,295	54	83,903	21,727
1967	8,615,000	162,756	13,403	75,360	3,595	2,714	4,693	718	2,195	52	84,363	23,620
1968	8,675,000	159,058	14,451	76,855	3,438	2,617	4,476	487	2,064	44	90,984	25,400
1969	8,734,000	165,760	16,329	76,693	3,356	2,550	4,488	459	2,175	27	93,392	28,397
1970	8,875,083	171,667	18,712	76,321	3,492	2,683	4,522	436	2,060	29	91,933	29,934

*1900 - 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 counts.

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

TABLE 5.2 - LIVE BIRTH RATES - TOTAL AND ILLEGITIMATE; DEATH RATES - ALL AGES, INFANT, NEONATAL, PERINATAL, FETAL, MATERNAL AND DEATH RATES DUE TO IMMATURITY; MARRIAGE AND DIVORCE RATES
MICHIGAN RESIDENTS, 1900 - 1970

(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.)

R A T E											
Year	LIVE BIRTHS		D E A T H S							P E R S O N S	
	Total	Illegit- imate	All Ages	Under 1 Yr	Under 28 Days	Peri- natal	Due to 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	15.6	26.0	2.5	12.0	1.7	20.7	6.7

Note: For the years 1900 - 1910 and 1912, illegitimate live births also include illegitimate fetal deaths. For years prior to 1950 deaths under 1 month of age are included in deaths under 28 days. For 1910 through 1921 deaths due to immaturity also include deaths from congenital debility.

TABLE 5.3 - REPORTED CASES OF CERTAIN COMMUNICABLE DISEASES
MICHIGAN OCCURRENCES, 1900 - 1970

Year	Diphtheria	Scarlet fever & Strep. throat	Smallpox	Typhoid fever	Whooping cough	Measles	Infectious hepatitis & serum	Tuberculosis (all forms)	Meningococcal infections	Poliomyelitis	Syphilis	Gonorrhea	Chancroid
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	49	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	35	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	557	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	118

Note: Meningococcal infections - Prior to 1952 data were for meningococcic meningitis.

Michigan Center for Health Statistics
Michigan Department of Public Health

TABLE 5.4 - CASE RATES OF CERTAIN REPORTED COMMUNICABLE DISEASES
MICHIGAN OCCURRENCES, 1900 - 1970

(Rates per 100,000 Population)

Year	Diphtheria	Scarlet fever & Strep. throat	Smallpox	Typhoid fever	Whooping cough	Measles	Infectious hepatitis & serum	Tuberculosis (all forms)	Meningococcal infections	Polymyellitis	Syphilis	Gonorrhea	Chancroid
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	3.7			
1911	129.9	178.8	31.0	91.8	65.5	332.8		181.4	16.5	2.3			
1912	110.5	152.0	37.8	95.5	42.1	95.0		65.7	3.0	2.6			
1913	179.5	135.0	65.0	73.4	30.3	299.4		62.6	5.4	1.8			
1914	163.3	119.5	48.4	68.7	57.8	360.1		81.4	6.5	1.6			
1915	135.4	105.0	33.8	60.4	69.7	137.0		112.6	3.3	2.9			
1916	169.2	208.5	47.5	75.6	55.2	365.2		212.8	4.9	18.0			
1917	249.2	419.9	107.7	50.5	94.1	424.3		142.4	2.2	2.7			
1918	175.2	170.0	149.9	38.3	73.3	192.4		104.5	2.7	3.5			
1919	220.4	175.0	66.5	35.0	51.1	248.0		118.1	2.1	4.3	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.2	11.8	381.4	30.5	37.6	1.0	0.0	64.4	148.5	1.3
1965	0	178.3	0	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	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	0.1	12.3	12.2	22.2	34.2	0.9	0.0	64.8	198.4	0.9
1968	0	116.4	0	0.0	4.9	4.1	27.2	30.2	1.1	0.0	61.7	209.3	1.2
1969	0	111.8	0	0.1	2.2	4.6	38.5	24.4	1.3	0.0	43.6	212.2	1.2
1970	0	133.7	0	0.2	2.2	20.7	51.8	22.4	0.8	0.0	44.2	229.4	1.3

Note: Meningococcal infections - Prior to 1952 data were for meningococcal meningitis.

Michigan Center for Health Statistics
Michigan Department of Public Health

TABLE 5.5 - NUMBER OF DEATHS AND DEATH RATES FOR CERTAIN COMMUNICABLE DISEASES
MICHIGAN RESIDENTS, 1900 - 1970

(Rates per 100,000 Population)

Year	Diphtheria		Scarlet Fever and Strep. Sore Throat		Smallpox		Typhoid Fever		Whooping Cough		Measles		Tuberculosis of the Respiratory System		Tuberculosis (all forms)		Poliomyelitis		Syphilis*		Gonorrhea	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1900	529	21.9	272	11.2	9	0.4	869	35.9	208	8.6	342	14.1	2,018	83.4	2,500	103.3						
1901	502	20.4	312	12.7	27	1.1	645	26.2	163	6.6	79	3.2	2,152	87.5	2,548	103.6			88	3.6		
1902	504	20.2	277	11.1	42	1.7	608	24.3	289	11.6	238	9.5	2,088	83.6	2,462	98.5			114	4.6		
1903	686	27.0	200	7.9	29	1.1	606	23.9	383	15.1	176	6.9	2,155	84.9	2,562	101.0			130	5.2		
1904	515	20.0	210	8.1	26	1.0	641	24.9	148	5.7	194	7.5	2,306	89.5	2,761	107.2			101	4.0		
1905	478	18.3	123	4.7	74	2.8	636	24.3	131	5.0	123	4.7	2,288	87.5	2,732	104.4			89	3.5		
1906	472	17.8	227	8.6	3	0.1	721	27.2	469	17.7	251	9.5	2,303	86.8	2,737	103.1			89	3.4		
1907	421	15.6	159	5.9	8	0.3	594	22.1	223	8.3	256	9.5	2,338	86.8	2,728	101.3			94	3.6		
1908	343	12.6	194	7.1	11	0.4	687	25.1	305	11.2	121	4.4	2,249	82.3	2,706	99.0			118	4.5		
1909	395	14.3	275	9.9	4	0.1	653	23.6	217	7.8	270	9.7	2,237	80.7	2,629	94.9			127	4.8		
1910	495	17.6	297	10.6	121	4.3	654	23.3	318	11.3	251	8.9	2,273	80.9	2,756	98.1	52	1.9	65	2.3		
1911	473	16.3	208	7.2	7	0.2	551	19.0	254	8.8	200	6.9	2,284	78.9	2,766	95.5	55	1.9	104	3.6		
1912	465	15.6	186	6.2	3	0.1	534	17.9	252	8.5	118	4.0	2,289	76.8	2,744	92.0	48	1.7	90	3.1		
1913	676	22.0	283	9.2	5	0.2	538	17.5	292	9.5	258	8.4	2,243	73.1	2,703	88.1	43	1.5	136	4.6		
1914	507	16.1	177	5.6	2	0.1	400	12.7	304	9.6	180	5.7	2,325	73.7	2,799	88.8	41	1.4	160	5.3		
1915	354	10.9	107	3.3	5	0.2	353	10.9	236	7.3	101	3.1	2,527	78.0	2,986	92.2	36	1.2	163	5.3		
1916	507	15.2	177	5.3	2	0.1	424	12.8	228	6.9	363	10.9	2,573	77.4	3,070	92.3	141	4.6	206	6.7		
1917	851	24.9	340	10.0	9	0.3	386	11.3	360	10.6	259	7.6	2,779	81.5	3,310	97.0	44	1.4	224	7.1		
1918	686	19.6	181	5.2	18	0.5	337	9.6	496	14.2	270	7.7	3,059	87.5	3,612	103.3	58	1.8	290	9.1		
1919	764	21.3	179	5.0	10	0.3	272	7.6	172	4.8	183	5.1	2,620	73.1	3,127	87.3	80	2.2	299	8.2		
1920	888	24.2	305	8.3	14	0.4	297	8.1	511	13.9	436	11.9	2,645	72.1	3,149	85.8	30	0.8	314	8.4		
1921	954	25.2	334	8.8	12	0.3	285	7.5	316	8.3	58	1.5	2,285	60.4	2,736	72.3	100	2.6	226	5.9	14	0.4
1922	620	15.9	217	5.6	20	0.5	192	4.9	232	5.9	232	5.9	2,232	57.2	2,654	68.0	21	0.5	186	4.7	6	0.2
1923	675	16.8	304	7.6	13	0.3	202	5.0	323	8.0	258	6.4	2,410	59.9	2,837	70.6	18	0.5	262	6.8	5	0.1
1924	470	11.4	265	6.4	226	5.5	149	3.6	169	4.1	221	5.3	2,474	59.8	2,952	71.3	116	3.0	271	7.0	13	0.3
1925	358	8.4	208	4.9	22	0.5	157	3.7	260	6.1	69	1.6	2,410	56.6	2,830	66.5	31	0.7	282	6.6	27	0.6
1926	677	15.5	235	5.4	4	0.1	119	2.7	355	8.1	572	13.2	2,601	59.5	3,041	69.5	34	0.8	327	7.5	12	0.3
1927	516	11.5	168	3.7	-	0	94	2.1	201	4.5	67	1.5	2,514	56.0	2,952	65.7	69	1.5	305	6.8	16	0.4
1928	384	8.3	178	3.9	2	0.0	83	1.8	219	4.8	303	6.6	2,647	57.4	3,108	67.5	27	0.6	384	8.4	19	0.4
1929	498	10.5	145	3.1	9	0.2	81	1.7	255	5.4	146	3.1	2,685	56.8	3,140	66.5	50	1.1	397	8.4	19	0.4
1930	299	6.2	130	2.7	9	0.2	87	1.8	176	3.6	231	4.8	2,443	50.5	2,912	60.1	39	0.8	395	8.2	12	0.2
1931	172	3.5	122	2.5	4	0.1	73	1.5	190	3.9	28	0.6	2,263	46.3	2,660	54.5	108	2.2	361	7.4	3	0.1
1932	106	2.2	112	2.3	1	0.0	56	1.1	199	4.0	183	3.7	2,101	42.7	2,463	50.0	23	0.5	377	7.7	2	0.0
1933	112	2.3	157	3.2	-	0	50	1.0	153	3.1	111	2.2	1,996	40.2	2,348	47.3	5	0.1	327	6.6	7	0.1
1934	38	0.8	171	3.4	-	0	65	1.3	141	2.8	36	0.7	1,909	38.1	2,199	43.9	25	0.5	402	8.0	10	0.2
1935	58	1.1	98	1.9	-	0	34	0.7	132	2.6	184	3.6	1,741	34.5	2,044	40.5	32	0.6	393	7.8	3	0.1
1936	52	1.0	114	2.2	-	0	37	0.7	107	2.1	12	0.2	1,816	35.7	2,100	41.3	21	0.4	394	7.7	6	0.1
1937	72	1.4	148	2.9	1	0.0	29	0.6	132	2.6	11	0.2	1,860	36.2	2,119	41.3	51	1.0	401	7.8	8	0.2
1938	44	0.9	87	1.7	-	0	23	0.4	116	2.2	100	1.9	1,633	31.6	1,866	36.1	10	0.2	401	7.8	8	0.2
1939	25	0.5	69	1.3	-	0	25	0.5	76	1.5	29	0.6	1,651	31.7	1,881	36.1	40	0.8	389	7.5	4	0.1
1940	20	0.4	41	0.8	1	0.0	11	0.2	59	1.1	19	0.4	1,547	29.4	1,752	33.3	72	1.4	591	11.2	3	0.0
1941	18	0.3	32	0.6	1	0.0	14	0.3	91	1.7	65	1.2	1,532	28.2	1,723	31.7	18	0.3	537	9.9	1	0.0
1942	24	0.4	23	0.4	-	0	5	0.1	72	1.3	8	0.1	1,630	29.4	1,827	33.0	10	0.2	559	10.1	7	0.1
1943	21	0.4	11	0.2	-	0	9	0.2	101	1.9	89	1.7	1,588	29.5	1,802	33.5	27	0.5	579	10.8	3	0.0
1944	32	0.6	7	0.1	1	0.0	7	0.1	33	0.6	49	0.9	1,544	28.7	1,748	32.5	45	0.8	543	10.1	2	0.0
1945	46	0.8	9	0.2	-	0	3	0.1	36	0.7	10	0.2	1,591	29.3	1,758	32.3	20	0.4	527	9.7	2	0.0
1946	27	0.5	3	0.1	-	0	6	0.1	44	0.8	47	0.8	1,645	28.8	1,843	32.3	89	1.6	547	9.6	-	0
1947	23	0.4	6	0.1	-	0	5	0.1	63	1.0	5	0.1	1,483	24.4	1,643	27.1	29	0.5	502	8.3	3	0.0
1948	8	0.1	1	0.0	-	0	4	0.1	9	0.1	43	0.7	1,395	22.5	1,561	25.2	54	0.9	512	8.3	-	0
1949	11	0.2	4	0.1	-	0	1	0.0	22	0.3	33	0.5	1,254	19.7	1,400	22.0	216	3.4	455	7.2	-	0
1950	2	0.0	1	0.0	-	0	5	0.1	28	0.4	28	0.4	1,134	17.8	1,270	19.9	128	2.0	325	5.1	1	0.0
1951	6	0.1	-	0	-	0	1	0.0	21	0.3	11	0.2	1,049	16.0	1,154	17.6	67	1.0	299	4.6	1	0.0
1952	2	0.0	-	0	-	0	-	0	8	0.1	17	0.3	689	10.3	775	11.6	213	3.2	174	2.6	2	0.0
1953	2	0.0	1	0.0	-	0	-	0	11	0.2	16	0.2	536	7.8	607	8.9	108	1.6	182	2.7	1	0.0
1954	3																					

