

# 2018 Minnesota Health Statistics

ANNUAL SUMMARY

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## **2018 MN Health Statistics Annual Summary**

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**Table 1. Percent change between 2017 and 2018 selected Minnesota Health Statistics for Minnesota residents.**

<b>Category</b>	<b>2017</b>	<b>2018</b>	<b>Percent Change</b>
Total Population	5,576,606	5,611,179	0.6%
Population of Females 15-44	1,066,806	1,074,005	0.7%
Total Pregnancies to MN Residents	78,227	76,636	-2.0%
Live Births to MN Residents	68,603	67,348	-1.8%
Birth Rate (births per 1,000 total MN population)	12.3	12.0	-2.4%
Pregnancy Rate (pregnancies per 1,000 females ages 15-44)	73.3	71.4	-2.7%
Fertility Rate (births per 1,000 Females Ages 15-44)	64.3	62.7	-2.5%
Births to Unmarried Mothers (%)	32.3%	31.9%	-1.2%
Low birthweight (Less than 2,500 grams)	6.6%	6.9%	4.5%
Preterm (Less than 37 weeks gestation) <sup>1</sup>	8.8%	8.9%	1.1%
Fetal Deaths <sup>2</sup>	406	392	-3.4%
Infant Deaths (Infants aged < 1 year)	329	342	4.0%
Neonatal Deaths (Infants aged < 28 days)	225	230	2.2%
Postneonatal Deaths (Infants aged 28 days to < 1 year)	104	112	7.7%
Fetal Mortality Rate (per 1,000 live births + Fetal Deaths)	5.2	5.1	-1.4%
Infant Mortality Rate (per 1,000 live births)	4.8	5.1	5.9%
Neonatal Mortality Rate (per 1,000 live births)	3.3	3.4	4.1%
Postneonatal Mortality Rate (per 1,000 live births)	1.5	1.7	9.7%
All Deaths	44,361	44,730	0.8%
Death Rate (per 1,000 Total MN Population)	8.0	8.0	0.2%
Cancer Deaths (Malignant Neoplasms)	9,890	9,906	0.2%
Heart Disease Deaths	8,230	8,401	2.1%
Unintentional Injury Deaths	2,789	2,811	0.8%
Alzheimer's Disease Deaths	2,473	2,435	-1.5%
Chronic Lower Respiratory Disease Deaths	2,449	2,350	-4.0%
Stroke Deaths (Cerebrovascular Diseases)	2,248	2,268	0.9%
Diabetes Deaths	1,311	1,308	-0.2%
Suicide Deaths (Intentional Self-harm)	781	737	-5.6%

<sup>1</sup> Based on Clinical Estimate of Gestation, all live births.

<sup>2</sup> Includes all fetal deaths regardless of gestational age.

-- For prenatal care, the 2016 GINDEX measure is not comparable to the 2017 APNCU index. See Introduction and Appendix B for more information.

**Table 2. Selected Demographic and Socioeconomic Characteristics of Minnesota Residents, Changes from 2017 to 2018**

Category	2017	2018	Percent Change
Total Population	5,576,606	5,611,179	0.6%
<b>Age groups</b>			
Population < 5 years	355,231	355,291	0.0%
Population 0-19 years	1,439,647	1,444,186	0.3%
Population >= 65 years	860,209	889,802	3.4%
<b>Race/ethnicity<sup>1</sup></b>			
White, non-Hispanic	4,519,243	4,524,531	0.1%
African American, non-Hispanic	390,257	406,460	4.2%
American Indian, non-Hispanic	68,049	68,556	0.7%
Asian/Pacific Islander, non-Hispanic	297,650	302,349	1.6%
Hispanic/Latino (any race)	301,407	309,283	2.6%
<b>Socioeconomic characteristics<sup>2</sup></b>			
Adults 25 years with HS diploma/GED or less	31.7%	30.9%	-2.5%
Total population living in poverty	9.5%	9.6%	1.1%
Kids < 18 living in poverty	11.3%	11.7%	3.5%
Kids < 18 living in single-parent headed households	25.1%	25.6%	2.0%
Unemployed (annual average)	3.6%	3.4%	-5.6%
Median household income	\$68,388.00	\$70,315.00	2.8%
Owner occupied houses	75.0%	71.5%	-4.7%
<b>Rural/urban residence<sup>3</sup></b>			
Large urban metropolitan area (population >= 1,000,000 and largest city >= 250,000 population)	1,799,998	1,809,638	0.5%
Large suburban metropolitan area (population >= 1,000,000 & largest city < 250,000)	1,670,016	1,687,303	1.0%
Medium metropolitan area (county with population 250,000-999,999)	235,498	235,591	0.0%
Small metropolitan area (county with population < 250,000)	630,826	635,312	0.7%
Micropolitan area (county population 10,000-49,999 and urban area with at least 2,500 population)	664,265	666,686	0.4%
Non-core (Rural) area (county with population < 49,999 and no urban area with > 2,500 population)	576,003	576,649	0.1%

<sup>1</sup> Annual Estimates are bridged-race Vintage 2018 postcensal estimates of the July 1 resident population. These estimates were prepared by the Census Bureau in collaboration with NCHS. Bridged race estimates created for the 5 race or Hispanic categories. Thus, there are no population estimates for other/unknown. For more information or access to the data, see: <https://wonder.cdc.gov/wonder/help/bridged-race.html>

<sup>2</sup> From the American Community Survey, 1-year estimates files. These estimates may be slightly different than the 5-year estimates in the County Health Tables or Vital Statistics Trends reports.

<sup>3</sup> Classification is based on the National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties. See [https://www.cdc.gov/nchs/data\\_access/urban\\_rural.htm](https://www.cdc.gov/nchs/data_access/urban_rural.htm) for more detail.

**Table 3. State Population by Race/Ethnicity and Age Group, MN Residents, 2018**

	Non-Hispanic				Hispanic	TOTAL
	White	Black	American Indian	Asian/Pacific Islander		
<b>&lt; 1 year</b>	50,596	6,759	1,094	4,195	5,922	68,566
<b>1 - 4 years</b>	200,638	35,440	5,231	19,749	25,667	286,725
<b>5 - 9 years</b>	252,101	43,166	6,471	25,101	33,595	360,434
<b>10 - 14 years</b>	264,252	41,916	6,012	24,474	33,998	370,652
<b>15 - 19 years</b>	264,841	34,621	5,712	23,066	29,569	357,809
<b>20 - 24 years</b>	269,797	32,871	5,495	25,134	26,768	360,065
<b>25 - 29 years</b>	278,221	35,809	5,615	32,067	24,822	376,534
<b>30 - 34 years</b>	290,588	33,607	4,938	31,047	24,211	384,391
<b>35 - 39 years</b>	299,130	30,334	4,371	25,764	24,091	383,690
<b>40 - 44 years</b>	257,136	23,793	3,484	20,879	21,283	326,575
<b>45 - 49 years</b>	275,527	21,842	3,678	18,138	17,737	336,922
<b>50 - 54 years</b>	305,354	18,323	3,719	14,029	13,144	354,569
<b>55 - 59 years</b>	353,556	16,000	3,846	11,228	10,292	394,922
<b>60 - 64 years</b>	328,117	12,313	3,186	9,037	6,870	359,523
<b>65 - 69 years</b>	272,621	8,072	2,290	6,897	4,602	294,482
<b>70 - 74 years</b>	201,879	4,933	1,538	4,561	2,787	215,698
<b>75 - 79 years</b>	144,239	3,204	937	3,069	1,705	153,154
<b>80 - 84 years</b>	99,360	1,808	536	1,985	1,095	104,784
<b>85+ years</b>	116,578	1,649	403	1,929	1,125	121,684
<b>TOTAL</b>	4,524,531	406,460	68,556	302,349	309,283	5,611,179

**NOTES:** Annual Estimates are bridged-race Vintage 2018 postcensal estimates of the July 1 resident population. These estimates were prepared by the Census Bureau in collaboration with NCHS. Bridged race estimates created for the 5 race or Hispanic categories. Thus, there are no population estimates for other/unknown. For more information or access to the data, see: <https://wonder.cdc.gov/wonder/help/bridged-race.html>

Estimates by sex are on Table 4.



Table 4. State Population by Race/Ethnicity, Age Group, and Sex, MN Residents, 2018.