TABLE 5.6 - NUMBER OF DEATHS AND DEATH RATES BY SPECIFIED CAUSES
MICHIGAN RESIDENTS, 1900 - 1970

(Rates per 100,000 Population)

Year	Heart Disease		Cancer (all forms)		Vascular Lesions Affecting Central Nervous System ¹		Accidents (all forms) ²		Motor Vehicle Accidents		Diabetes		Pneumonia ³		Immaturity		General Arterio-sclerosis	
	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	3,373	89.1	3,931	103.8	2,476	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	997	19.6
1937	13,233	257.8	5,732	111.7	4,378	85.3	4,580	89.2	2,187	42.6	1,255	24.5	4,098	79.8	1,415	27.6	1,168	22.8
1938	13,887	268.4	6,059	117.1	4,543	87.8	3,608	69.7	1,490	28.8	1,283	24.8	2,869	55.5	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	7,6													

TABLE 5.7
POPULATION CHANGES BY COUNTY
MICHIGAN RESIDENTS, 1960, 1970

AREA	CENSUS YEAR		Percent Change	Natural Increase	Net Migration
	1960	1970			
STATE	7,823,194	8,875,083	13.4	1,009,456	42,433
Alcona	6,352	7,113	12.0	328	433
Alger	9,250	8,568	-7.4	431	-1,113
Allegan	57,729	66,575	15.3	6,883	1,963
Alpena	28,556	30,708	7.5	3,836	-1,684
Antrim	10,373	12,612	21.6	524	1,715
Arenac	9,860	11,149	13.1	636	653
Baraga	7,151	7,789	8.9	524	114
Barry	31,738	38,166	20.3	3,442	2,986
Bay	107,042	117,339	9.6	14,719	-4,422
Benzie	7,834	8,593	9.7	422	337
Berrien	149,865	163,875	9.3	20,134	-6,124
Branch	34,903	37,906	8.6	2,671	332
Calhoun	138,858	141,963	2.2	16,042	-12,937
Cass	36,932	43,312	17.3	3,009	3,371
Charlevoix	13,421	16,541	23.2	1,171	1,949
Cheboygan	14,550	16,573	13.9	1,403	620
Chippewa	32,655	32,412	-0.7	6,154	-6,397
Clare	11,647	16,695	43.3	1,054	3,994
Clinton	37,969	48,492	27.7	6,421	4,102
Crawford	4,971	6,482	30.4	429	1,082
Delta	34,298	35,924	4.7	2,926	-1,300
Dickinson	23,917	23,753	-0.7	1,047	-1,211
Easton	49,684	68,892	38.7	6,767	12,441
Emmet	15,904	18,331	15.3	1,463	964
Genesee	374,313	444,341	18.7	67,262	2,766
Gladwin	10,769	13,471	25.1	789	1,913
Gogebic	24,370	20,676	-15.2	-132	-3,562
Grand Traverse	33,490	39,175	17.0	3,346	2,339
Gratiot	37,012	39,246	6.0	4,895	-2,661
Hillsdale	34,742	37,171	7.0	3,123	-694
Houghton	35,654	34,652	-2.8	922	-1,924
Huron	34,006	34,083	0.2	5,026	-2,949
Ingham	211,296	261,039	23.5	36,470	13,273
Ionia	43,132	45,848	6.3	4,590	-1,874
Iosco	16,505	24,905	50.9	4,476	3,924
Iron	17,184	13,813	-19.6	-156	-3,215
Isabella	35,348	44,594	26.2	5,092	4,154
Jackson	131,994	143,274	8.5	14,900	-3,620
Kalamazoo	169,712	201,550	18.8	22,928	8,910
Kalkaska	4,382	5,272	20.3	219	671
Kent	363,187	411,944	13.2	50,112	-2,255
Keweenaw	2,417	2,264	-6.3	-76	-77
Lake	5,338	5,661	6.1	-130	453
Lapeer	41,926	52,317	24.8	5,667	4,724
Leelanau	9,321	10,872	16.6	617	934
Lenawee	77,789	81,609	4.9	8,113	-4,293
Livingston	38,233	58,967	54.2	5,243	15,491
Luce	7,827	6,789	-13.3	267	-1,305
Mackinac	10,853	9,660	-11.0	1,109	-2,302
Macomb	405,804	625,309	54.1	95,159	124,346
Manistee	19,042	20,094	5.5	1,303	-251
Marquette	56,154	64,686	15.2	7,994	538
Mason	21,929	22,612	3.1	1,243	-560
Mecosta	21,051	27,992	33.0	2,425	4,516
Menominee	24,685	24,587	-0.4	1,415	-1,513
Midland	51,450	63,769	23.9	9,760	2,559
Missaukee	6,784	7,126	5.0	344	-2
Monroe	101,120	118,479	17.2	14,676	2,683
Montcalm	35,795	39,660	10.8	3,516	349
Montmorency	4,424	5,247	18.6	96	727
Muskegon	149,943	157,426	5.0	20,868	-13,385
Newaygo	24,160	27,992	15.9	2,336	1,496
Oakland	690,259	907,871	31.5	110,126	107,486
Oceana	16,547	17,984	8.7	1,394	43
Ogemaw	9,680	11,903	23.0	411	1,812
Ontonagon	10,584	10,548	-0.3	661	-697
Osceola	13,595	14,838	9.1	1,050	193
Oscoda	3,447	4,726	37.1	156	1,123
Otsego	7,545	10,422	38.1	1,079	1,798
Ottawa	98,719	128,181	29.8	15,843	13,619
Presque Isle	13,117	12,836	-2.1	1,227	-1,508
Roscommon	7,200	9,892	37.4	77	2,615
Saginaw	190,752	219,743	15.2	30,568	-1,577
St. Clair	107,201	120,175	12.1	11,446	1,528
St. Joseph	42,332	47,392	12.0	4,162	898
Sanilac	32,314	34,889	8.0	2,596	-21
Schoucraft	8,953	8,226	-8.1	570	-1,297
Shiawassee	53,446	63,075	18.0	7,684	1,945
Tuscola	43,305	48,603	12.2	4,845	453
Van Buren	48,395	56,173	16.1	4,445	3,333
Washtenaw	172,440	234,103	35.8	30,130	31,533
Wayne	2,666,297	2,666,751	-	273,261	-272,807
Wexford	18,466	19,717	6.8	1,482	-231

TABLE 5.8

Population by Age, by Race and Sex
Michigan Residents 1970

AGE GROUP	TOTAL						WHITE						NONWHITE														
	TOTAL			FEMALE			TOTAL			MALE			TOTAL			FEMALE			MALE			TOTAL			FEMALE		
	NO.	%		NO.	%		NO.	%		NO.	%		NO.	%		NO.	%		NO.	%		NO.	%		NO.	%	
Under 5 Years	804,463	9.1		410,096	9.4		394,367	8.7		687,775	8.8		351,509	9.1		336,266	8.4		116,688	11.2		58,587	11.6		58,101	10.8	
5-9 Years	923,818	10.4		471,266	10.8		452,552	10.0		805,123	10.3		411,865	10.7		393,258	9.9		118,695	11.4		59,401	11.8		59,294	11.0	
10-14 Years	979,265	11.0		498,844	11.5		480,421	10.6		854,074	10.9		435,909	11.3		418,165	10.5		125,191	12.0		62,935	12.5		62,256	11.6	
15-19 Years	872,624	9.8		436,420	10.0		436,204	9.6		763,352	9.7		382,791	10.0		380,561	9.5		109,272	10.5		53,629	10.6		55,643	10.4	
20-24 Years	702,742	7.9		328,837	7.6		373,905	8.3		612,402	7.8		287,502	7.5		324,900	8.1		90,340	8.7		41,335	8.2		49,005	9.1	
25-29 Years	593,598	6.7		293,503	6.7		300,095	6.6		522,098	6.7		259,518	6.8		262,580	6.6		71,500	6.9		33,985	6.7		37,515	7.0	
30-34 Years	488,765	5.5		239,490	5.5		249,275	5.5		431,707	5.5		213,457	5.6		218,250	5.5		57,058	5.5		26,003	5.2		31,025	5.8	
35-39 Years	474,072	5.3		230,493	5.3		243,579	5.4		417,004	5.3		204,458	5.3		212,546	5.3		57,068	5.5		26,035	5.2		31,033	5.8	
40-44 Years	528,250	6.0		259,354	6.0		268,896	5.9		467,485	6.0		230,737	6.0		236,748	5.9		60,765	5.8		28,617	5.7		32,148	6.0	
45-49 Years	529,221	6.0		257,814	5.9		271,407	6.0		471,820	6.0		229,805	6.0		242,015	6.1		57,401	5.5		28,009	5.6		29,392	5.5	
50-54 Years	477,787	5.4		231,567	5.3		246,220	5.4		429,578	5.5		208,050	5.4		221,528	5.6		48,209	4.6		23,517	4.7		24,692	4.6	
55-59 Years	411,253	4.6		201,328	4.6		209,925	4.6		371,569	4.7		181,566	4.7		190,003	4.8		39,684	3.8		19,762	3.9		19,922	3.7	
60-64 Years	336,270	3.8		162,083	3.7		174,187	3.8		305,379	3.9		147,042	3.8		158,337	4.0		30,891	3.0		15,041	3.0		15,850	2.9	
65-69 Years	263,577	3.0		123,237	2.8		140,340	3.1		238,993	3.1		111,335	2.9		127,658	3.2		24,584	2.4		11,902	2.4		12,682	2.4	
70-74 Years	203,045	2.3		89,288	2.1		113,757	2.5		186,735	2.4		81,606	2.1		105,129	2.6		16,310	1.6		7,682	1.5		8,628	1.6	
75-79 Years	146,559	1.7		61,889	1.4		84,670	1.9		137,320	1.8		57,763	1.5		79,557	2.0		9,239	0.9		4,126	0.8		5,113	1.0	
80-84 Years	85,291	1.0		33,520	0.8		51,771	1.1		80,418	1.0		31,487	0.8		48,931	1.2		4,873	0.5		2,003	0.4		2,840	0.5	
85 and Over	54,483	0.6		19,619	0.5		34,864	0.8		50,642	0.6		18,106	0.5		32,536	0.8		3,841	0.4		1,513	0.3		2,328	0.4	
TOTAL	8,875,083	100.0		4,348,648	100.0		4,526,435	100.0		7,833,474	100.0		3,844,506	100.0		3,988,968	100.0		1,041,609	100.0		504,142	100.0		537,467	100.0	
Median Age	26			26			27			27			26			28			23			22			23		

TABLE 5.9
SELECTED VITAL STATISTICS BY COUNTY
MICHIGAN RESIDENTS, 1970

AREA	POPULATION	LIVE BIRTHS	ILLEGITIMATE LIVE BIRTHS	LOW WEIGHT LIVE BIRTHS	DEATHS	INFANT DEATHS	NEONATAL DEATHS	PERINATAL DEATHS	FETAL DEATHS	MARRIAGES ¹	DIVORCES ¹
STATE	8,875,083	171,667	18,712	13,432	76,321	3,492	2,683	4,522	2,060	91,933	29,934
Alcona	7,113	103	7	5	103	2	1	2	1	54	21
Alger	8,568	143	17	15	95	2	2	4	2	73	-
Allegan	66,575	1,331	79	91	578	31	25	32	11	643	169
Alpena	30,708	542	25	39	243	10	10	14	4	329	88
Antrim	12,612	212	12	11	152	8	5	10	5	120	43
Arenac	11,149	218	17	18	112	6	5	7	3	107	31
Baraga	7,789	157	12	13	94	3	2	3	1	72	12
Barry	38,166	723	47	40	352	9	9	16	8	413	153
Bay	117,339	2,235	152	143	911	39	34	51	21	1,225	344
Benzie	8,593	166	14	18	117	8	6	8	2	85	30
Berrien	163,875	3,517	494	291	1,571	78	56	92	39	2,448	607
Branch	37,906	637	47	53	387	17	11	17	8	461	111
Calhoun	141,963	2,707	326	222	1,310	84	69	100	37	1,572	672
Cass	43,312	853	54	55	409	18	13	23	10	536	183
Charlevoix	16,541	298	22	28	195	8	7	7	-	168	32
Cheboygan	16,573	313	21	26	175	6	3	8	5	179	35
Chippewa	32,412	725	48	39	288	13	10	17	8	372	86
Clare	16,695	282	28	26	193	7	6	11	5	157	44
Clinton	48,492	925	54	57	351	21	21	28	9	373	109
Crawford	6,482	123	8	8	67	3	2	3	2	76	22
Delta	35,924	620	32	36	398	16	14	17	4	345	70
Dickinson	23,753	335	16	21	300	9	5	10	5	318	55
Eaton	68,892	1,258	63	88	527	29	27	35	13	607	234
Emmet	18,331	333	34	22	201	10	7	10	3	201	51
Genesee	444,341	9,651	1,161	743	3,207	204	159	270	119	4,566	1,819
Gladwin	13,471	237	17	13	151	4	3	4	1	134	27
Gogebic	20,676	309	21	21	338	8	8	10	5	399	28
Grand Traverse	39,175	759	63	51	372	21	15	18	5	444	152
Gratiot	39,246	774	53	40	358	10	6	14	8	408	141
Hillsdale	37,171	638	34	42	353	10	6	13	7	384	-
Houghton	34,652	531	15	23	525	12	8	15	7	265	53
Huron	34,083	582	23	31	405	16	13	19	6	282	55
Ingham	261,039	5,396	549	371	1,680	116	85	150	70	3,465	1,166
Ionia	45,848	859	45	52	411	17	13	36	23	479	135
Iosco	24,905	579	26	37	213	6	4	6	4	212	49
Iron	13,813	142	8	10	237	1	1	3	2	172	31
Isabella	44,594	761	46	53	272	11	8	19	11	465	98
Jackson	143,274	2,705	217	188	1,280	60	45	71	31	1,501	631
Kalamazoo	201,550	3,630	328	240	1,356	50	35	76	44	2,150	866
Kalkaska	5,272	92	4	6	82	2	2	1	-	70	12
Kent	411,044	7,745	834	519	3,577	145	103	194	101	4,514	1,484
Keweenaw	2,264	20	-	1	42	1	-	-	-	18	3
Lake	5,661	78	12	7	100	5	4	5	1	60	20
Lapeer	52,317	1,022	36	52	445	16	14	20	8	549	158
Leelanau	10,872	190	9	10	117	1	1	4	3	67	7
Lenawee	81,609	1,699	95	128	764	35	31	43	14	1,079	304
Livingston	58,967	1,040	48	65	461	12	8	23	15	508	207
Luce	6,789	82	11	11	74	3	2	5	3	59	29
Mackinac	9,660	154	12	6	105	4	2	3	1	68	22
Macomb	625,309	12,234	648	854	3,428	204	166	272	120	5,275	1,866
Manistee	20,094	347	26	20	259	14	10	15	5	186	56
Marquette	64,686	1,254	61	78	567	19	17	26	10	667	179
Mason	22,612	311	29	20	302	4	3	7	4	211	65
Mecosta	27,992	514	38	39	225	10	10	12	3	233	55
Menominee	24,587	303	17	24	310	5	4	9	5	514	36
Midland	63,769	1,285	58	57	366	21	14	21	9	642	180
Missaukee	7,126	108	6	5	86	1	1	2	1	82	12
Monroe	118,479	2,268	97	153	870	44	26	47	23	2,986	333
Montcalm	39,660	794	51	53	461	14	11	18	7	470	125
Montmorency	5,247	92	4	8	89	-	-	-	-	54	16
Muskegon	157,426	3,068	445	244	1,341	69	54	97	46	1,731	564
Newaygo	27,992	513	38	30	333	13	11	15	4	261	74
Oakland	907,871	16,690	1,192	1,230	5,933	315	257	396	160	8,477	3,167
Oceana	17,984	315	17	19	198	3	3	3	1	195	47
Ogemaw	11,903	224	12	14	175	3	2	5	3	113	21
Ontonagon	10,548	183	7	9	145	6	6	13	8	122	21
Osceola	14,838	286	29	18	166	5	3	5	2	167	-
Oscoda	4,726	67	8	2	65	1	1	1	-	61	7
Otsego	10,422	218	11	11	86	5	4	7	3	97	35
Ottawa	128,181	2,445	106	126	879	41	33	54	25	1,131	294
Presque Isle	12,836	198	9	10	112	4	4	7	4	97	21
Roscommon	9,892	129	12	13	154	3	2	5	3	95	32
Saginaw	219,743	4,584	601	382	1,833	97	78	129	55	2,095	733
St. Clair	120,175	2,297	176	162	1,249	45	37	52	18	1,185	398
St. Joseph	47,392	957	77	67	525	25	21	33	13	582	164
Sanilac	34,889	638	29	30	428	12	11	16	7	315	65
Schoolcraft	8,226	122	7	10	108	1	-	4	4	70	12
Shiawassee	63,075	1,285	84	75	501	30	23	46	23	635	196
Tuscola	48,603	975	56	59	470	19	15	27	12	475	122
Van Buren	56,173	1,075	91	79	615	29	24	35	13	617	185
Washtenaw	234,103	4,548	342	309	1,380	78	62	106	48	2,624	873
Wayne	2,666,751	52,522	9,001	5,110	26,370	1,139	839	1,478	718	25,976	9,205
Wexford	19,717	384	30	27	258	6	5	12	8	240	76
County Not Stated	-	3	1	-	-	-	-	-	-	-	-