<u>Females</u>	White	Black	American Indian	Asian/Pacific Islander	Hispanic	TOTAL
< 1 year	24,693	3,312	531	2,042	2,907	33,485
1 - 4 years	97,786	17,376	2,512	9,765	12,536	139,975
5 - 9 years	122,748	21,165	3,239	12,381	16,495	176,028
10 - 14 years	129,550	20,678	2,968	12,146	16,771	182,113
15 - 19 years	129,626	16,748	2,759	11,499	14,520	175,152
20 - 24 years	133,745	16,081	2,674	12,445	12,825	177,770
25 - 29 years	135,313	17,333	2,781	15,867	11,694	182,988
30 - 34 years	142,800	16,347	2,462	15,761	11,248	188,618
35 - 39 years	147,040	14,580	2,227	13,766	11,008	188,621
40 - 44 years	126,888	11,628	1,748	10,809	9,783	160,856
45 - 49 years	136,666	10,513	1,892	9,358	8,430	166,859
50 - 54 years	153,124	8,549	1,932	7,203	6,229	177,037
55 - 59 years	178,124	7,698	2,021	5,865	5,017	198,725
60 - 64 years	166,220	6,053	1,693	4,957	3,350	182,273
65 - 69 years	139,420	4,233	1,303	3,834	2,386	151,176
70 - 74 years	105,667	2,650	886	2,543	1,448	113,194
75 - 79 years	78,032	1,902	526	1,754	943	83,157
80 - 84 years	56,396	1,099	316	1,183	609	59,603
85+ years	75,577	1,033	266	1,217	655	78,748
<b>TOTAL</b>	<b>2,279,415</b>	<b>198,978</b>	<b>34,736</b>	<b>154,395</b>	<b>148,854</b>	<b>2,816,378</b>
<b><u>Males</u></b>						
< 1 year	25,903	3,447	563	2,153	3,015	35,081
1 - 4 years	102,852	18,064	2,719	9,984	13,131	146,750
5 - 9 years	129,353	22,001	3,232	12,720	17,100	184,406
10 - 14 years	134,702	21,238	3,044	12,328	17,227	188,539
15 - 19 years	135,215	17,873	2,953	11,567	15,049	182,657
20 - 24 years	136,052	16,790	2,821	12,689	13,943	182,295
25 - 29 years	142,908	18,476	2,834	16,200	13,128	193,546
30 - 34 years	147,788	17,260	2,476	15,286	12,963	195,773
35 - 39 years	152,090	15,754	2,144	11,998	13,083	195,069
40 - 44 years	130,248	12,165	1,736	10,070	11,500	165,719
45 - 49 years	138,861	11,329	1,786	8,780	9,307	170,063
50 - 54 years	152,230	9,774	1,787	6,826	6,915	177,532
55 - 59 years	175,432	8,302	1,825	5,363	5,275	196,197
60 - 64 years	161,897	6,260	1,493	4,080	3,520	177,250
65 - 69 years	133,201	3,839	987	3,063	2,216	143,306
70 - 74 years	96,212	2,283	652	2,018	1,339	102,504
75 - 79 years	66,207	1,302	411	1,315	762	69,997
80 - 84 years	42,964	709	220	802	486	45,181
85+ years	41,001	616	137	712	470	42,936
<b>TOTAL</b>	<b>2,245,116</b>	<b>207,482</b>	<b>33,820</b>	<b>147,954</b>	<b>160,429</b>	<b>2,794,801</b>

**Table 5. Resident Live Births, Crude Birth Rates<sup>1</sup>, Fertility Rates<sup>2</sup>, Minnesota and United States, 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1980, 1985, 1990, 1995, 2000, 2005-2018.**

Year	Live Births		Crude Birth Rate <sup>1</sup>		Fertility Rate <sup>2</sup>	
	Minnesota	U.S.	Minnesota	U.S.	Minnesota	U.S.
1940	52,915	2,559,000	19.0	19.4	81.0	79.9
1945	54,656	2,858,000	20.9	20.4	85.1	85.9
1950	75,078	3,632,000	25.2	24.1	119.1	106.2
1955	81,532	4,097,000	25.7	25.0	130.1	118.3
1960	87,523	4,257,850	25.6	23.7	136.0	118.0
1965	70,810	3,760,358	19.7	19.4	105.9	96.3
1970	68,449	3,731,386	18.0	18.4	88.4	89.7
1975	56,463	3,144,198	14.4	14.6	65.4	66.0
1980	67,843	3,612,258	16.6	15.9	70.8	68.4
1985	67,412	3,760,561	16.1	15.8	68.0	66.2
1990	67,985	4,158,212	15.5	16.7	66.3	70.9
1995	63,259	3,899,589	13.7	14.7	60.1	65.6
2000	67,451	4,058,814	13.7	14.7	62.3	67.5
2005	70,920	4,140,419	13.8	14.0	64.9	66.7
2006	73,515	4,265,555	14.2	14.2	68.6	68.5
2007	73,675	4,316,233	14.2	14.3	69.6	69.5
2008	72,382	4,251,095	13.9	13.9	69.0	68.4
2009	70,617	4,130,665	13.4	13.5	67.5	66.7
2010	68,407	3,999,386	12.9	13.0	65.4	64.1
2011	68,416	3,953,593	12.8	12.7	65.5	63.2
2012	68,783	3,952,841	12.8	12.6	65.7	63.0
2013	69,183	3,932,181	12.8	12.4	65.9	62.5
2014	69,916	3,988,076	12.8	12.5	66.4	62.9
2015	69,835	3,978,497	12.7	12.4	66.3	62.5
2016	69,746	3,945,875	12.6	12.2	66.2	62.0
2017	68,603	3,855,500	12.3	11.8	64.3	60.3
2018	67,348	3,791,712	12.0	11.6	62.7	59.1

<sup>1</sup> Live Births per 1,000 total population.

<sup>2</sup> Live Births per 1,000 Female Population Ages 15-44.

**Table 6. Numbers and Rates of Resident Deaths, Infant and Neonatal Deaths; Minnesota and United States,<sup>1</sup> 1940, 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1980, 1985, 1990, 1995, 2000, 2005-2018.**

Year	Deaths				Infant Deaths				Neonatal Deaths			
	Minnesota		United States		Minnesota		United States		Minnesota		United States	
	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>3</sup>	Number	Rate <sup>3</sup>	Number	Rate <sup>4</sup>	Number	Rate <sup>4</sup>
1950	27,897	9.4	1,452,454	9.6	1,876	25.0	103,825	29.2	1,430	19.0	72,855	20.5
1955	28,574	9.0	1,528,717	9.3	1,779	21.8	106,903	26.4	1,386	17.0	77,351	19.1
1960	31,596	9.3	1,711,982	9.5	1,881	21.5	110,873	26.0	1,397	16.0	79,733	18.7
1965	32,477	9.0	1,828,136	9.4	1,432	20.2	92,866	24.7	1,075	15.2	66,419	17.7
1970	33,919	8.9	1,921,031	9.5	1,203	17.6	74,667	20.0	944	13.8	56,279	15.1
1975	32,686	8.3	1,892,879	8.8	771	13.7	50,525	16.1	582	10.3	36,416	11.6
1980	33,415	8.2	1,989,841	8.8	679	10.0	45,526	12.6	421	6.2	30,618	8.5
1985	34,793	0.0	2,086,440	8.7	591	8.8	40,030	10.6	364	5.4	26,179	7.0
1990	34,739	7.9	2,148,463	8.6	796	7.3	38,100	9.2	295	4.3	24,309	5.8
1995	37,427	8.1	2,312,132	8.8	427	6.8	29,583	7.6	255	4.0	19,155	4.9
2000	37,595	7.6	2,403,351	8.7	377	5.6	28,035	6.9	252	3.7	18,776	4.6
2005	37,498	7.3	2,447,903	8.0	363	5.1	28,534	6.9	232	3.3	18,834	4.6
2006	36,963	7.2	2,426,264	8.1	381	5.2	28,527	6.7	243	3.3	18,989	4.5
2007	37,086	7.1	2,423,712	8.0	407	5.5	29,138	6.8	278	3.8	19,058	4.4
2008	38,431	7.4	2,471,984	8.1	433	6.0	28,059	6.6	275	3.8	18,211	4.3
2009	37,801	7.2	2,437,163	7.9	324	4.5	26,412	6.4	188	2.7	17,255	4.2
2010	38,857	7.3	2,468,435	8.0	309	4.5	24,586	6.2	210	3.1	16,188	4.1
2011	39,799	7.4	2,515,458	8.1	339	5.0	23,985	6.1	224	3.3	15,954	4.0
2012	40,020	7.4	2,543,279	8.1	347	5.0	23,629	6.0	249	3.6	15,850	4.0
2013	40,981	7.6	2,596,993	8.2	349	5.0	23,440	6.0	248	3.6	15,867	4.0
2014	41,271	7.6	2,626,418	8.2	352	5.0	23,215	5.8	233	3.3	15,720	3.9
2015	42,652	7.8	2,712,630	8.4	361	5.2	23,455	5.9	262	3.8	15,652	3.9
2016	43,050	7.8	2,744,248	8.5	357	5.1	23,161	5.9	242	3.5	15,282	3.9
2017	44,361	8.0	2,813,503	8.6	329	4.8	22,335	5.8	225	3.3	14,821	3.8
2018	44,730	8.0	N/A		342	4.5	N/A		230	3.0	N/A	

<sup>1</sup> 2018 US rates are based on provisional data; final counts are not yet available.

<sup>2</sup> Deaths per 1,000 Population.

<sup>3</sup> Infant Deaths per 1,000 Live Births.

<sup>4</sup> Neonatal Deaths (infant born alive and died within first 28 days) per 1,000 Live Births

**Table 7. Summary of Selected Vital Statistics by Race and Hispanic Ethnicity<sup>1</sup>, Minnesota Residents, 2018.**

	Non-Hispanic					Hispanic	TOTAL
	White	African American	American Indian	Asian/Pacific Isl.	Other/Unknown		
<b>Fertility (counts)</b>							
Total pregnancies	50,837	11,225	1,311	6,198	1,481	5,584	76,636
Live births	46,844	8,775	1,149	5,463	270	4,847	67,348
Induced abortions <sup>2</sup>	3,764	2,365	150	702	1,206	709	8,896
Fetal deaths <sup>3</sup>	229	85	12	33	5	28	392
<i>Late fetal deaths</i>	98	39	8	14	2	11	172
<b>Natality (percents)</b>							
First-time mothers	37.5%	26.5%	26.5%	34.8%	25.9%	32.8%	35.2%
Late PNC	1.8%	6.3%	15.8%	3.2%	8.9%	5.9%	3.1%
Inadequate PNC	6.1%	19.9%	32.9%	13.7%	17.0%	16.6%	9.7%
C-section (any) delivery	27.0%	29.4%	30.8%	22.5%	25.9%	26.1%	27.0%
Low birthweight	6.0%	10.1%	8.1%	8.4%	9.6%	7.3%	6.9%
Preterm	8.6%	9.4%	13.6%	8.5%	11.9%	9.5%	8.9%
<b>Mortality (counts)</b>							
Female deaths	20,659	712	280	373	18	182	22,224
Male deaths	20,628	855	322	404	27	270	22,506
Total deaths	41,287	1,567	602	777	45	452	44,730
<b>Perinatal Mortality</b>							
Perinatal deaths <sup>5</sup> (Late fetal + Early neonatal)	197	77	10	31	6	35	356
Total infant deaths <sup>6</sup>	186	77	12	27	6	34	342
Neonatal deaths ( <i>&lt; 28 days</i> )	120	52	2	24	5	27	230
<i>Early neonatal death</i> ( <i>&lt; 7 days</i> )	99	38	2	17	4	24	184
Postneonatal deaths ( <i>28 days - 1 yr</i> )	66	25	10	3	1	7	112

<sup>1</sup> Race/ethnicity based on self-identified race/ethnicity of woman.