¹ By County of Occurrence rather than county of residence

TABLE 5.10
SELECTED VITAL STATISTICS RATES BY COUNTY
MICHIGAN RESIDENTS, 1970

AREA	LIVE BIRTHS	ILLEGITIMATE LIVE BIRTHS	LOW WEIGHT LIVE BIRTHS	DEATHS	INFANT DEATHS	NEONATAL DEATHS	PERINATAL DEATHS	FETAL DEATHS	MARRIAGES	DIVORCES
STATE	19.3	109.0	78.2	8.6	20.3	15.6	26.0	11.9	20.7	6.7
Alcona	14.5	68.0	48.5	14.5	19.4	9.7	19.2	9.6	15.2	5.9
Alger	16.7	118.9	104.9	11.1	14.0	14.0	27.6	13.8	17.0	0
Allegan	20.0	59.4	68.4	8.7	23.3	18.8	23.8	8.2	19.3	5.1
Alpena	17.7	46.1	72.0	7.9	18.5	18.5	25.6	7.3	21.4	5.7
Antrim	16.8	56.6	51.9	12.1	37.7	23.6	46.1	23.0	19.0	6.8
Arenac	19.6	78.0	82.6	10.0	27.5	22.9	31.7	13.6	19.2	5.6
Baraga	20.2	76.4	82.8	12.1	19.1	12.7	19.0	6.3	18.5	3.1
Barry	18.9	65.0	55.3	9.2	12.4	12.4	21.9	10.9	21.6	8.0
Bay	19.0	68.0	64.0	7.8	17.4	15.2	22.6	9.3	20.9	5.9
Benzie	19.3	84.3	108.4	13.6	48.2	36.1	47.6	11.9	19.8	7.0
Berrien	21.5	140.5	82.7	9.6	22.2	15.9	25.9	11.0	29.9	7.4
Branch	16.8	73.8	83.2	10.2	26.7	17.3	26.4	12.4	24.3	5.9
Calhoun	19.1	120.4	82.0	9.2	31.0	25.5	36.4	13.5	22.1	9.5
Cass	19.7	63.3	64.5	9.4	21.1	15.2	26.7	11.6	24.8	8.5
Charlevoix	18.0	73.8	94.0	11.8	26.8	23.5	23.5	0	20.3	3.9
Cheboygan	18.9	67.1	83.1	10.6	19.2	9.6	25.2	15.7	21.6	4.2
Chippewa	22.4	66.2	53.8	8.9	17.9	13.8	23.2	10.9	23.0	5.3
Clare	16.9	99.3	92.2	11.6	24.8	21.3	38.3	17.4	18.8	5.3
Clinton	19.1	58.4	61.6	7.2	22.7	22.7	30.0	9.6	15.4	4.5
Crawford	19.0	65.0	65.0	10.3	24.4	16.3	24.0	16.0	23.4	6.8
Delta	17.3	51.6	58.1	11.1	25.8	22.6	27.2	6.4	19.2	3.9
Dickinson	14.1	47.8	62.7	12.6	26.9	14.9	29.4	14.7	26.8	4.6
Eaton	18.3	50.1	70.0	7.6	23.1	21.5	27.5	10.2	17.6	6.8
Emmet	18.2	102.1	66.1	11.0	30.0	21.0	29.7	8.9	21.9	5.6
Genesee	21.7	120.3	77.0	7.2	21.1	16.5	27.6	12.2	20.6	8.2
Gladwin	17.6	71.7	54.9	11.2	16.9	12.7	16.8	4.2	19.9	4.0
Gogebic	14.9	68.0	68.0	16.3	25.9	25.9	31.8	15.9	38.6	2.7
Grand Traverse	19.4	83.0	67.2	9.5	27.7	19.8	23.6	6.5	22.7	7.8
Gratiot	19.7	68.5	51.7	9.1	12.9	7.8	17.9	10.2	20.8	7.2
Hillsdale	17.2	53.3	65.8	9.5	15.7	9.4	20.2	10.9	20.7	0
Houghton	15.3	28.2	43.3	15.2	22.6	15.1	27.9	13.0	15.3	3.1
Huron	17.1	39.5	53.3	11.9	27.5	22.3	32.3	10.2	16.5	3.2
Ingham	20.7	101.7	68.8	6.4	21.5	15.8	27.4	12.8	26.5	8.9
Ionia	18.7	52.4	60.5	9.0	19.8	15.1	40.8	26.1	20.9	5.9
Iosco	23.2	44.9	63.9	8.6	10.4	6.9	10.3	6.9	17.0	3.9
Iron	10.3	56.3	70.4	17.2	7.0	7.0	20.7	13.8	24.9	4.5
Isabella	17.1	60.4	69.6	6.1	14.5	10.5	24.6	14.2	20.9	4.4
Jackson	18.9	80.2	69.5	8.9	22.2	16.6	26.0	11.3	21.0	8.8
Kalamazoo	18.0	90.4	66.1	6.7	13.8	9.6	20.7	12.0	21.3	8.6
Kalkaska	17.5	43.5	65.2	15.6	21.7	21.7	10.9	0	26.6	4.6
Kent	18.8	107.7	67.0	8.7	18.7	13.3	24.7	12.9	22.0	7.2
Keeweenaw	8.8	0	50.0	18.6	50.0	0	0	0	15.9	2.7
Lake	13.8	153.8	89.7	17.7	64.1	51.3	63.3	12.7	21.2	7.1
Leapeer	19.5	35.2	50.9	8.5	15.7	13.7	19.4	7.8	21.0	6.0
Leelanau	17.5	47.4	52.6	10.8	5.3	5.3	20.7	15.5	12.3	1.3
Lenawee	20.8	55.9	75.3	9.4	20.6	18.2	25.1	8.2	26.4	7.5
Livingston	17.6	46.2	62.5	7.5	11.5	7.7	21.8	14.2	17.2	7.0
Luce	12.1	134.1	134.1	10.9	36.6	24.4	58.8	35.3	17.4	8.5
Mackinac	15.9	77.9	39.0	10.9	26.0	13.0	19.4	6.5	14.1	4.6
Macomb	19.6	53.0	69.8	5.5	16.7	13.6	22.0	9.7	16.9	6.0
Manistee	17.3	74.9	57.6	12.9	40.3	28.8	42.6	14.2	18.5	5.6
Marquette	19.4	48.6	62.2	8.8	15.2	13.6	20.6	7.9	20.6	5.5
Mason	13.8	93.2	64.3	13.4	12.9	9.6	22.2	12.7	18.7	5.7
Mecosta	18.4	73.9	75.9	8.0	19.5	19.5	23.2	5.8	16.6	3.9
Menominee	12.3	56.1	79.2	12.6	16.5	13.2	29.2	16.2	41.8	2.9
Midland	20.2	45.1	44.4	5.7	16.3	10.9	16.2	7.0	20.1	5.6
Missaukee	15.2	55.6	46.3	12.1	9.3	9.3	18.3	9.2	23.0	3.4
Monroe	19.1	42.8	67.5	7.3	19.4	11.5	20.5	10.0	50.4	5.6
Montcalm	20.0	64.2	66.8	11.6	17.6	13.9	22.5	8.7	23.7	6.3
Montmorency	17.5	43.5	87.0	17.0	0	0	0	0	20.6	6.1
Muskegon	19.5	145.0	79.5	8.5	22.5	17.6	31.1	14.8	22.0	7.2
Newaygo	18.3	74.1	58.5	11.9	25.3	21.4	29.0	7.7	18.6	5.3
Oakland	18.4	71.4	73.7	6.5	18.9	15.4	23.5	9.5	18.7	7.0
Oceana	17.5	54.0	60.3	11.0	9.5	9.5	9.5	3.2	21.7	5.2
Ogemaw	18.8	53.6	62.5	14.7	13.4	8.9	22.0	13.2	19.0	3.5
Ontonagon	17.3	38.3	49.2	13.7	32.8	32.8	68.1	41.9	23.1	4.0
Osceola	19.3	101.4	62.9	11.2	17.5	10.5	17.4	6.9	22.5	0
Oscoda	14.2	119.4	29.9	13.8	14.9	14.9	14.9	0	25.8	3.0
Otsego	20.9	50.5	50.5	8.3	22.9	18.3	31.7	13.6	18.6	6.7
Ottawa	19.1	43.4	51.5	6.9	16.8	13.5	21.9	10.1	17.6	4.6
Presque Isle	15.4	45.5	50.5	8.7	20.2	20.2	34.7	19.8	15.1	3.3
Roscommon	13.0	93.0	100.8	15.6	23.3	15.5	37.9	22.7	19.2	6.5
Saginaw	20.9	131.1	83.3	8.3	21.2	17.0	27.8	11.9	19.1	6.7
St. Clair	19.1	76.6	70.5	10.4	19.6	16.1	22.5	7.8	19.7	6.6
St. Joseph	20.2	80.5	70.0	11.1	26.1	21.9	34.0	13.4	24.6	6.9
Sanilac	18.3	45.5	47.0	12.3	18.8	17.2	24.8	10.9	18.1	3.7
Schoolcraft	14.8	57.4	82.0	13.1	8.2	0	31.7	31.7	17.0	2.9
Shiawassee	20.4	65.4	58.4	7.9	23.3	17.9	35.2	17.6	20.1	6.2
Tuscola	20.1	57.4	60.5	9.7	19.5	15.4	27.4	12.2	19.5	5.0
Van Buren	19.1	84.7	73.5	10.9	27.0	22.3	32.2	11.9	22.0	6.6
Washtenaw	19.4	75.2	67.9	5.9	17.2	13.6	23.1	10.4	22.4	7.5
Wayne	19.7	171.4	97.3	9.9	21.7	16.0	27.8	13.5	19.5	6.9
Wexford	19.5	78.1	70.3	13.1	15.6	13.0	30.6	20.4	24.3	7.7

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 5.11
REPORTED CASES OF SELECTED COMMUNICABLE DISEASES BY COUNTY OF RESIDENCE
MICHIGAN, 1970

AREA	TOTAL	DIPHTHERIA	STREPTOCOCCAL SORE THROAT (INCLUDING SCARLET FEVER)	TYPHOID FEVER	WHOOPING COUGH	HEPATITIS, INFECTIONS AND SERUM	MEASLES	MENINGOCOCCAL INFECTION	FOLLICULITIS	RHEUMATIC FEVER	TUBERCULOSIS	SYPHILIS	GONORRHEA	ALL OTHER DISEASES
STATE	92,249	-	11,863	14	195	4,594	1,834	69	2	541*	1,992	3,920	20,359	46,866
Alcona	4	-	-	-	-	-	-	-	-	-	3	1	-	-
Alger	23	-	1	-	-	-	-	-	-	-	1	2	5	14
Allegan	359	-	114	-	2	64	1	-	-	10	2	11	56	99
Alpena	62	-	6	-	1	3	6	-	-	4	-	3	6	33
Antrim	13	-	-	-	-	-	-	-	-	3	3	2	4	1
Arenac	25	-	-	-	-	-	-	-	-	-	-	-	-	-
Baraga	19	-	1	-	-	5	-	-	-	3	3	3	11	-
Barry	385	-	73	-	-	1	-	-	-	-	-	1	1	15
Bay	519	-	37	-	1	17	3	-	-	7	6	4	33	242
Benzie	16	-	-	-	-	78	3	2	-	2	16	18	94	268
Berrien	2,739	-	285	-	10	22	26	-	-	1	3	2	10	-
Branch	214	-	3	-	-	35	3	-	-	7	30	59	312	1,988
Calhoun	866	-	21	-	1	91	5	-	-	1	4	6	58	104
Cass	120	-	20	-	-	6	1	2	-	3	14	52	341	336
Charlevoix	14	-	-	-	-	-	1	1	-	-	4	10	41	37
Cheboygan	44	-	2	-	2	6	2	-	-	-	2	5	6	1
Chippewa	88	-	42	-	-	2	11	-	-	1	1	5	5	20
Clare	64	-	-	-	-	-	-	-	-	1	4	9	5	14
Clinton	637	-	68	-	-	22	8	3	-	1	1	8	4	50
Crawford	22	-	-	-	-	4	-	-	-	9	4	4	21	498
Delta	287	-	115	-	-	3	2	-	-	-	1	1	8	8
Dickinson	175	-	15	-	-	1	1	-	-	5	4	7	5	146
Eaton	446	-	23	-	-	18	1	1	-	1	6	1	1	149
Emmet	9	-	-	-	-	2	-	1	-	4	6	5	56	332
Genesee	4,078	-	339	-	6	179	13	3	-	-	3	-	3	1
Gladwin	9	-	-	-	-	-	-	-	-	33	65	239	1,703	1,498
Gogebic	188	-	28	-	-	1	3	-	-	-	-	2	4	3
Grand Traverse	267	-	22	-	2	16	4	1	-	4	6	4	5	137
Gratiot	126	-	1	-	-	28	-	-	-	7	7	5	9	195
Hillsdale	66	-	1	-	-	6	5	1	-	10	1	7	20	59
Houghton	472	-	10	-	-	1	1	-	-	2	4	6	4	444
Huron	11	-	-	-	-	3	-	-	-	-	2	2	3	1
Ingham	7,197	-	4,073	-	3	233	9	8	-	14	27	89	1,185	1,556
Ionia	251	-	79	-	2	6	1	-	-	-	2	11	59	91
Iosco	697	-	368	-	1	1	3	-	-	-	1	3	-	320
Iron	115	-	90	-	1	1	-	1	-	-	11	2	2	7
Isabella	100	-	1	-	-	5	-	-	-	9	3	8	25	49
Jackson	335	-	-	-	-	118	-	-	-	14	12	64	125	2
Kalamazoo	3,804	-	175	-	1	172	3	1	-	12	21	62	1,095	2,262
Kalamazoo	86	-	13	-	-	-	-	-	-	3	-	2	-	68
Kent	3,853	-	1,466	1	20	174	16	5	-	10	32	111	1,534	484
Keweenaw	17	-	3	-	-	-	-	-	-	-	-	2	1	11
Lake	37	-	1	-	-	2	-	-	-	-	1	31	2	-
Lapeer	173	-	32	-	-	7	-	-	-	7	3	-	15	109
Leelanau	4	-	-	-	-	-	-	-	-	-	2	2	-	-
Lenawee	514	-	34	-	2	20	3	2	-	11	8	7	97	330
Livingston	195	-	6	-	-	16	15	-	-	5	13	2	33	105
Luce	12	-	-	-	-	1	-	-	-	6	1	3	1	-
Mackinac	158	-	-	-	-	1	2	-	-	3	-	4	6	142
Macomb	5,773	-	168	-	2	208	15	1	-	51	70	83	187	4,988
Manistee	19	-	-	-	-	2	-	-	1	1	1	4	9	1
Marquette	1,566	-	931	-	-	10	12	1	-	2	17	7	70	516
Mason	85	-	-	-	-	3	2	-	-	7	5	4	14	50
Mecosta	343	-	10	-	-	6	-	-	-	2	1	6	16	302
Menominee	166	-	43	-	-	-	1	-	-	5	15	3	2	97
Midland	464	-	40	1	-	25	7	-	-	6	2	3	17	363
Missaukee	37	-	1	-	-	1	-	-	-	-	1	1	2	31
Monroe	3,143	-	114	-	3	43	-	-	-	10	26	16	69	2,862
Montcalm	262	-	20	-	-	20	1	1	-	1	4	6	42	167
Montmorency	121	-	1	-	-	2	1	-	-	1	-	2	-	114
Muskegon	1,314	-	20	1	1	49	1	1	-	-	45	42	602	552
Newaygo	37	-	1	-	-	9	-	-	-	3	3	7	12	2
Oakland	11,017	-	444	2	11	557	91	3	-	34	142	155	1,332	8,246
Oceana	60	-	3	-	-	2	2	-	-	3	1	2	11	36
Ogemaw	9	-	-	-	-	3	-	-	-	1	1	2	2	-
Ontonagon	55	-	4	-	-	7	-	-	-	4	-	1	-	39
Osceola	12	-	-	-	-	-	-	-	-	1	2	1	8	-
Oscoda	6	-	-	-	-	-	-	-	-	1	2	2	2	-
Otsego	12	-	-	-	-	1	-	-	-	2	1	-	1	7
Ottawa	1,558	-	502	-	4	48	8	3	-	6	8	6	152	821
Presque Isle	62	-	-	-	-	3	2	-	-	1	-	4	6	46
Roscommon	20	-	2	-	-	2	-	-	-	-	-	2	12	-
Saginaw	1,302	-	48	-	2	99	83	1	-	7	40	83	324	615
St. Clair	633	-	12	-	13	9	3	-	-	8	23	18	239	308
St. Joseph	226	-	18	-	-	20	-	-	-	4	10	16	64	94
Sanilac	20	-	1	-	-	2	-	-	-	2	2	3	4	6
Schoolcraft	2	-	-	-	-	1	-	-	-	-	-	-	-	1
Shiawassee	120	-	14	-	-	15	-	-	-	4	3	10	34	40
Tuscola	88	-	1	-	-	12	4	1	-	6	2	14	28	20
Van Buren	753	-	21	-	2	36	1	-	1	3	12	37	163	477
Washtenaw	2,218	-	536	-	-	130	8	2	-	13	64	67	625	773
Wayne	30,407	-	1,340	9	102	1,869	1,434	24	-	137	1,138	2,417	9,250	12,687
Wexford	255	-	-	-	-	1	3	-	-	1	-	3	9	238
STATE HOMES	169	-	-	-	-	28	4	-	-	-	-	-	3	134

*Provisional figures

TABLE 5.12
SELECTED CAUSES OF DEATH BY COUNTY
MICHIGAN RESIDENTS, 1970

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 LIVER	NEPHRITIS & NEPHROSIS	INFECTIONS OF KIDNEY	MATERNAL DEATHS, ALL FORMS	SUICIDE AND SELF-INFLECTED INJURY	HOMICIDE AND INJURY BY OTHER PERSONS - NOT IN WAR	RESIDUAL
STATE	76,321	29,204	13,551	7,691	4,428	2,309	2,180	2,101	1,174	180	430	1,558	319	289	29	992	876	11,319
Alcona	103	38	12	19	9	5	3	3	2	1	-	1	2	-	-	-	-	13
Alger	95	32	10	8	8	7	3	5	2	1	-	1	1	-	-	1	-	16
Allegan	578	220	99	54	39	18	19	16	9	1	3	11	2	4	-	8	2	91
Alpena	243	101	44	31	20	12	2	-	3	-	2	2	-	1	-	4	-	33
Antrim	152	73	23	18	6	5	-	4	3	-	3	-	-	-	-	-	1	21
Arenac	112	38	22	18	8	4	-	-	1	1	-	-	3	-	-	1	-	20
Baraga	94	24	12	8	10	8	10	1	1	-	1	3	1	-	-	2	1	20
Barry	352	148	61	31	27	18	9	13	4	-	3	3	3	-	-	5	2	43
Bay	911	332	179	111	40	26	18	10	15	2	8	13	1	4	-	22	7	149
Benzie	117	38	19	13	14	7	4	1	3	1	-	1	-	2	-	-	1	20
Berrien	1,571	635	224	179	111	58	38	42	34	2	6	24	1	7	-	19	10	239
Branch	387	134	56	63	32	21	5	17	9	1	1	5	2	1	-	-	-	61
Calhoun	1,310	493	213	146	83	43	31	37	25	4	8	17	6	4	-	14	4	225
Cass	409	150	68	46	36	19	6	9	14	-	2	7	4	-	-	5	1	61
Charlevoix	195	80	40	23	10	7	4	9	4	-	-	2	-	1	-	1	-	21
Cheboygan	175	74	29	14	12	7	4	6	1	-	2	3	-	2	-	2	-	26
Chippewa	288	125	39	22	14	8	10	15	4	-	2	5	1	-	-	4	-	47
Clare	193	103	37	10	7	5	1	5	4	-	1	-	-	-	-	3	-	22
Clinton	351	150	53	33	18	14	9	9	10	-	-	2	-	2	-	4	1	60
Crawford	67	29	10	12	2	1	1	2	-	-	2	-	-	-	-	1	-	8
Delta	398	144	52	41	40	15	16	10	9	1	2	8	-	1	1	2	1	70
Dickinson	300	138	57	27	11	4	3	6	7	-	-	8	1	2	-	1	-	39
Eaton	527	200	89	52	33	21	17	13	13	-	4	6	1	3	1	10	1	84
Emmet	201	80	38	20	12	5	7	4	-	1	1	2	-	-	-	3	4	29
Genesee	3,207	1,208	577	302	227	122	88	55	65	4	17	49	10	19	1	42	38	505
Gladwin	151	67	32	14	8	4	8	4	-	1	-	2	-	1	-	-	1	13
Gogebic	338	169	50	25	13	5	13	9	5	-	2	6	3	2	-	2	1	38
Grand Traverse	372	139	64	47	23	9	7	10	11	-	2	2	1	2	-	7	1	56
Gratiot	358	145	55	45	29	15	8	12	6	-	1	2	2	1	-	3	1	48
Hillsdale	353	159	46	34	22	10	15	10	7	-	3	4	1	3	-	5	1	43
Houghton	525	227	79	61	25	9	23	13	12	2	2	10	5	1	-	5	1	59
Huron	405	173	49	76	28	20	6	10	6	-	3	7	1	1	-	3	-	42
Ingham	1,680	585	298	156	118	62	55	43	45	2	8	20	5	10	-	25	11	299
Ionia	411	168	50	46	28	18	13	16	13	-	2	6	1	1	-	6	1	60
Iosco	213	88	38	16	17	9	4	3	10	1	1	5	-	-	-	3	2	25
Iron	237	103	36	47	16	8	8	5	1	-	-	1	1	-	-	-	-	19
Isabella	272	117	35	32	16	9	17	7	3	-	1	4	-	-	-	4	-	36
Jackson	1,280	528	219	122	68	38	42	18	33	2	5	25	4	5	1	16	6	186
Kalamazoo	1,356	487	273	124	73	41	45	50	33	3	8	17	2	6	-	25	5	205
Kalkaska	82	40	11	4	5	3	3	2	1	-	-	1	1	-	-	-	1	13
Kent	3,577	1,353	639	376	182	95	82	100	92	6	24	51	9	14	3	40	16	590
Keweenaw	42	23	5	4	1	1	1	3	-	-	-	1	-	-	-	2	-	2
Lake	100	37	16	8	6	4	1	3	2	-	1	1	-	2	-	-	2	21
Lapeer	445	165	70	44	35	15	16	17	6	-	5	6	4	1	-	4	5	67
Leelanau	117	48	33	12	9	3	1	1	1	-	-	-	-	-	-	1	-	11
Lenawee	764	263	135	93	61	39	27	17	22	1	7	13	3	2	-	12	1	107
Livingston	441	153	81	38	40	26	14	11	4	1	4	6	4	2	-	9	1	73
Luce	74	31	8	5	3	3	5	5	2	-	-	2	1	-	-	-	-	12
Mackinac	105	48	12	16	3	2	5	6	1	-	-	-	-	-	-	2	-	12
Macomb	3,428	1,255	689	290	200	109	73	77	52	5	17	68	19	9	1	68	20	585
Manistee	259	118	40	30	13	7	5	7	5	-	2	3	-	3	-	-	-	33
Marquette	567	267	91	45	29	16	14	12	9	-	4	12	6	-	-	6	-	72
Mason	302	127	42	52	18	8	7	8	6	1	-	2	-	-	-	3	-	36
Mecosta	225	85	37	18	17	11	7	7	5	-	2	2	1	3	-	5	-	36
Menominee	310	134	58	36	18	14	7	2	9	-	3	5	1	-	-	3	-	34
Midland	366	127	67	45	17	10	8	8	5	-	3	3	1	3	-	14	1	64
Missaukee	86	35	9	9	9	8	7	-	1	-	1	-	-	-	-	2	-	12
Monroe	870	331	161	82	66	35	29	21	12	1	2	17	3	2	-	16	4	123
Montcalm	461	175	75	60	27	16	10	13	15	1	2	6	1	2	-	6	2	66
Montmorency	89	43	13	13	2	2	3	2	2	-	2	1	-	-	-	-	-	8
Muskegon	1,341	521	258	163	64	32	35	29	23	3	14	23	5	3	-	10	9	181
Newaygo	333	122	58	32	30	16	7	7	14	-	2	2	2	1	-	4	-	52
Oakland	5,933	2,221	1,176	590	356	189	150	124	85	11	27	104	21	18	2	106	52	890
Oceana	198	69	36	24	16	10	3	7	2	-	-	3	-	1	-	2	2	33
Ogemaw	175	67	30	20	11	7	8	3	10	-	1	-	-	-	-	2	-	23
Ontonagon	145	61	18	13	9	3	4	4	8	-	1	2	1	-	-	1	-	23
Osceola	166	73	31	16	7	4	6	6	4	-	-	2	2	4	-	-	-	15
Oscoda	65	24	12	6	6	3	3	3	1	-	-	-	-	-	-	2	-	8
Otsego	86	31	17	9	6	3	-	2	-	-	-	-	-	1	-	-	-	20
Ottawa	879	321	165	95	56	33	35	25	17	3	9	10	2	2	-	12	2	125
Presque Isle	112	38	23	17	9	3	1	5	1	-	1	1	2	-	-	4	-	10
Roscommon	154	57	34	22	9	5	2	3	1	-	1	1	-	-	-	1	-	23
Saginaw	1,833	723	316	181	104	49	49	50	24	3	8	28	10	4	-	16	26	291
St. Clair	1,249	478	213	135	82	37	46	28	41	1	7	24	11	5	-	15	3	160
St. Joseph	525	221	74	62	34	21	8	17	11	1	3	6	2	1	-	5	-	80
Sanilac	428	179	55	59	32	21	12	9	9	-	3	6	3	1	-	2	-	58
Schoolcraft	108	45	20	12	5	2	6	3	3	-	1	2	-	-	-	-	-	11
Shiawassee	501	173	70	54	51	29	15	24	6	-	4	10	5	-	-	9	2	78
Tuscola	470	187	62	51	50	37	19	8	4	1	5	4	-	-	-	8	3	68
Van Buren	615	219	100	75	56	32	16	18	18	1	4	7	3	2	-	7	1	88
Washtenaw	1,380	438	275	164	110	62	41	36	16	-	4	20	5	2	1	23	12	233
Wayne	26,370	10,028	4,789	2,434	1,233	556	813	854	192	109	148	811	123	113	18	310	606	3,789
Wexford	258	101	40	31	16	11	6	12	5	-	2	7	3	2	-	2	-	31