<sup>2</sup> Race and ethnicity data for abortions are not collected and processed the same as for natality data. The other/unknown race category for abortion includes those with multiple races, while multiple races are probabilistically assigned to one of the other four race categories. Thus, the other/unknown race category for natality statistics only includes those with unknown race. Abortion

<sup>3</sup> Fetal deaths of less than 20 weeks gestation are not included in the counts. Late fetal deaths are a subset of fetal deaths occurring at 28 weeks or later gestation.

<sup>4</sup> Perinatal deaths include late fetal deaths (28 or more weeks gestation) plus early neonatal deaths (under 7 days of age).

<sup>5</sup> Infant deaths are period events that occurred in the reporting period and are included in the mortality files.

**NOTE:** Counts based on <20 events should not be used to calculate rates due to instability of the estimates.

**Table 8. Summary of Selected Vital Statistics by Urban/Rural Classification<sup>1</sup>, Minnesota Residents, 2018.**

	Metropolitan				Non-Metropolitan (Rural)		TOTAL
	Large Urban	Large Suburban	Medium	Small	Micro	Non-Core	
<b>Fertility (counts)</b>							
Total pregnancies	28,410	22,201	2,451	8,621	8,164	6,779	76,626
Live births	23,358	19,830	2,171	7,896	7,622	6,464	67,341
Induced abortions	4,906	2,258	264	683	498	284	8,893
Fetal deaths <sup>2</sup>	146	113	16	42	44	31	392
<i>Late fetal deaths</i> <i>(&gt; 28 weeks)</i>	65	40	6	21	26	14	172
<b>Nativity (percents)</b>							
First-time mothers	38.0%	35.2%	37.9%	33.5%	31.3%	31.5%	35.2%
Late PNC	3.8%	2.5%	2.8%	1.6%	3.3%	3.9%	3.1%
Inadequate PNC	12.2%	7.9%	8.0%	7.4%	10.1%	9.7%	9.8%
C-section	25.9%	28.0%	25.7%	25.7%	27.5%	28.9%	27.0%
Low birthweight	7.6%	6.5%	5.8%	6.2%	6.5%	6.8%	6.9%
Preterm	9.0%	9.2%	9.0%	8.1%	8.3%	9.2%	8.9%
<b>Mortality (counts)<sup>3</sup></b>							
Female deaths	6,708	5,278	1,249	2,539	3,264	3,180	22,218
Male deaths	6,451	5,392	1,272	2,609	3,438	3,334	22,496
Total deaths	13,159	10,670	2,521	5,148	6,702	6,514	44,714
<b>Perinatal Mortality</b>							
Perinatal deaths <sup>4</sup> (Late fetal + Early neonatal)	135	82	8	49	50	32	356
Total infant deaths <sup>5</sup>	128	83	8	48	41	33	341
Neonatal deaths (< 28 days)	89	52	2	35	31	21	230
<i>Early neonatal death</i> <i>(&lt; 7 days)</i>	70	42	2	28	24	18	184
Postneonatal deaths (28 days - 1 yr)	39	31	6	13	10	12	111

<sup>1</sup>Classification is based on the National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties. See Introduction to this report or [https://www.cdc.gov/nchs/data\\_access/urban\\_rural.htm](https://www.cdc.gov/nchs/data_access/urban_rural.htm). 7 are missing county of residence.

<sup>2</sup>Fetal deaths of less than 20 weeks gestation are not included in the counts. Late fetal deaths are a subset of fetal deaths occurring at 28 weeks or later gestation.

<sup>3</sup>Total mortality counts do not include 16 that are missing geography, 1 infant missing geography.

<sup>4</sup>Perinatal deaths include late fetal deaths (28 or more weeks gestation) plus early neonatal deaths (under 7 days of age).

<sup>5</sup>Infant deaths are period events that occurred in the reporting period and are from the annual mortality file.

**NOTE:** Counts based on <20 events should not be used to calculate rates due to instability of the estimates.

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## Nativity Tables

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County	Total <sup>1</sup>	Births to MN County Residents across Place of Birth			Births Occurring in EACH County across Place of Residence		
		Within County	Outside County of Residence		Total <sup>2</sup>	Other Minnesota Residents	Out of State Residents
			Within Minnesota	Outside Minnesota			
<b>State Total</b>	<b>67,339</b>	<b>40,800</b>	<b>24,006</b>	<b>2,536</b>	<b>66,413</b>	<b>24,006</b>	<b>1,607</b>
Aitkin	122	50	72	0	63	12	1
Anoka	4,241	1,922	2,307	12	3,133	1,202	9
Becker	431	311	57	63	511	197	3
Beltrami	641	588	31	22	881	292	1
Benton	558	5	552	1	6	1	0
Big Stone	70	46	10	14	98	24	28
Blue Earth	734	651	83	0	1,396	739	6
Brown	290	219	70	1	390	167	4
Carlton	358	64	292	2	126	61	1
Carver	1,148	616	529	3	1,276	658	2
Cass	293	4	286	3	4	0	0
Chippewa	164	83	81	0	120	36	1
Chisago	599	277	265	57	625	338	10
Clay	820	3	14	803	3	0	0
Clearwater	114	9	103	2	9	0	0
Cook	45	4	41	0	4	0	0
Cottonwood	133	73	48	12	99	26	0
Crow Wing	652	493	157	2	686	191	2
Dakota	5,139	2,069	3,054	16	3,085	980	36
Dodge	254	5	249	0	5	0	0
Douglas	431	376	54	1	618	240	2
Faribault	156	50	105	1	79	20	9
Fillmore	247	36	159	52	36	0	0
Freeborn	304	207	90	7	298	58	33
Goodhue	518	214	297	7	310	47	49
Grant	47	0	44	3	0	0	0
Hennepin	15,844	14,138	1,668	38	21,251	6,996	117
<i>Bloomington</i>	999	5	991	3	5	0	0
<i>Edina</i>	498	256	241	1	3,157	2,891	10
<i>Minneapolis</i>	5,692	3,699	1,972	21	9,523	5,742	82
<i>Richfield</i>	503	4	499	0	4	0	0
Houston	183	3	5	175	3	0	0
Hubbard	200	69	124	7	108	38	1
Isanti	475	181	292	2	300	118	1
Itasca	440	338	102	0	383	45	0
Jackson	98	1	74	23	1	0	0
Kanabec	178	105	73	0	213	104	4
Kandiyohi	555	478	77	0	693	214	1
Kittson	53	2	27	24	2	0	0
Koochiching	91	37	52	2	37	0	0
Lac Qui Parle	66	2	45	19	2	0	0
Lake	104	3	101	0	3	0	0
Lake of the Woods	33	0	31	2	0	0	0
Le Sueur	324	0	324	0	0	0	0
Lincoln	70	0	32	38	0	0	0
Lyon	356	309	10	37	511	201	1
McLeod	393	256	137	0	417	159	2
Mahnomen	90	6	75	9	6	0	0



**Table 1. Resident Live Births Distributed by County of Occurrence (n=67,348); Live Births by County of Occurrence Distributed by Residence (n=66,420), Minnesota 2018.**

County	Births to MN County Residents across Place of Birth				Births Occurring in EACH County across Place of Residence		
	Total <sup>1</sup>	Within County	<i>Outside County of Residence</i>		Total <sup>2</sup>	Other Minnesota Residents	Out of State Residents
			Within Minnesota	Outside Minnesota			
Marshall	81	2	24	55	2	0	0
Martin	244	179	60	5	255	49	27
Meeker	294	122	170	2	140	18	0
Mille Lacs	302	20	279	3	56	34	2
Morrison	355	106	247	2	127	21	0
Mower	539	339	200	0	374	25	10
Murray	81	1	57	23	1	0	0
Nicollet	340	7	332	1	73	65	1
Nobles	386	298	18	70	396	86	12
Norman	81	1	8	72	2	1	0
Olmsted	2,035	2,011	15	9	3,368	1,217	140
Otter Tail	612	351	209	52	431	74	6
Pennington	167	132	2	33	234	95	7
Pine	225	6	219	0	7	1	0
Pipestone	140	59	31	50	77	11	7
Polk	435	115	29	291	175	59	1
Pope	121	47	74	0	106	59	0
Ramsey	7,513	4,964	2,517	32	8,997	3,833	200
<i>St. Paul</i>	<i>4,811</i>	<i>2,310</i>	<i>2,484</i>	<i>17</i>	<i>6,306</i>	<i>3,820</i>	<i>176</i>
Red Lake	43	1	30	12	1	0	0
Redwood	199	76	117	6	102	26	0
Renville	180	42	138	0	49	6	1
Rice	728	282	444	2	336	54	0
Rock	97	40	1	56	93	44	9
Roseau	173	145	15	13	177	26	6
St. Louis	1,813	1,769	42	2	2,850	593	488
<i>Duluth</i>	<i>956</i>	<i>936</i>	<i>20</i>	<i>0</i>	<i>2,318</i>	<i>897</i>	<i>485</i>
Scott	1,717	769	943	5	1,299	523	7
Sherburne	1,210	152	1,055	3	407	255	0
Sibley	175	2	173	0	2	0	0
Stearns	2,057	1,863	188	6	3,225	1,355	7
Steele	385	286	97	2	470	184	0
Stevens	124	75	49	0	97	22	0
Swift	114	1	113	0	1	0	0
Todd	322	228	93	1	585	356	1
Traverse	40	0	21	19	2	0	0
Wabasha	233	2	227	4	130	64	2
Wadena	180	64	115	1	1	0	0
Waseca	217	1	215	1	0	0	0
Washington	2,732	1,087	1,604	41	2,757	1,386	284
Watonwan	168	1	167	0	1	0	0
Wilkin	66	21	9	36	70	3	46
Winona	473	203	127	143	242	22	17
Wright	1,767	613	1,153	1	880	265	2
Yellow Medicine	113	14	79	20	24	10	0

<sup>1</sup> County or residence or occurrence is missing for nine records.