TABLE 5.13
NUMBER OF DEATHS BY CAUSE
MICHIGAN RESIDENTS, 1970

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	182	Other malignant neoplasm of uterus----	240
005	Food poisoning (bacterial)-----	1	183	Malignant neoplasm of ovary, fallopian tube, and broad ligament----	397
008	Enteritis due to other specified organism----	5	184	Malignant neoplasm of other and unspecified female genital organs----	36
009	Diarrheal disease-----	105	185	Malignant neoplasm of prostate-----	734
010	Silicotuberculosis-----	8	186	Malignant neoplasm of testis-----	38
011	Pulmonary tuberculosis-----	122	187	Malignant neoplasm of other and unspecified male genital organs-----	7
012	Other respiratory tuberculosis-----	4	188	Malignant neoplasm of bladder-----	380
013	Tuberculosis of meninges and central nervous system-----	7	189	Malignant neoplasm of other and unspecified urinary organs-----	287
015	Tuberculosis of bones and joints-----	5	190	Malignant neoplasm of eye-----	15
016	Tuberculosis of genitourinary system-----	2	191	Malignant neoplasm of brain-----	328
017	Tuberculosis of other organs-----	1	192	Malignant neoplasm of other parts of nervous system-----	36
018	Disseminated tuberculosis-----	8	193	Malignant neoplasm of thyroid gland----	46
019	Late effects of tuberculosis-----	23	194	Malignant neoplasm of other endocrine glands-----	14
027	Other zoonotic bacterial diseases-----	1	195	Malignant neoplasm of ill-defined sites-----	116
034	Streptococcal sore throat and scarlet fever-----	2	196	Secondary and unspecified malignant neoplasm of lymph nodes----	7
036	Meningococcal infection-----	15	197	Secondary malignant neoplasm of respiratory and digestive systems-----	248
037	Tetanus-----	4	198	Other secondary malignant neoplasm-----	69
038	Septicemia-----	128	199	Malignant neoplasm without specification of site-----	454
039	Other bacterial diseases-----	7	200	Lymphosarcoma and reticulum-cell sarcoma-----	283
044	Late effects of acute poliomyelitis-----	10	201	Hodgkin's disease-----	149
045	Aseptic meningitis due to enterovirus-----	4	202	Other neoplasms of lymphoid tissue----	135
046	Other enterovirus diseases of central nervous system-----	1	203	Multiple myeloma-----	187
052	Chickenpox-----	6	204	Lymphatic leukemia-----	174
054	Herpes simplex-----	6	205	Myeloid leukemia-----	246
055	Measles-----	1	206	Monocytic leukemia-----	39
056	Rubella-----	1	207	Other and unspecified leukemia-----	184
062	Mosquito-borne viral encephalitis-----	1	208	Polycythemia vera-----	22
065	Viral encephalitis, unspecified-----	15	209	Myelofibrosis-----	30
070	Infectious hepatitis-----	42	210	Benign neoplasm of buccal cavity and pharynx-----	2
072	Mumps-----	2	211	Benign neoplasm of other parts of digestive system-----	13
075	Infectious mononucleosis-----	3	212	Benign neoplasm of respiratory system-----	2
079	Other viral diseases-----	14	213	Benign neoplasm of bone and cartilage-----	1
084	Malaria-----	1	214	Lipoma-----	3
090	Congenital syphilis-----	1	215	Other benign neoplasm of muscular and connective tissue-----	1
093	Cardiovascular syphilis-----	8	218	Uterine fibroma-----	13
094	Syphilis of central nervous system-----	6	220	Benign neoplasm of ovary-----	5
097	Other syphilis and not specified-----	2	225	Benign neoplasm of brain and other parts of nervous system-----	40
098	Gonococcal infections-----	2	226	Benign neoplasm of endocrine glands----	8
100	Leptospirosis-----	1	227	Hemangioma and lymphangioma-----	8
112	Moniliasis-----	5	228	Benign neoplasm of other and unspecified organs and tissues-----	1
113	Actinomycosis-----	1	230	Neoplasm of unspecified nature of digestive organs-----	7
115	Histoplasmosis-----	3	231	Neoplasm of unspecified nature of respiratory organs-----	8
116	Blastomycosis-----	2	232	Neoplasm of unspecified nature of skin and musculoskeletal system-----	1
117	Other systemic mycosis-----	5	234	Neoplasm of unspecified nature of uterus-----	2
130	Toxoplasmosis-----	1	237	Neoplasm of unspecified nature of other genitourinary organs-----	2
135	Sarcoidosis-----	9	238	Neoplasm of unspecified nature of eye, brain, and other parts of nervous system-----	31
136	Other and unspecified infective and parasitic diseases-----	7	239	Neoplasm of unspecified nature of other and unspecified organs-----	2
II. NEOPLASMS (140-239)					
140	Malignant neoplasm of lip-----	4	III. ENDOCRINE, NUTRITIONAL, AND METABOLIC DISEASES (240-279)		
141	Malignant neoplasm of tongue-----	69	240	Simple goiter-----	3
142	Malignant neoplasm of salivary gland-----	21	241	Nontoxic nodular goiter-----	1
143	Malignant neoplasm of gum-----	7	242	Thyrototoxicosis with or without goiter-----	11
144	Malignant neoplasm of floor of mouth-----	21	243	Cretinism of congenital origin-----	1
145	Malignant neoplasm of other and unspecified parts of mouth-----	46	244	Myxedema-----	20
146	Malignant neoplasm of oropharynx-----	33	245	Thyroiditis-----	2
147	Malignant neoplasm of nasopharynx-----	27	246	Other diseases of thyroid gland-----	2
148	Malignant neoplasm of hypopharynx-----	17	250	Diabetes mellitus-----	2,180
149	Malignant neoplasm of pharynx, unspecified--	42	251	Disorders of pancreatic internal secretion other than diabetes mellitus-----	5
150	Malignant neoplasm of esophagus-----	266	252	Diseases of parathyroid gland-----	6
151	Malignant neoplasm of stomach-----	674	253	Diseases of pituitary gland-----	11
152	Malignant neoplasm of small intestine, including duodenum-----	30	254	Diseases of thymus gland-----	3
153	Malignant neoplasm of large intestine, except rectum-----	1,470	255	Diseases of adrenal glands-----	21
154	Malignant neoplasm of rectum and rectosigmoid junction-----	387	258	Polyglandular dysfunction and other diseases of endocrine glands-----	20
155	Malignant neoplasm of liver and intra-hepatic bile ducts, specified as primary--	78	264	Ascorbic acid deficiency-----	1
156	Malignant neoplasm of gallbladder and bile ducts-----	216	266	Other vitamin deficiency states-----	1
157	Malignant neoplasm of pancreas-----	665	268	Nutritional marasmus-----	15
158	Malignant neoplasm of peritoneum and retroperitoneal tissue-----	26	269	Other nutritional deficiency-----	65
159	Malignant neoplasm of unspecified digestive organs-----	22	271	Congenital disorders of carbohydrate metabolism-----	1
160	Malignant neoplasm of nose, nasal cavities, middle ear, and accessory sinuses-----	23	272	Congenital disorders of lipid metabolism-----	3
161	Malignant neoplasm of larynx-----	110			
162	Malignant neoplasm of trachea, bronchus, and lung-----	2,663			
163	Malignant neoplasm of other and unspecified respiratory organs-----	19			
170	Malignant neoplasm of bone-----	61			
171	Malignant neoplasm of connective and other soft tissue-----	84			
172	Malignant melanoma of skin-----	86			
173	Other malignant neoplasm of skin-----	46			
174	Malignant neoplasm of breast-----	1,209			
180	Malignant neoplasm of cervix uteri-----	228			

TABLE 5.13
NUMBER OF DEATHS BY CAUSE
MICHIGAN RESIDENTS, 1970 (Continued)

ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER	ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER
273	Other and unspecified congenital disorders of metabolism-----	40	401	Essential benign hypertension-----	39
274	Gout-----	8	402	Hypertensive heart disease-----	427
275	Plasma protein abnormalities-----	7	403	Hypertensive renal disease-----	190
276	Amyloidosis-----	16	404	Hypertensive heart and renal disease-----	153
277	Obesity not specified as of endocrine origin-----	71	410	Acute myocardial infarction-----	15,614
279	Other and unspecified metabolic diseases-----	18	411	Other acute and subacute forms of ischemic heart disease-----	82
IV. DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS (280-289)			412	Chronic ischemic heart disease-----	11,083
280	Iron deficiency anemias-----	6	413	Angina pectoris-----	8
281	Other deficiency anemias-----	23	420	Acute pericarditis, nonrheumatic-----	2
282	Hereditary hemolytic anemias-----	18	421	Acute and subacute endocarditis-----	33
283	Acquired hemolytic anemias-----	4	422	Acute myocarditis-----	16
284	Aplastic anemia-----	43	423	Chronic disease of pericardium, nonrheumatic-----	24
285	Other and unspecified anemias-----	37	424	Chronic disease of endocardium-----	58
286	Coagulation defects-----	13	425	Cardiomyopathy-----	89
287	Purpura and other hemorrhagic conditions-----	15	426	Pulmonary heart disease-----	24
288	Agranulocytosis-----	8	427	Symptomatic heart disease-----	757
289	Other diseases of blood and blood-forming organs-----	19	428	Other myocardial insufficiency-----	127
V. MENTAL DISORDERS (290-315)			429	Ill-defined heart disease-----	109
290	Senile and presenile dementia-----	18	430	Subarachnoid hemorrhage-----	439
291	Alcoholic psychosis-----	26	431	Cerebral hemorrhage-----	1,438
295	Schizophrenia-----	1	432	Occlusion of prece bral arteries-----	125
296	Affective psychoses-----	3	433	Cerebral thrombosis-----	2,409
299	Unspecified psychosis-----	2	434	Cerebral embolism-----	23
300	Neuroses-----	1	435	Transient cerebral ischemia-----	2
303	Alcoholism-----	132	436	Acute but ill-defined cerebrovascular disease-----	2,303
304	Drug dependence-----	25	437	Generalized ischemic cerebrovascular disease-----	905
306	Special symptoms not elsewhere classified-----	4	438	Other and ill-defined cerebrovascular disease-----	47
309	Mental disorders not specified as psychotic associated with physical conditions-----	37	440	Arteriosclerosis-----	1,174
314	Profound mental retardation-----	3	441	Aortic aneurysm (nonaphyllitic)-----	590
315	Unspecified mental retardation-----	6	442	Other aneurysm-----	35
VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS (320-389)			443	Other peripheral vascular disease-----	28
320	Meningitis-----	82	444	Arterial embolism and thrombosis-----	237
322	Intracranial and intraspinal abscess-----	8	445	Gangrene-----	94
323	Encephalitis, myelitis, and encephalomyelitis-----	14	446	Polyarteritis nodosa and allied conditions-----	27
324	Late effects of intracranial abscess or pyogenic infection-----	7	447	Other diseases of arteries and arterioles-----	14
330	Hereditary neuromuscular disorders-----	38	448	Diseases of capillaries-----	2
331	Hereditary diseases of the striatopallidal system-----	14	450	Pulmonary embolism and infarction-----	338
332	Hereditary ataxia-----	3	451	Phlebitis and thrombophlebitis-----	117
333	Other hereditary and familial diseases of nervous system-----	4	452	Portal vein thrombosis-----	3
340	Multiple sclerosis-----	77	453	Other venous embolism and thrombosis-----	62
341	Other demyelinating diseases of central nervous system-----	9	454	Varicose veins of lower extremities-----	11
342	Paralysis agitans-----	123	456	Varicose veins of other sites-----	13
343	Cerebral spastic infantile paralysis-----	29	457	Noninfective disease of lymphatic channels-----	3
344	Other cerebral paralysis-----	24	458	Other diseases of circulatory system-----	29
346	Epilepsy-----	96	VIII. DISEASES OF THE RESPIRATORY SYSTEM (460-519)		
347	Other diseases of brain-----	70	460	Acute nasopharyngitis (common cold)---	2
348	Motor neurone disease-----	74	461	Acute sinusitis-----	2
349	Other diseases of spinal cord-----	6	462	Acute pharyngitis-----	3
350	Facial paralysis-----	2	464	Acute laryngitis and tracheitis-----	10
351	Trigeminal neuralgia-----	1	465	Acute upper respiratory infection of multiple or unspecified sites-----	13
354	Polyneuritis and polyradiculitis-----	7	466	Acute bronchitis and bronchiolitis-----	37
355	Other and unspecified forms of neuralgia and neuritis-----	1	470	Influenza, unqualified-----	32
357	Other diseases of peripheral nerves except autonomic-----	5	471	Influenza with pneumonia-----	52
375	Glaucoma-----	1	472	Influenza with other respiratory manifestations-----	6
376	Detachment of retina-----	1	473	Influenza with digestive manifestations-----	7
381	Otitis media without mention of mastoiditis-----	5	480	Viral pneumonia-----	71
VII. DISEASES OF THE CIRCULATORY SYSTEM (390-458)			481	Pneumococcal pneumonia-----	145
390	Rheumatic fever without mention of heart involvement-----	1	482	Other bacterial pneumonia-----	48
391	Rheumatic fever with heart involvement-----	7	483	Pneumonia due to other specified organism-----	4
392	Chorea-----	1	484	Acute interstitial pneumonia-----	40
393	Diseases of pericardium-----	3	485	Bronchopneumonia, unspecified-----	678
394	Diseases of mitral valve-----	153	486	Pneumonia, unspecified-----	1,018
395	Diseases of aortic valve-----	134	490	Bronchitis, unqualified-----	32
396	Diseases of mitral and aortic valves-----	55	491	Chronic bronchitis-----	222
397	Diseases of other endocardial structures-----	27	492	Emphysema-----	1,130
398	Other heart disease, specified as rheumatic-----	217	493	Asthma-----	107
400	Malignant hypertension-----	56	500	Hypertrophy of tonsils and adenoids-----	3
			501	Peritonsillar abscess-----	1
			503	Chronic sinusitis-----	4
			508	Other diseases of upper respiratory tract-----	8
			510	Empyema-----	14
			511	Pleurisy-----	6
			512	Spontaneous pneumothorax-----	7
			513	Abscess of lung-----	8
			514	Pulmonary congestion and hypostasis-----	60

TABLE 5.13
NUMBER OF DEATHS BY CAUSE
MICHIGAN RESIDENTS, 1970 (Continued)

ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER	ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER
515	Pneumoconiosis due to silica and silicates-----	29	653	Delivery complicated by other postpartum hemorrhage-----	1
517	Other chronic interstitial pneumonia-----	131	659	Delivery with rupture of uterus-----	1
518	Bronchiectasis-----	40	670	Sepsis of childbirth and the puerperium-----	1
519	Other diseases of respiratory system-----	58	671	Puerperal phlebitis and thrombosis-----	1
IX. DISEASES OF THE DIGESTIVE SYSTEM (520-577)			673	Puerperal pulmonary embolism-----	4
522	Diseases of pulp and periapical tissues-----	2	674	Cerebral hemorrhage in the puerperium-----	3
523	Periodontal diseases-----	1	XII. DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE (680-709)		
527	Diseases of the salivary glands-----	2	680	Boil and carbuncle-----	1
530	Diseases of esophagus-----	40	682	Other cellulitis and abscess-----	8
531	Ulcer of stomach-----	139	683	Acute lymphadenitis-----	1
532	Ulcer of duodenum-----	153	686	Other local infections of skin and subcutaneous tissue-----	5
533	Peptic ulcer, site unspecified-----	56	694	Pemphigus-----	2
534	Gastrojejunal ulcer-----	17	695	Erythematous conditions-----	21
535	Gastritis and duodenitis-----	28	696	Psoriasis and similar disorders-----	2
536	Disorders of function of stomach-----	3	702	Other dermatoses-----	1
537	Other diseases of stomach and duodenum-----	11	707	Chronic ulcer of skin-----	22
540	Acute appendicitis-----	55	708	Urticaria-----	1
541	Appendicitis, unqualified-----	4	709	Other diseases of skin-----	1
550	Inguinal hernia without mention of obstruction-----	9	XIII. DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE (710-738)		
551	Other hernia of abdominal cavity without mention of obstruction-----	44	710	Acute arthritis due to pyogenic organisms-----	1
552	Inguinal hernia with obstruction-----	13	712	Rheumatoid arthritis and allied conditions-----	70
553	Other hernia of abdominal cavity with obstruction-----	46	713	Osteoarthritis and allied conditions-----	13
560	Intestinal obstruction without mention of hernia-----	202	714	Other specified forms of arthritis-----	1
562	Diverticula of intestine-----	130	715	Arthritis, unspecified-----	11
563	Chronic enteritis and ulcerative colitis-----	42	716	Polymyositis and dermatomyositis-----	4
566	Abscess of anal and rectal regions-----	1	717	Other nonarticular rheumatism-----	1
567	Peritonitis-----	26	718	Rheumatism, unspecified-----	1
569	Other diseases of intestines and peritoneum-----	175	720	Osteomyelitis and periostitis-----	8
570	Acute and subacute necrosis of liver-----	15	721	Osteitis deformans-----	6
571	Cirrhosis of liver-----	1,558	723	Other diseases of bone-----	9
572	Suppurative hepatitis and liver abscess-----	8	725	Displacement of intervertebral disc-----	3
573	Other diseases of liver-----	54	727	Ankylosis of joint-----	1
574	Cholelithiasis-----	103	729	Other diseases of joint-----	3
575	Cholecystitis and cholangitis, without mention of calculus-----	79	731	Synovitis, bursitis, and tenosynovitis-----	1
576	Other diseases of gallbladder and biliary ducts-----	46	732	Infective myositis and other inflammatory diseases of tendon and fascia-----	1
577	Diseases of pancreas-----	148	733	Other diseases of muscle, tendon, and fascia-----	11
X. DISEASES OF THE GENITOURINARY SYSTEM (580-629)			734	Diffuse diseases of connective tissue-----	58
580	Acute nephritis-----	36	735	Curvature of spine-----	7
581	Nephrotic syndrome-----	17	738	Other deformities-----	1
582	Chronic nephritis-----	220	XIV. CONGENITAL ANOMALIES (740-759)		
583	Nephritis, unqualified-----	43	740	Anencephalus-----	47
584	Renal sclerosis, unqualified-----	3	741	Spina bifida-----	37
590	Infections of kidney-----	289	742	Congenital hydrocephalus-----	27
591	Hydronephrosis-----	7	743	Other congenital anomalies of nervous system-----	33
592	Calculus of kidney and ureter-----	20	745	Congenital anomalies of ear, face, and neck-----	1
593	Other diseases of kidney and ureter-----	104	746	Congenital anomalies of heart-----	362
594	Calculus of other parts of urinary system-----	3	747	Other congenital anomalies of circulatory system-----	76
595	Cystitis-----	9	748	Congenital anomalies of respiratory system-----	24
596	Other diseases of bladder-----	7	749	Cleft palate and cleft lip-----	3
598	Stricture of urethra-----	5	750	Other congenital anomalies of upper alimentary tract-----	4
599	Other diseases of urinary tract-----	36	751	Other congenital anomalies of digestive system-----	32
600	Hyperplasia of prostate-----	74	752	Congenital anomalies of genital organs-----	2
601	Prostatitis-----	8	753	Congenital anomalies of urinary system-----	64
602	Other diseases of prostate-----	13	755	Other congenital anomalies of limbs-----	1
604	Orchitis and epididymitis-----	1	756	Other congenital anomalies of musculoskeletal system-----	18
605	Redundant prepuce and phimosis-----	1	757	Congenital anomalies of skin, hair, and nails-----	5
607	Other diseases of male genital organs-----	6	758	Other and unspecified congenital anomalies-----	13
614	Salpingitis and oophoritis, unqualified-----	2	759	Congenital syndromes affecting multiple systems-----	75
615	Other diseases of ovary and fallopian tube-----	2	XV. CERTAIN CAUSES OF PERINATAL MORBIDITY AND MORTALITY (760-779)		
616	Diseases of parametrium and pelvic peritoneum (female)-----	5	760	Chronic circulatory and genitourinary diseases in mother-----	2
623	Uterovaginal prolapse-----	4	761	Other maternal conditions unrelated to pregnancy-----	18
625	Other diseases of uterus-----	5	762	Toxemia of pregnancy-----	12
626	Disorders of menstruation-----	2			
629	Other diseases of female genital organs-----	5			
XI. COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM (630-678)					
631	Ectopic pregnancy-----	3			
632	Hemorrhage of pregnancy-----	1			
637	Pre-eclampsia, eclampsia, and toxemia, unspecified-----	3			
638	Hyperemesis gravidarum-----	1			
640	Abortion induced for medical indications-----	1			
642	Abortion induced for other reasons-----	2			
643	Spontaneous abortion-----	1			
644	Abortion not specified as induced or spontaneous-----	1			
651	Delivery complicated by placenta previa or antepartum hemorrhage-----	3			
652	Delivery complicated by retained placenta-----	2			

TABLE 5.13
NUMBER OF DEATHS BY CAUSE
MICHIGAN RESIDENTS, 1970 (Continued)

ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER	ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER
763	Maternal ante- and intrapartum infection----	13	E859	Accidental poisoning by other and unspecified drugs and medicaments-----	19
764	Difficult labor with abnormality of bones, organs, or tissues of pelvis-----	3	E860	Accidental poisoning by alcohol-----	1
765	Difficult labor with disproportion, but no mention of abnormality of pelvis-----	1	E861	Accidental poisoning by cleansing and polishing agents-----	1
766	Difficult labor with malposition of fetus----	22	E864	Accidental poisoning by petroleum products and other solvents-----	3
767	Difficult labor with abnormality of forces of labor-----	2	E865	Accidental poisoning by pesticides, fertilizers, or plant food----	1
768	Difficult labor with other and unspecified complications-----	13	E867	Accidental poisoning by corrosives and caustics, not elsewhere classified-----	1
769	Other complications of pregnancy and childbirth-----	299	E868	Accidental poisoning by noxious foodstuffs and poisonous plants-----	1
770	Conditions of placenta-----	157	E869	Accidental poisoning by other and unspecified solid and liquid substances-----	18
771	Conditions of umbilical cord-----	24	E870	Accidental poisoning by gas distributed by pipeline-----	3
772	Birth injury without mention of cause-----	69	E871	Accidental poisoning by liquefied petroleum gas distributed in mobile containers-----	1
773	Termination of pregnancy-----	1	E873	Accidental poisoning by motor vehicle exhaust gas-----	57
774	Hemolytic disease of newborn with kernicterus-----	1	E874	Accidental poisoning by carbon monoxide from incomplete combustion of domestic fuels----	1
775	Hemolytic disease of newborn without mention of kernicterus-----	53	E875	Accidental poisoning by other carbon monoxide-----	28
776	Anoxic and hypoxic conditions not elsewhere classifiable-----	933	E876	Accidental poisoning by other gases and vapors-----	8
777	Immaturity, unqualified-----	436	E880	Fall on or from stairs or steps-----	91
778	Other conditions of fetus or newborn-----	73	E881	Fall on or from ladders or scaffolding-----	20
XVI. SYMPTOMS AND ILL-DEFINED CONDITIONS (780-796)			E882	Fall from or out of building or other structure-----	19
780	Certain symptoms referable to nervous system and special senses-----	6	E883	Fall into hole or other opening in surface-----	3
781	Other symptoms referable to nervous system and special senses-----	1	E884	Other fall from one level to another-----	72
782	Symptoms referable to cardiovascular and lymphatic system-----	33	E885	Fall on same level from slipping, stumbling, or tripping----	20
783	Symptoms referable to respiratory system-----	5	E886	Fall on same level from collision, pushing, or shoving by or with other person-----	3
784	Symptoms referable to upper gastrointestinal tract-----	1	E887	Other and unspecified fall-----	496
788	Other general symptoms-----	1	E890	Accident caused by conflagration in private dwelling-----	154
792	Uremia-----	11	E891	Accident caused by conflagration in other building or structure-----	16
794	Senility without mention of psychosis-----	14	E892	Accident caused by conflagration not in building or structure-----	8
795	Sudden death (cause unknown)-----	171	E893	Accident caused by ignition of clothing-----	17
796	Other ill-defined and unknown causes of morbidity and mortality-----	311	E894	Accident caused by ignition of highly inflammable material-----	13
E XVII. ACCIDENTS, POISONINGS, AND VIOLENCE (EXTERNAL CAUSE) (E800-E999)			E895	Accident caused by controlled fire in private dwelling-----	2
E802	Railway accident involving derailment without antecedent collision-----	1	E896	Accident caused by controlled fire in other building or structure-----	1
E805	Hit by rolling stock-----	18	E897	Accident caused by controlled fire not in building or structure-----	2
E810	Motor vehicle traffic accident involving collision with train-----	65	E898	Accident caused by other specified fires or flames-----	14
E812	Motor vehicle traffic accident involving collision with another motor vehicle-----	1,060	E899	Accident caused by unspecified fire-----	9
E813	Motor vehicle traffic accident involving collision with other vehicle-----	43	E900	Excessive heat-----	1
E814	Motor vehicle traffic accident involving collision with pedestrian-----	374	E901	Excessive cold-----	7
E815	Other motor vehicle traffic accident involving collision-----	368	E902	High and low air pressure-----	1
E816	Noncollision motor vehicle traffic accident due to loss of control-----	263	E904	Hunger, thirst, exposure, and neglect-----	7
E818	Other noncollision motor vehicle traffic accident-----	24	E906	Other accident: caused by animals-----	5
E819	Motor vehicle traffic accident of unspecified nature-----	78	E907	Lightning-----	4
E820	Motor vehicle nontraffic accident involving collision with moving object-----	21	E908	Cataclysm-----	4
E823	Motor vehicle nontraffic accident of other and unspecified nature-----	13	E910	Accidental drowning and submersion-----	231
E826	Pedal cycle accident-----	1	E911	Inhalation and ingestion of food causing obstruction or suffocation-----	94
E827	Other nonmotor road vehicle accident-----	3	E912	Inhalation and ingestion of other object causing obstruction or suffocation-----	33
E830	Accident to watercraft causing submersion-----	47	E913	Accidental mechanical suffocation-----	53
E831	Accident to watercraft causing other injury-----	1	E915	Foreign body accidentally entering other orifice-----	1
E832	Other accidental submersion or drowning in water transport-----	15	E916	Struck accidentally by falling object-----	44
E834	Other fall from one level to another in water transport-----	2	E917	Striking against or struck accidentally by objects-----	25
E837	Explosion, fire, burning and in water transport-----	1	E918	Caught accidentally in or between objects-----	16
E838	Other and unspecified water transport accident-----	1	E919	Overexertion and strenuous movements-----	5
E840	Accident to powered aircraft at take-off or landing-----	5	E920	Accidents caused by cutting or piercing instruments-----	7
E841	Accident to powered aircraft, other and unspecified-----	36	E921	Accidents caused by explosion of pressure vessel-----	3
E844	Other specified air transport accidents-----	1			
E851	Accidental poisoning by hormones and synthetic substitutes-----	1			
E852	Accidental poisoning by primarily systemic and hematologic agents-----	1			
E853	Accidental poisoning by analgesics and antipyretics-----	31			
E854	Accidental poisoning by other sedatives and hypnotics-----	30			
E855	Accidental poisoning by autonomic nervous system and psychotherapeutic drugs-----	2			
E857	Accidental poisoning by cardiovascular drugs-----	1			
E858	Accidental poisoning by gastrointestinal drugs-----	1			

TABLE 5.13
NUMBER OF DEATHS BY CAUSE
MICHIGAN RESIDENTS, 1970 (Continued)

ICDA LIST NUMBER	CAUSE OF DEATH	NUMBER
E922	Accident caused by firearm missiles-----	79
E923	Accident caused by explosive material-----	17
E924	Accident caused by hot substance, corrosive liquid, and steam-----	10
E925	Accident caused by electric current-----	32
E927	Vehicle accidents not elsewhere classifiable-----	10
E928	Machinery accidents not elsewhere classifiable-----	29
E929	Other and unspecified accidents-----	34
E930	Complications and misadventures in operative therapeutic procedures-----	14
E931	Complications and misadventures in other and unspecified therapeutic procedures-----	8
E932	Complications and misadventures in diagnostic procedures-----	2
E935	Complications and misadventures in other prophylactic procedures-----	1
E936	Complications and misadventures in other nontherapeutic procedures-----	2
E940	Late effect of motor vehicle accident-----	8
E941	Late effect of other transport accident-----	2
E943	Late effect of accidental fall-----	11
E946	Late effect of other accident-----	15
E947	Late effect of surgical operation-----	1
E949	Late effect of other surgical and medical procedures-----	1
E950	Suicide and self-inflicted poisoning by solid or liquid substances-----	120
E952	Suicide and self-inflicted poisoning by other gases-----	175
E953	Suicide and self-inflicted injury by hanging, strangulation, and suffocation---	164
E954	Suicide and self-inflicted injury by submersion (drowning)-----	21
E955	Suicide and self-inflicted injury by firearms and explosives-----	466
E956	Suicide and self-inflicted injury by cutting and piercing instruments-----	11
E957	Suicide and self-inflicted injury by jumping from high place-----	17
E958	Suicide and self-inflicted injury by other and unspecified means-----	18
E960	Fight, brawl, or rape-----	2
E961	Assault by corrosive or caustic substances, except poisoning-----	1
E962	Assault by poisoning-----	2
E963	Assault by hanging and strangulation-----	24
E964	Assault by submersion (drowning)-----	5
E965	Assault by firearms and explosives-----	634
E966	Assault by cutting and piercing instruments-----	109
E967	Assault by pushing from high place-----	2
E968	Assault by other and unspecified means-----	88
E970	Injury due to legal intervention by firearms-----	9
E980	Poisoning by solid or liquid substances, undetermined whether accidentally or purposely inflicted-----	24
E982	Poisoning by other gases, undetermined whether accidentally or purposely inflicted-----	5
E983	Hanging and strangulation, undetermined whether accidentally or purposely inflicted-----	1
E984	Submersion (drowning), undetermined whether accidentally or purposely inflicted-----	9
E985	Injury by firearms and explosives, undetermined whether accidentally or purposely inflicted-----	15
E987	Falling from high place, undetermined whether accidentally or purposely inflicted-----	2
E988	Injury by other and unspecified means, undetermined whether accidentally or purposely inflicted-----	40
E990	Injury due to war operations by fires and conflagrations-----	1
E991	Injury due to war operations by bullets and fragments-----	1
E999	Late effect of injury due to war operations-----	2
TOTAL		76,321

TABLE 5.14
VITAL STATISTICS BY SELECTED CITIES*
MICHIGAN RESIDENTS, 1970

AREA	POPULATION APRIL, 1970 CENSUS	LIVE BIRTHS BY RESIDENCE	RATE	ILLEGITIMATE LIVE BIRTHS BY RESIDENCE	RATE	DEATHS BY RESIDENCE	RATE	INFANT DEATHS BY RESIDENCE	RATE	FETAL DEATHS BY RESIDENCE	RATE
Allen Park	40,747	497	12.2	28	56.3	284	7.0	7	14.1	4	8.0
Ann Arbor	99,797	1,920	19.2	119	62.0	501	5.0	27	14.1	15	7.8
Battle Creek	38,931	892	22.9	176	197.3	564	14.5	38	42.6	13	14.6
Bay City	49,449	960	19.4	92	95.8	532	10.8	20	20.8	12	12.5
Birmingham	26,170	573	21.9	25	43.6	276	10.5	4	7.0	5	8.7
Dearborn	104,199	1,318	12.6	57	43.2	1,032	9.9	25	19.0	20	15.2
Dearborn Heights	80,069	1,340	16.7	63	47.0	454	5.7	14	10.4	5	3.7
Detroit	1,511,482	31,880	21.1	7,589	238.0	18,354	12.1	746	23.4	460	14.4
East Detroit	45,920	619	13.5	53	85.6	292	6.4	10	16.2	4	6.5
East Lansing	47,540	663	13.9	39	58.8	127	2.7	14	21.1	7	10.6
Ferndale	30,850	666	21.6	64	96.1	309	10.0	16	24.0	6	9.0
Flint	193,317	4,675	24.2	844	180.5	1,744	9.0	117	25.0	69	14.8
Garden City	41,864	721	17.2	41	56.9	192	4.6	16	22.2	6	8.3
Grand Rapids	197,649	3,761	19.0	603	160.3	2,215	11.2	77	20.5	53	14.1
Hamtramck	27,245	467	17.1	39	83.5	443	16.3	9	19.3	1	2.1
Highland Park	35,444	705	19.9	179	253.9	420	11.8	25	35.5	12	17.0
Holland (Pt)	26,337	461	17.5	26	56.4	232	8.8	9	19.5	9	19.5
Inkster	38,595	951	24.6	167	175.6	285	7.4	17	17.9	16	16.8
Jackson	45,484	1,008	22.2	134	132.9	611	13.4	23	22.8	11	10.9
Kalamazoo	85,555	1,742	20.4	217	124.6	718	8.4	21	12.1	25	14.4
Lansing	131,547	3,210	24.4	420	130.8	1,057	8.0	84	26.2	46	14.3
Lincoln Park	52,984	1,012	19.1	66	65.2	393	7.4	19	18.8	18	17.8
Livonia	110,109	1,510	13.7	71	47.0	550	5.0	33	21.9	15	9.9
Madison Heights	38,599	868	22.5	48	55.3	145	3.8	9	10.4	9	10.4
Midland	35,176	727	20.7	26	35.8	180	5.1	9	12.4	3	4.1
Muskegon	44,631	1,348	30.2	210	155.8	519	11.6	30	22.3	31	23.0
Oak Park	36,762	595	16.2	20	33.8	247	6.7	10	16.8	2	3.4
Pontiac	85,279	2,721	31.9	431	158.4	804	9.4	78	28.7	27	9.9
Portage	33,590	540	16.1	27	50.0	96	2.9	5	9.3	2	3.7
Port Huron	35,794	754	21.1	79	104.8	443	12.4	21	27.9	6	8.0
Roseville	60,529	1,240	20.5	71	57.3	305	5.0	21	16.9	8	6.5
Royal Oak	85,499	1,483	17.3	71	47.9	642	7.5	25	16.9	16	10.8
Saginaw	91,849	2,272	24.7	463	203.8	995	10.8	47	20.7	27	11.9
St. Clair Shores	88,093	1,249	14.2	68	54.4	545	6.2	24	19.2	18	14.4
Southfield	69,285	902	13.0	28	31.0	426	6.1	11	12.2	3	3.3
Southgate	33,909	637	18.8	24	37.7	145	4.3	12	18.8	6	9.4
Sterling Heights	61,365	1,590	25.9	43	27.0	230	3.7	23	14.5	16	10.1
Taylor	70,020	1,791	25.6	78	43.6	311	4.4	40	22.3	16	8.9
Troy	39,419	810	20.5	33	40.7	204	5.2	15	18.5	8	9.9
Warren	179,260	3,210	17.9	152	47.4	870	4.9	58	18.1	31	9.7
Westland	86,749	2,059	23.7	106	51.5	319	3.7	31	15.1	24	11.7
Wyandotte	41,061	706	17.2	34	48.2	369	9.0	15	21.2	11	15.6
Wyoming	56,560	1,123	19.9	64	57.0	354	6.3	25	22.3	16	14.2
Ypsilanti	29,538	666	22.5	58	87.1	145	4.9	13	19.5	9	13.5

*25,000 population or over