<sup>2</sup> Total births occurring in each county includes births to MN county residents within county of residence (second column).

**Table 2. Counts and Percentages for Characteristics of Birth Mother by Race/Ethnicity, MN Residents, 2018.**

Total births in each group	Non-Hispanic										TOTAL	
	White		African American		American Indian		Asian/Pacific Islander		Hispanic/Latino			
	#	Col %	#	Col %	#	Col %	#	Col %	#	Col %	#	Col %
	46,844		8,775		1,149		5,463		4,847		67,348	
<b>Age of Mother<sup>1</sup></b>												
< 18 years	137	0.3%	82	0.9%	42	3.7%	31	0.6%	123	2.5%	422	0.6%
18-19 years	682	1.5%	253	2.9%	76	6.6%	103	1.9%	273	5.6%	1,392	2.1%
<b>Teen Mom Total</b>	<b>819</b>	<b>1.7%</b>	<b>335</b>	<b>3.8%</b>	<b>118</b>	<b>10.3%</b>	<b>134</b>	<b>2.5%</b>	<b>396</b>	<b>8.2%</b>	<b>1,814</b>	<b>2.7%</b>
20-24 years	5,240	11.2%	1,566	17.8%	281	24.5%	795	14.6%	1,221	25.2%	9,136	13.6%
25-29 years	14,204	30.3%	2,621	29.9%	368	32.0%	1,617	29.6%	1,395	28.8%	20,289	30.1%
30-34 years	17,497	37.4%	2,643	30.1%	257	22.4%	1,795	32.9%	1,043	21.5%	23,305	34.6%
35-39 years	7,844	16.7%	1,252	14.3%	106	9.2%	938	17.2%	632	13.0%	10,828	16.1%
40-44 years	1,153	2.5%	289	3.3%	19	--	169	3.1%	155	3.2%	1,797	2.7%
45+ years	84	0.2%	68	0.8%	0	--	13	--	5	--	172	0.3%
<b>Educational Attainment<sup>2</sup></b>												
< High School	824	2.0%	1,771	25.8%	134	17.9%	530	11.7%	1,048	32.4%	4,335	7.7%
HS Diploma / GED	3,862	9.7%	1,658	32.5%	298	48.4%	703	17.6%	762	34.9%	7,307	14.0%
Some College, No degree	6,327	13.1%	1,591	18.2%	147	28.2%	673	9.8%	591	17.2%	9,351	13.7%
Associate Degree	6,235	10.9%	659	7.3%	79	16.2%	450	6.0%	221	5.4%	7,661	9.7%
Bachelor's Degree	15,537	26.3%	794	8.4%	48	8.5%	1,239	17.0%	421	9.9%	18,058	22.3%
Graduate / Professional Degree	7,912	16.1%	312	3.4%	27	2.9%	914	14.5%	165	3.6%	9,345	13.2%
Unknown	88	0.2%	89	1.0%	17	--	25	0.5%	22	0.5%	341	0.5%
<b>Urban/Rural Residence<sup>3</sup></b>												
Large Urban Metro Area	12,170	26.0%	5,314	60.6%	204	17.8%	3,547	64.9%	2,018	41.6%	23,358	34.7%
Large Suburban Metro Area	15,337	32.7%	1,826	20.8%	114	9.9%	1,282	23.5%	1,213	25.0%	19,830	29.4%
Medium/ Small Metro Area	8,083	17.3%	1,081	12.3%	154	13.4%	299	5.5%	401	8.3%	10,067	14.9%
Micropolitan Area	5,697	12.2%	472	5.4%	412	35.9%	233	4.3%	784	16.2%	7,622	11.3%
Noncore (Rural) Area	5,553	11.9%	81	0.9%	265	23.1%	101	1.8%	431	8.9%	6,464	9.6%
<b>Nativity Status</b>												
US born	45,333	96.8%	3,554	40.5%	1,134	98.7%	1,656	30.3%	2,118	43.7%	53,976	80.1%
Foreign-born	1,428	3.0%	5,088	58.0%	10	--	3,783	69.2%	2,645	54.6%	13,016	19.3%

<sup>1</sup>Seven women are missing age and not included in this variable.

<sup>2</sup>Educational attainment calculated for mothers age 25 years and older.

<sup>3</sup>Seven are missing county of residence and are not included in this variable. See Appendix B for more information and definitions of each geographic area type.

**Table 3. Counts and Percentages<sup>1</sup> for Selected Pregnancy Characteristics by Race/Ethnicity, MN Residents, 2018.**

Total births in each group	Non-Hispanic										TOTAL	
	White		African American		American Indian		Asian/Pacific Islander		Hispanic/Latino		#	Col %
	#	Col %	#	Col %	#	Col %	#	Col %	#	Col %		
	46,844		8,775		1,149		5,463		4,847		67,348	
<b>Previous Live Births</b>												
None	17,550	37.5%	2,321	26.5%	305	26.5%	1,901	34.8%	1,590	32.8%	23,737	35.2%
One	16,082	34.3%	2,172	24.8%	277	24.1%	1,691	31.0%	1,389	28.7%	21,684	32.2%
Two or more	13,153	28.1%	4,277	48.7%	563	49.0%	1,868	34.2%	1,862	38.4%	21,844	32.4%
<b>Prepregnancy BMI<sup>2</sup></b>												
Underweight (BMI < 19.0)	1,399	3.0%	352	4.0%	19	--	329	6.0%	119	2.5%	2,228	3.3%
Acceptable (BMI 19.0 - 24.9)	20,151	43.0%	2,722	31.0%	352	30.6%	2,509	45.9%	1,439	29.7%	27,260	40.5%
Overweight (BMI 25.0 - 29.9)	12,472	26.6%	2,590	29.5%	302	26.3%	1,574	28.8%	1,504	31.0%	18,504	27.5%
Obese (BMI 30.0 - 40.9)	10,569	22.6%	2,482	28.3%	349	30.4%	950	17.4%	1,468	30.3%	15,886	23.6%
Morbidly Obese (BMI > 40.9)	1,916	4.1%	435	5.0%	78	6.8%	67	1.2%	205	4.2%	2,715	4.0%
Height/weight missing	337	0.7%	194	2.2%	49	4.3%	34	0.6%	112	2.3%	755	1.1%
<b>Trimester Prenatal Care Began</b>												
First	38,314	81.8%	5,762	65.7%	599	52.1%	3,900	71.4%	3,426	70.7%	52,124	77.4%
Second	5,126	10.9%	2,199	25.1%	266	23.2%	1,287	23.6%	1,054	21.7%	9,983	14.8%
Third	708	1.5%	475	5.4%	108	9.4%	174	3.2%	245	5.1%	1,725	2.6%
No prenatal care	150	0.3%	78	0.9%	74	6.4%	15	--	39	0.8%	365	0.5%
Out of state births <sup>3</sup>	2,182	4.7%	175	2.0%	73	6.4%	41	0.8%	0	--	2,536	3.8%
Prenatal care not reported	364	0.8%	86	1.0%	29	2.5%	46	0.8%	83	1.7%	615	0.9%
<b>Adequacy of Prenatal Care</b>												
None	150	0.3%	78	0.9%	74	6.4%	15	--	39	0.8%	365	0.5%
Inadequate	2,685	5.7%	1,671	19.0%	304	26.5%	746	13.7%	768	15.8%	6,211	9.2%
Intermediate	3,697	7.9%	1,266	14.4%	120	10.4%	568	10.4%	429	8.9%	6,106	9.1%
Adequate	21,485	45.9%	3,090	35.2%	340	29.6%	2,359	43.2%	1,850	38.2%	29,200	43.4%
Intensive	16,202	34.6%	2,398	27.3%	206	17.9%	1,684	30.8%	1,669	34.4%	22,207	33.0%
Out of state births <sup>3</sup>	2,182	4.7%	175	2.0%	73	6.4%	41	0.8%	0	--	2,536	3.8%
Prenatal care not reported	443	0.9%	97	1.1%	32	2.8%	50	0.9%	92	1.9%	723	1.1%

<sup>1</sup> Percentages are column (within each race/ethnicity group) percentages.<sup>2</sup> BMI = Body Mass Index calculated as weight (kg) / height (meters)<sup>2</sup>.<sup>3</sup> Out of state births are MN residents giving birth outside the state of MN. Prenatal care data are not available from some states.

**Table 4. Counts and Percentages for Delivery Characteristics and Infant Outcomes by Race/Ethnicity, MN Residents, 2018.**

Total births in each group	Non-Hispanic										TOTAL	
	White		African American		American Indian		Asian/Pacific Islander		Hispanic/Latino			
	#	Col %	#	Col %	#	Col %	#	Col %	#	Col %	#	Col %
<b>Birth Attendant<sup>1</sup></b>												
MD or DO	40,248	85.9%	7,205	82.1%	1,043	90.8%	4,689	85.8%	4,006	82.6%	57,378	85.2%
Certified Nurse Midwife	5,502	11.7%	1,476	16.8%	82	7.1%	738	13.5%	793	16.4%	8,628	12.8%
Other licensed or lay midwife	350	0.7%	7	--	2	--	2	--	15	--	390	0.6%
Other (RN, EMT, non-med/ or missing)	744	1.6%	87	1.0%	22	1.9%	34	0.6%	33	0.7%	952	1.4%
<b>Delivery setting<sup>2</sup></b>												
Hospital	45,482	97.1%	8,691	99.0%	1,134	98.7%	5,431	99.4%	4,797	99.0%	65,752	97.6%
Free-standing birth center	633	1.4%	41	0.5%	3	--	15	--	23	0.5%	729	1.1%
Home	713	1.5%	37	0.4%	8	--	14	--	23	0.5%	834	1.2%
<b>Method of Delivery<sup>3</sup></b>												
Vaginal	33,409	71.3%	5,894	67.2%	762	66.3%	4,109	75.2%	3,488	72.0%	47,856	71.1%
Vaginal Birth after C-Section	765	1.6%	297	3.4%	32	2.8%	127	2.3%	92	1.9%	1,317	2.0%
C-Section	12,653	27.0%	2,583	29.4%	354	30.8%	1,227	22.5%	1,267	26.1%	18,154	27.0%
<b>Infant Outcomes</b>												
<b>Gestational Age<sup>4</sup></b>												
Preterm (< 37 weeks)	4,038	8.6%	822	9.4%	156	13.6%	466	8.5%	461	9.5%	5,975	8.9%
Term (37 - 41 weeks)	42,503	90.7%	7,769	88.5%	970	84.4%	4,972	91.0%	4,369	90.1%	60,815	90.3%
Post Term (42+ weeks)	234	0.5%	172	2.0%	9	--	21	0.4%	12	--	450	0.7%
<b>Birthweight<sup>5</sup></b>												
Very low birth weight	464	1.0%	159	1.8%	16	--	88	1.6%	71	1.5%	805	1.2%
Low birth weight	2,331	5.0%	730	8.3%	93	8.1%	372	6.8%	284	5.9%	3,829	5.7%
Normal birth weight	38,483	82.2%	7,148	81.5%	873	76.0%	4,740	86.8%	4,124	85.1%	55,580	82.5%
High birth weight	5,526	11.8%	734	8.4%	167	14.5%	261	4.8%	366	7.6%	7,084	10.5%
<b>Number of Infants at Birth</b>												
Singleton	45,121	96.3%	8,457	96.4%	1,117	97.2%	5,336	97.7%	4,726	97.5%	65,019	96.5%
Twins	1,676	3.6%	315	3.6%	32	2.8%	121	2.2%	118	2.4%	2,270	3.4%
Triplets or more	47	0.1%	3	--	0	--	6	--	3	--	59	0.1%

<sup>1</sup> DO = Doctor of Osteopathy; Certified Nurse Midwife includes Certified Nurse midwives and Certified (non-nurse) Midwives.

<sup>2</sup> Delivery setting missing for 33 births that are not included in this variable.

<sup>3</sup> Method of Delivery is missing for 21 births that are not included in this variable.

<sup>4</sup> Calculated based on clinician's estimate of completed weeks of gestation. 111 are missing gestational age and are not included in this variable.

<sup>5</sup> Birthweight: VLBW < 1,500 gms (3 lbs 5 oz); LBW < 2,500 (5.5 lbs); normal range 2,500 - 3,900 gms High birthweight 4,000+ grams (8 pounds, 13 ounces). 50 missing birth weight.

**Table 5. Counts and Percentages<sup>1</sup> for Selected Pregnancy Characteristics by Urban/Rural Residence,<sup>2</sup> MN Residents, 2018.**

Total births in each group	Metropolitan								Non-Metropolitan (Rural)				TOTAL <sup>2</sup>	
	Large Central		Large Fringe		Medium		Small		Micropolitan		Rural			
	#	Col %	#	Col %	#	Col %	#	Col %	#	Col %	#	Col %	#	Col %
	23,358		19,830		2,171		7,896		7,622		6,464		67,341	
<b>Previous Live Births</b>														
None	8,868	38.0%	6,979	35.2%	823	37.9%	2,647	33.5%	2,383	31.3%	2,035	31.5%	23,737	35.2%
One	7,368	31.5%	6,792	34.3%	675	31.1%	2,522	31.9%	2,363	31.0%	1,962	30.4%	21,684	32.2%
Two or more	7,096	30.4%	6,043	30.5%	670	30.9%	2,720	34.4%	2,859	37.5%	2,453	37.9%	21,844	32.4%
<b>Prepregnancy BMI<sup>3</sup></b>														
Underweight (BMI < 19.0)	870	3.7%	614	3.1%	69	3.2%	268	3.4%	224	2.9%	183	2.8%	2,228	3.3%
Acceptable (BMI 19.0 - 24.9)	10,122	43.3%	7,983	40.3%	865	39.8%	3,134	39.7%	2,794	36.7%	2,357	36.5%	27,260	40.5%
Overweight (BMI 25.0 - 29.9)	6,403	27.4%	5,449	27.5%	601	27.7%	2,213	28.0%	2,111	27.7%	1,727	26.7%	18,504	27.5%
Obese (BMI 30.0 - 40.9)	4,884	20.9%	4,795	24.2%	520	24.0%	1,917	24.3%	2,043	26.8%	1,727	26.7%	15,886	23.6%
Morbidly Obese (BMI > 40.9)	733	3.1%	806	4.1%	97	4.5%	310	3.9%	385	5.1%	383	5.9%	2,715	4.0%
Height/weight missing	346	1.5%	183	0.9%	19	--	54	0.7%	65	0.9%	87	1.3%	755	1.1%
<b>Trimester Prenatal Care Began</b>														
First	17,916	76.7%	16,518	83.3%	1,884	86.8%	5,221	66.1%	5,808	76.2%	4,775	73.9%	52,124	77.4%
Second	4,251	18.2%	2,524	12.7%	209	9.6%	1,158	14.7%	1,074	14.1%	766	11.9%	9,983	14.8%
Third	732	3.1%	431	2.2%	39	1.8%	127	1.6%	194	2.5%	201	3.1%	1,725	2.6%
No prenatal care	153	0.7%	65	0.3%	22	1.0%	14	--	57	0.7%	53	0.8%	365	0.5%
Out of state births <sup>4</sup>	70	0.3%	143	0.7%	4	--	1,342	17.0%	385	5.1%	590	9.1%	2,536	3.8%
Prenatal care not reported	236	1.0%	149	0.8%	13	--	34	0.4%	104	1.4%	79	1.2%	615	0.9%
<b>Adequacy of Prenatal Care</b>														
None	153	0.7%	65	0.3%	22	1.0%	14	--	57	0.7%	53	0.8%	365	0.5%
Inadequate	2,697	11.5%	1,492	7.5%	151	7.0%	582	7.4%	711	9.3%	577	8.9%	6,211	9.2%
Intermediate	2,116	9.1%	1,705	8.6%	128	5.9%	1,093	13.8%	631	8.3%	431	6.7%	6,106	9.1%
Adequate	9,416	40.3%	9,266	46.7%	1,176	54.2%	3,007	38.1%	3,466	45.5%	2,868	44.4%	29,200	43.4%
Intensive	8,638	37.0%	6,987	35.2%	676	31.1%	1,812	22.9%	2,249	29.5%	1,845	28.5%	22,207	33.0%
Out of state births <sup>4</sup>	70	0.3%	143	0.7%	4	--	1,342	17.0%	385	5.1%	590	9.1%	2,536	3.8%
Prenatal care not reported	268	1.1%	172	0.9%	14	--	46	0.6%	123	1.6%	100	1.5%	723	1.1%

<sup>1</sup> Percentages are column (within each urban/rural group) percentages.<sup>2</sup> Seven individuals are missing county of residence and are not included in total.<sup>3</sup> BMI = Body Mass Index calculated as weight (kg) / height (meters)<sup>2</sup>.<sup>4</sup> Out of state births are MN residents giving birth outside the state of MN. Prenatal care data are not available from some states.

**Table 6. Counts and Percentages<sup>1</sup> for Delivery Characteristics and Infant Outcomes by Urban/Rural Residence, MN Residents, 2018.**

Total births in each group	Metropolitan								Non-Metropolitan (Rural)				TOTAL <sup>2</sup>	
	Large Central		Large Fringe		Medium		Small		Micropolitan		Non-Core			
	#	Col %	#	Col %	#	Col %	#	Col %	#	Col %	#	Col %	#	Col %
	23,358		19,830		2,171		7,896		7,622		6,464		67,341	
<b>Birth Attendant<sup>3</sup></b>														
MD or DO	18,689	80.0%	17,567	88.6%	1,992	91.8%	6,583	83.4%	6,812	89.4%	5,730	88.6%	57,378	85.2%
Certified Nurse Midwife	4,336	18.6%	1,934	9.8%	129	5.9%	1,077	13.6%	613	8.0%	538	8.3%	8,628	12.8%
Other licensed or lay midwife	92	0.4%	96	0.5%	8	--	47	0.6%	64	0.8%	83	1.3%	390	0.6%
Other (RN, EMT, non-med/ or missing)	241	1.0%	233	1.2%	42	1.9%	189	2.4%	133	1.7%	113	1.7%	952	1.4%
<b>Delivery setting<sup>4</sup></b>														
Hospital	22,762	97.4%	19,410	97.9%	2,126	97.9%	7,733	97.9%	7,448	97.7%	6,267	97.0%	65,752	97.6%
Free-standing birth center	411	1.8%	235	1.2%	1	--	30	0.4%	33	0.4%	19	--	729	1.1%
Home	176	0.8%	177	0.9%	43	2.0%	128	1.6%	137	1.8%	172	2.7%	834	1.2%
<b>Method of Delivery<sup>5</sup></b>														
Vaginal	16,813	72.0%	13,913	70.2%	1,555	71.6%	5,691	72.1%	5,389	70.7%	4,488	69.4%	47,856	71.1%
Vaginal Birth after C-Section	483	2.1%	366	1.8%	57	2.6%	175	2.2%	136	1.8%	100	1.5%	1,317	2.0%
C-Section	6,056	25.9%	5,546	28.0%	559	25.7%	2,029	25.7%	2,094	27.5%	1,870	28.9%	18,154	27.0%
<b>Infant Outcomes</b>														
<b>Gestational Age<sup>6</sup></b>														
Preterm (< 37 weeks)	2,094	9.0%	1,821	9.2%	196	9.0%	639	8.1%	632	8.3%	593	9.2%	5,975	8.9%
Term (37 - 41 weeks)	21,007	89.9%	17,911	90.3%	1,961	90.3%	7,179	90.9%	6,930	90.9%	5,821	90.1%	60,815	90.3%
Post Term (42+ weeks)	234	1.0%	75	0.4%	9	--	63	0.8%	40	0.5%	28	0.4%	450	0.7%
<b>Birthweight<sup>7</sup></b>														
Very low birth weight	312	1.3%	214	1.1%	18	--	93	1.2%	97	1.3%	71	1.1%	805	1.2%
Low birth weight	1,462	6.3%	1,078	5.4%	125	5.8%	400	5.1%	398	5.2%	366	5.7%	3,829	5.7%
Normal birth weight	19,389	83.0%	16,332	82.4%	1,782	82.1%	6,503	82.4%	6,268	82.2%	5,300	82.0%	55,580	82.5%
High birth weight	2,175	9.3%	2,196	11.1%	244	11.2%	894	11.3%	853	11.2%	721	11.2%	7,084	10.5%
<b>Number of Infants at Birth</b>														
Singleton	22,537	96.5%	19,102	96.3%	2,108	97.1%	7,614	96.4%	7,401	97.1%	6,250	96.7%	65,019	96.6%
Twins	800	3.4%	710	3.6%	63	2.9%	271	3.4%	221	2.9%	205	3.2%	2,270	3.4%
Triplets or more	21	0.1%	18	--	0	--	11	--	0	--	9	--	59	0.1%

<sup>1</sup> Percentages are column (within each urban/rural group) percentages.

<sup>2</sup> Seven individuals are missing county of residence and are not included in total.

<sup>3</sup> DO = Doctor of Osteopathy; Certified Nurse Midwife includes Certified Nurse midwives and Certified (non-nurse) Midwives.

<sup>4</sup> Delivery setting missing 33 that are not included in this variable

<sup>5</sup> Method of Delivery is missing for 21 births that are not included in this variable.

<sup>6</sup> Calculated based on clinician's estimate of completed weeks of gestation. 108 are missing gestational age and are not included in this variable.

<sup>7</sup> Birthweight: VLBW < 1,500 gms (3 lbs 5 oz); LBW < 2,500 (5.5 lbs); normal range 2,500 - 3,900 gms High birthweight 4,000+ grams (8 pounds, 13 ounces). 50 missing birth weight.

**Table 7. Route of Delivery<sup>1</sup> by Characteristics of Women Giving Birth, MN Residents.**

	Vaginal		VBAC		C-Section	
	#	Row %	#	Row %	#	Row %
<b>All Births</b>	47,856	71.1%	1,317	2.0%	18,154	27.0%
<b>Race / Ethnicity</b>						
White	33,409	71.3%	765	1.6%	12,653	27.0%
African American	5,894	67.2%	297	3.4%	2,583	29.4%
American Indian	762	66.4%	32	2.8%	354	30.8%
Asian/Pacific Islander	4,109	75.2%	127	2.3%	1,227	22.5%
Other/Unknown	194	72.4%	4	--	70	26.1%
Hispanic/Latino	3,488	72.0%	92	1.9%	1,267	26.1%
<b>Age of Mother</b>						
< 18 years	379	89.8%	1	--	42	10.0%
18-19 years	1,175	84.4%	2	--	215	15.4%
<b>Teen Mom Total</b>	<b>1,554</b>	<b>85.7%</b>	<b>3</b>	<b>--</b>	<b>257</b>	<b>14.2%</b>
20-24 years	7,125	78.0%	104	1.1%	1,906	20.9%
25-29 years	15,049	74.2%	358	1.8%	4,877	24.0%
30-34 years	16,200	69.5%	532	2.3%	6,564	28.2%
35-39 years	6,834	63.1%	269	2.5%	3,723	34.4%
40-44 years	1,002	55.9%	46	2.6%	745	41.6%
45+ years	86	50.0%	5	--	81	47.1%
<b>Educational Attainment<sup>2</sup></b>						
< High School	5,016	74.5%	183	2.7%	1,538	22.8%
HS Diploma / GED	8,037	70.9%	242	2.1%	3,049	26.9%
Some College, No degree	8,595	70.0%	231	1.9%	3,446	28.1%
Associate Degree	5,923	69.7%	139	1.6%	2,437	28.7%
Bachelor's Degree	13,390	71.5%	339	1.8%	4,991	26.7%
Graduate / Professional Degree	6,617	70.5%	173	1.8%	2,595	27.7%
Unknown	278	72.0%	10	--	98	25.4%
<b>Prepregnancy BMI</b>						
Underweight (BMI < 19.0)	1,799	80.8%	36	1.6%	392	17.6%
Acceptable (BMI 19.0 - 24.9)	20,881	76.6%	518	1.9%	5,857	21.5%
Overweight (BMI 25.0 - 29.9)	13,137	71.0%	409	2.2%	4,957	26.8%
Obese (BMI 30.0 - 40.9)	10,116	63.7%	297	1.9%	5,471	34.4%
Morbidly Obese (BMI > 40.9)	1,395	51.4%	37	1.4%	1,283	47.3%
Height or weight not reported	528	71.2%	20	2.7%	194	26.1%
<b>Adequacy of Prenatal Care<sup>3</sup></b>						
No Prenatal Care	242	66.9%	19	--	101	27.9%
Inadequate	4,505	72.6%	170	2.7%	1,533	24.7%
Intermediate	4,598	75.3%	157	2.6%	1,351	22.1%
Adequate	21,595	74.0%	611	2.1%	6,993	23.9%
Intensive	14,628	65.9%	346	1.6%	7,233	32.6%
Out of state births <sup>4</sup>	1,806	71.2%	0	--	730	28.8%
<b>Previous Live Births</b>						
No previous births	16,977	71.5%	12	--	6,747	28.4%
One previous live birth	15,276	70.4%	472	2.2%	5,936	27.4%
Two or more previous births	15,547	71.2%	832	3.8%	5,460	25.0%

**NOTE:** Row percentages (route of delivery within each category). Missing data for each variable not included except where shown [age (7), APNCU (709), previous birth (68)]. -- are not calculated due to <

<sup>1</sup> Route of delivery missing for 21 women and not included in the table. VBAC = Vaginal Birth after

<sup>2</sup> Educational attainment reported for mothers age 25 years and older.

<sup>3</sup> Adequacy is determined using the Adequacy of Prenatal Care Utilization (APNCU) Index and is not comparable to GINDEX Index used in previous years. See glossary for definitions.

<sup>4</sup> Out of state births are MN residents giving birth outside the state of MN. Prenatal care data not available

**Table 8. Counts and Percentages<sup>1</sup> of Selected Birth Outcomes by Demographic Characteristics of Women Giving Birth, MN Residents, 2018.**

	Preterm <sup>2</sup>		Low Birthweight <sup>3</sup>		High Birthweight <sup>3</sup>	
	#	Row %	#	Row %	#	Row %
<b>All Births</b>	5,975	8.9%	4,634	6.9%	7,085	10.5%
<b>Race and Ethnicity</b>						
White	4,038	8.6%	2,795	6.0%	5,527	11.8%
African American	822	9.4%	889	10.1%	734	8.4%
American Indian	156	13.7%	109	9.5%	167	14.5%
Asian/Pacific Islander	466	8.5%	460	8.4%	261	4.8%
Other/Unknown	32	12.0%	26	9.7%	30	11.2%
Hispanic/Latino	461	9.5%	355	7.3%	366	7.6%
<b>Age of Mother</b>						
< 18 years	47	11.2%	44	10.5%	23	5.5%
18-19 years	125	9.0%	130	9.3%	73	5.2%
<b>Teen Mom Total</b>	<b>172</b>	<b>9.5%</b>	<b>174</b>	<b>9.6%</b>	<b>96</b>	<b>5.3%</b>
20-24 years	811	8.9%	710	7.8%	703	7.7%
25-29 years	1,649	8.1%	1,313	6.5%	2,063	10.2%
30-34 years	1,980	8.5%	1,437	6.2%	2,692	11.6%
35-39 years	1,114	10.3%	817	7.5%	1,328	12.3%
40-44 years	218	12.1%	161	9.0%	184	10.2%
45+ years	29	17.0%	20	11.6%	19	--
<b>Educational Attainment<sup>4</sup></b>						
< High School	594	8.8%	559	8.3%	545	8.1%
HS Diploma / GED	1,112	9.8%	934	8.2%	1,029	9.1%
Some College, No degree	1,238	10.1%	991	8.1%	1,238	10.1%
Associate Degree	727	8.6%	504	5.9%	947	11.1%
Bachelor's Degree	1,495	8.0%	1,059	5.7%	2,226	11.9%
Graduate / Professional Degree	759	8.1%	550	5.9%	1,062	11.3%
Unknown	50	13.1%	37	9.6%	38	9.9%
<b>Prepregnancy BMI</b>						
Underweight (BMI < 19.0)	243	10.9%	249	11.2%	98	4.4%
Acceptable (BMI 19.0 - 24.9)	2,153	7.9%	1,845	6.8%	2,263	8.3%
Overweight (BMI 25.0 - 29.9)	1,506	8.1%	1,151	6.2%	2,106	11.4%
Obese (BMI 30.0 - 40.9)	1,592	10.0%	1,100	6.9%	2,148	13.5%
Morbidly Obese (BMI > 40.9)	345	12.7%	190	7.0%	393	14.5%
Height or weight not reported	136	18.7%	99	13.3%	77	10.3%
<b>Adequacy of Prenatal Care<sup>5</sup></b>						
None	98	30.2%	83	22.9%	21	5.8%
Inadequate	581	9.4%	518	8.4%	581	9.4%
Intermediate	305	5.0%	276	4.5%	736	12.1%
Adequate	975	3.3%	839	2.9%	3,565	12.2%
Intensive	3,572	16.1%	2,563	11.5%	1,837	8.3%
Out of state births	339	13.4%	264	10.4%	277	10.9%
<b>Previous Live Births</b>						
No previous births	2,294	9.7%	1,965	8.3%	1,877	7.9%
One previous birth	1,697	7.8%	1,239	5.7%	2,520	11.6%
Two or more previous births	1,972	9.0%	1,421	6.5%	2,676	12.3%

<sup>1</sup> Percentages are row percentages (outcome within each characteristic category).

<sup>2</sup> Preterm are infants born after 20 weeks but before 37 weeks of gestation.

<sup>3</sup> Low birthweight < 2,500 grams (5.5 pounds). High birthweight >= 4,000 grams (8 pounds, 13 ounces). 50 are missing birthweight.

<sup>4</sup> Educational attainment reported for mothers age 25 years and older.

<sup>5</sup> Adequacy is determined using the Adequacy of Prenatal Care Utilization (APNCU) Index, and is not comparable to GINDEX Index used in previous years. See glossary for more information. Out of state births are MN residents giving birth outside the state of MN. Prenatal care data not available from some states. There are 723 women missing data and not included in this variable.



**Table 9. Number of Race and Hispanic Checkboxes Selected by Women Who Gave Birth, Minnesota Residents, 2018.**

	Number that selected <sup>1</sup> each checkbox	
	2017	2018
<b>Race Checkboxes</b>		
White	51,278	50,385
African American	4,604	4,774
Somali	2,600	2,621
Ethiopian	801	690
Liberian	361	363
Sudanese	77	78
Nigerian	182	171
Other African	659	654
American Indian	1,783	1,709
Asian Indian	1,027	961
Chinese	431	411
Filipino	257	237
Japanese	96	94
Korean	291	272
Vietnamese	341	357
Hmong	2,137	2,222
Cambodian	205	198
Laotian	166	137
Other Asian	775	791
Hawaiian	42	31
Guamanian/Chamorro	5	17
Samoan	6	5
Other Pacific Islander	80	93
Other Race	2,226	2,143
Unknown Race	398	205
<b>Hispanic/Latino Checkboxes</b>		
Mexican	3,304	3,226
Cuban	65	60
Puerto Rican	227	215
Other Hispanic	1,835	1,346
Not Hispanic/Latino	63,172	62,156
Unknown/Nothing Selected	537	345

<sup>1</sup> More than one category may be selected, thus counts sum to more than the Minnesota resident birth

**Note:** Categories correspond to those listed on the birth certificate worksheet and are self-selected by each woman. Counts are the number of records on which that checkbox was indicated. Race(s) chosen do not necessarily correspond to birth country of mother.

**Note:** Classification of the checkboxes changed from 2016 to 2017. In 2016, all checkboxes selected were documented regardless of other information provided by the woman. In 2017, checkboxes are edited and corrected for inconsistencies to reflect complete race/ethnicity information provided by each woman. Edited codes are the national standard for reporting vital statistics by race/ethnicity.

**Table 10. Live Births by Birth Country<sup>1</sup> of Women Giving Birth, MN Residents, 2018.**

<b>Woman's Birth Country</b>	<b>Number of Women Born in Each Country</b>
<b>United States</b>	<b>54,061</b>
<b>Foreign-Born</b>	<b>13,547</b>
Somalia	2,425
Mexico	1,540
Ethiopia	899
Thailand	849
India	809
Kenya	450
Laos	393
Liberia	384
Guatemala	359
Burma	283
Unknown	270
Vietnam	256
China	252
El Salvador	218
Canada	208
Nigeria	193
Ecuador	192
Philippines	184
South Korea	172
Honduras	140
Russia	118
Ukraine	109
Cambodia	100
Germany	100
Cameroon	99
Nepal	89
Ghana	80
All Others	2,116

<sup>1</sup>The list represents home countries of women giving birth where there were at least 75 women from that country.

**Table 11. Selected Characteristics and Outcomes for Women Who Smoked Before or During Pregnancy, Minnesota Residents, 2018 .**

	Total Births	% that Smoked Before or During Pregnancy		% Smokers that Quit Prior to Pregnancy		% Smokers that Quit During Pregnancy	
		#	1.0%	#	%	#	%
<b>All Births</b>	67,348	6,436	9.6%	1,342	20.9%	1,031	16.0%
<b>Race and Ethnicity<sup>2</sup></b>							
White	46,844	4,898	10.5%	1,073	21.9%	784	16.0%
African American	8,775	630	7.2%	106	16.8%	116	18.4%
American Indian	1,149	499	43.4%	37	7.4%	47	9.4%
Asian/Pacific Islander	5,463	177	3.2%	54	30.5%	43	24.3%
Other/Unknown	270	22	8.1%	5	--	1	--
Hispanic/Latino	4,847	210	4.3%	67	31.9%	40	19.0%
<b>Age of Mother</b>							
< 18 years	422	41	9.7%	12	--	6	--
18-19 years	1,392	275	19.8%	58	21.1%	62	22.5%
20-24 years	9,136	1,582	17.3%	326	20.6%	313	19.8%
25-29 years	20,289	2,157	10.6%	456	21.1%	309	14.3%
30-34 years	23,305	1,601	6.9%	356	22.2%	221	13.8%
35-39 years	10,828	677	6.3%	117	17.3%	105	15.5%
40+ years	1,969	102	5.2%	17	--	15	--
<b>Trimester PNC began</b>							
First	52,124	4,463	8.6%	1,034	23.2%	757	17.0%
Second	9,983	1,139	11.4%	173	15.2%	171	15.0%
Third	1,725	304	17.6%	32	10.5%	34	11.2%
None	365	165	45.2%	5	--	7	--
Out of state births <sup>3</sup>	2,536	308	12.1%	89	28.9%	53	17.2%
Not reported	615	57	9.3%	9	--	9	--
<b>Delivery Method</b>							
Vaginal	47,856	4,408	9.2%	912	20.7%	710	16.1%
VBAC <sup>4</sup>	1,317	95	7.2%	15	--	17	--
C-section	18,154	1,931	10.6%	414	21.4%	304	15.7%
<b>Preterm</b>							
< 37 weeks	5,975	725	12.1%	123	17.0%	124	17.1%
<b>Low Birth Weight</b>							
< 2500 grams	3,967	644	16.2%	96	14.9%	99	15.4%

<sup>1</sup> Percentages are row percentages (smoking within each characteristic category).<sup>2</sup> Other/unknown races are not shown due to small numbers (n = 12 total smokers).<sup>3</sup> Out of state births are MN residents giving birth outside the state of MN. Prenatal care data not available from some states.<sup>4</sup> VBAC - Vaginal Birth After [previous] Cesarean-Section.

**Table 12. Pregnancies Resulting from Infertility Treatments, MN Residents, 2018.**

	Birth Purity			
	Total	Singleton	Twin	Triplet+ <sup>2</sup>
<b>Pregnancies<sup>1</sup></b>				
Total pregnancies	66,185	65,018	1,147	20
# resulting from infertility treatments	1,462	1,271	183	8
% resulting from infertility treatments	2.2%	2.0%	16.0%	--
<b>Age of Mother<sup>3</sup></b>				
<20 years	2	1	1	0
20-24 years	23	19	4	0
25-29 years	220	182	35	3
30-34 years	614	536	77	1
35-39 years	425	373	49	3
40-44 years	137	121	15	1
45+ years	40	38	2	0
<b>Treatment Type</b>				
Drugs/Artificial Insemination Only	918	794	120	4
Assisted Reproductive Technologies Only	507	446	58	3
Both Methods	19	16	2	1
Method Not Specified	18	15	3	0

<sup>1</sup> Number of pregnancies, not number of births. Each mother is counted only once regardless of the plurality of the pregnancy.

<sup>2</sup> Due to the small numbers triplets or more are combined. -- rates not calculated due to < 20.

<sup>3</sup> Of pregnancies resulting from infertility treatments, 1 is missing age and is not included.

## Fertility Tables

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Table 1: Pregnancies, Pregnancy Outcome, Birth/Fertility Rates, Minnesota Residents, 2004 - 2018

Table 2: Pregnancies and Pregnancy Rates by Age of Mother, Minnesota Residents, 2008 - 2018

**Fertility Table 1. Total Reported Pregnancies by Pregnancy Outcome, Pregnancy Rate, and Fertility Rate, MN Residents, 2004 - 2018.**

	Total Reported Pregnancies <sup>1</sup>	Live Births	Induced Abortions	Fetal Deaths <sup>2</sup>	Female <sup>3</sup> Population Ages 15-44	Pregnancy Rate <sup>4</sup>	Fertility Rate <sup>5</sup>
<b>Year</b>							
2004	83,719	70,614	12,755	350	1,095,018	76.5	64.5
2005	83,555	70,920	12,306	329	1,092,604	76.5	64.9
2006	86,814	73,515	12,948	351	1,070,877	81.1	68.6
2007	86,832	73,675	12,770	387	1,058,541	82.0	69.6
2008	84,653	72,382	11,896	375	1,048,477	80.7	69.0
2009	82,353	70,617	11,391	345	1,046,457	78.7	67.5
2010	79,329	68,407	10,570	352	1,045,681	75.9	65.4
2011	78,942	68,416	10,150	376	1,044,201	75.6	65.5
2012	78,906	68,783	9,758	365	1,046,298	75.4	65.7
2013	78,600	69,183	9,030	387	1,049,636	74.9	65.9
2014	79,534	69,916	9,180	438	1,053,340	75.5	66.4
2015	79,197	69,835	8,898	464	1,054,063	75.1	66.3
2016	79,219	69,746	9,053	420	1,054,178	75.1	66.2
2017	78,227	68,603	9,218	406	1,066,806	73.3	64.3
2018	76,636	67,348	8,896	392	1,074,005	71.4	62.7
<b>.....2018.....</b>							
<b>Race/ethnicity</b>							
White	50,837	46,844	3,764	229	815,412	62.3	57.4
Black	11,225	8,775	2,365	85	92,717	121.1	94.6
American Indian	1,311	1,149	150	12	14,651	89.5	78.4
Asian/Pacific Islander	6,198	5,463	702	33	80,147	77.3	68.2
Other/Unknown	1,481	270	1,206	5	N/A <sup>6</sup>	--	--
Hispanic (any race)	5,584	4,847	709	28	71,078	78.6	68.2
<b>Woman's age group</b>							
<15 years	33	20	13	0	N/A <sup>6</sup>	--	--
15-19 years	2,496	1,794	692	10	175,152	14.3	10.2
20-24 years	11,610	9,136	2,408	66	177,770	65.3	51.4
25-29 years	22,908	20,289	2,503	116	182,988	125.2	110.9
30-34 years	25,251	23,305	1,839	107	188,618	133.9	123.6
35-39 years	11,988	10,828	1,090	70	188,621	63.6	57.4
40-44 years	2,135	1,797	317	21	160,856	13.3	11.2
45+ years	208	172	34	2	N/A <sup>6</sup>	--	--

<sup>1</sup> Includes Live Births, Fetal Deaths and Induced Abortions.

<sup>2</sup> Fetal Death counts include all reported to the Minnesota Department of Health regardless of gestational age.

<sup>3</sup> Total MN Population count by year from MN State Demographic Center: <https://mn.gov/admin/demography/data-by-topic/population-data/our-estimates>. Female population for race/ethnicity and age groups retrieved from CDC WONDER ([wonder.cdc.gov](http://wonder.cdc.gov)) Bridged-Race Population Estimates.

<sup>4</sup> Number of pregnancies per 1,000 women ages 15 - 44 years.

<sup>5</sup> Number of live births per 1,000 women ages 15 - 44 years.

<sup>6</sup> Population estimates for these age groups not calculated because population denominator data not available.

**Fertility Table 2. Pregnancy Rates by Age of Woman over Time, Minnesota Residents, 2008-2018.**

Year/ Event	Total	Age of Woman							
		<15	15-19	20-24	25-29	30-34	35-39	40+	Unkwn
<b>2008</b>									
Reported Pregnancies <sup>1</sup>	84,653	114	6,598	18,910	26,455	20,595	9,690	2,291	0
Age Specific Pregnancy Rate <sup>2</sup>	80.7	***	36.7	106.7	150.1	128.3	57.0	12.4	***
<b>2009</b>									
Reported Pregnancies <sup>1</sup>	82,353	81	5,981	18,061	25,964	20,672	9,250	2,340	4
Age Specific Pregnancy Rate <sup>2</sup>	78.7	***	33.1	97.6	144.6	130.0	56.3	13.1	***
<b>2010</b>									
Reported Pregnancies <sup>1</sup>	79,329	89	5,351	16,455	25,102	21,031	9,023	2,275	3
Age Specific Pregnancy Rate <sup>2</sup>	75.9	***	29.9	94.1	135.6	124.9	55.6	13.0	***
<b>2011</b>									
Reported Pregnancies <sup>1</sup>	78,942	72	4,743	15,622	24,946	22,090	9,102	2,356	11
Age Specific Pregnancy Rate <sup>2</sup>	75.6	***	26.4	90.6	134.9	125.9	57.9	13.5	***
<b>2012</b>									
Reported Pregnancies <sup>1</sup>	78,906	77	4,392	15,501	24,543	22,865	9,189	2,333	6
Age Specific Pregnancy Rate <sup>2</sup>	75.4	***	24.7	88.7	134.3	126.1	58.4	13.5	***
<b>2013</b>									
Reported Pregnancies <sup>1</sup>	78,600	57	3,878	14,698	24,416	23,771	9,604	2,174	2
Age Specific Pregnancy Rate <sup>2</sup>	74.9	***	22.1	82.7	135.5	128.0	59.6	12.9	***
<b>2014</b>									
Reported Pregnancies <sup>1</sup>	79,534	53	3,561	14,330	24,435	24,726	10,182	2,243	4
Age Specific Pregnancy Rate <sup>2</sup>	75.5	***	20.4	80.0	135.9	131.0	61.5	13.6	***
<b>2015</b>									
Reported Pregnancies <sup>1</sup>	79,197	38	3,161	13,534	24,119	25,357	10,805	2,181	2
Age Specific Pregnancy Rate <sup>2</sup>	75.1	***	18.1	75.2	135.7	133.2	63.2	13.6	***
<b>2016</b>									
Reported Pregnancies <sup>1</sup>	79,219	41	3,004	12,939	23,975	25,552	11,453	2,255	0
Age Specific Pregnancy Rate <sup>2</sup>	75.1	***	17.2	71.9	135.1	134.8	64.8	14.4	***
<b>2017</b>									
Reported Pregnancies <sup>3</sup>	78,227	<15	15-19	20-24	25-29	30-34	35-39	40-44	45+/unk
Age Specific Pregnancy Rate <sup>2</sup>	73.3	***	16.4	69.4	129.0	138.4	63.4	13.7	***
<b>2018</b>									
Reported Pregnancies <sup>3</sup>	76,636	<15	15-19	20-24	25-29	30-34	35-39	40-44	45+/unk
Age Specific Pregnancy Rate <sup>2</sup>		***	14.3	65.3	125.2	133.9	63.6	13.3	***

<sup>1</sup> Includes live births, all reported fetal deaths and induced abortions

<sup>2</sup> Pregnancies within a specific age group per 1,000 female population of that same age group. Total rate is calculated per 1,000 female population age 15-44.

<sup>3</sup> Beginning with 2017, the older age groups 40+ split to 40-44 and 45+ in order to isolate those in the 15-44 range.

\*\*\*Appropriate age-specific female population is not available for use in rate calculations.

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## Mortality Tables

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Table 1. Deaths by County of Residence and County of Occurrence, Minnesota Residents, 2018

Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018

Table 3. Leading Causes of Death, Death Rates, and Rank Order, Minnesota and U.S., 2018

Table 4. Leading Causes of Death by Age Groups, Minnesota Residents, 2018

Table 5a. Deaths Due to Selected Causes by Race/Ethnicity, MN Residents, 2018

Table 5b. Cause-Specific Mortality Rates by Race/Ethnicity, MN Residents, 2018

Table 6a. Deaths Due to Selected Causes by Rural/Urban Residence, MN Residents, 2018

Table 6b. Cause-Specific Mortality Rates by Rural/Urban Residence, MN Residents, 2018

**Table 1. Resident Deaths Distributed by County of Occurrence (n=44,730); Deaths by County of Occurrence Distributed by Place of Residence (n=44,734), Minnesota 2018.**

County	Deaths to MN County Residents across Place of Death				Deaths Occurring in Each County across Place of Residence		
	Total	Within County	<i>Outside County of Residence</i>		Total <sup>1</sup>	Other Minnesota Residents	Out of State Residents
			Within Minnesota	Outside Minnesota			
<b>State Total</b>	<b>44,715</b>	<b>35,160</b>	<b>7,974</b>	<b>1,581</b>	<b>44,734</b>	<b>7,974</b>	<b>1,600</b>
Aitkin	203	144	57	2	161	17	0
Anoka	2,240	1,616	597	27	1,971	336	19
Becker	359	279	19	61	323	34	10
Beltrami	431	342	39	50	421	73	6
Benton	393	249	140	4	300	49	2
Big Stone	76	59	8	9	65	3	3
Blue Earth	516	454	54	8	652	195	3
Brown	295	245	47	3	260	15	0
Carlton	386	261	119	6	297	34	2
Carver	545	360	179	6	467	103	4
Cass	338	185	133	20	217	26	6
Chippewa	167	120	43	4	133	11	2
Chisago	444	322	115	7	410	79	9
Clay	474	287	9	178	320	8	25
Clearwater	85	53	19	13	62	9	0
Cook	49	33	14	2	43	9	1
Cottonwood	136	103	15	18	115	11	1
Crow Wing	724	565	145	14	623	54	4
Dakota	2,683	1,793	856	34	2,069	245	31
Dodge	168	108	58	2	122	14	0
Douglas	441	365	68	8	414	45	4
Faribault	183	132	47	4	146	9	5
Fillmore	255	191	49	15	213	17	5
Freeborn	373	293	69	11	313	16	4
Goodhue	482	359	111	12	435	62	14
Grant	69	40	18	11	47	7	0
Hennepin	8,767	8,003	650	114	10,448	2,148	297
<i>Bloomington</i>	843	495	343	5	608	107	6
<i>Edina</i>	506	369	135	2	1,056	663	24
<i>Minneapolis</i>	2,397	1,795	565	37	3,772	1,781	196
<i>Richfield</i>	260	109	148	3	130	19	2
Houston	202	125	11	66	137	7	5
Hubbard	230	153	41	36	175	20	2
Isanti	345	233	109	3	263	30	0
Itasca	550	418	126	6	452	31	3
Jackson	115	75	24	16	77	1	1
Kanabec	120	83	37	0	92	9	0
Kandiyohi	437	351	82	4	384	33	0
Kittson	57	43	5	9	46	3	0
Koochiching	161	108	52	1	110	1	1
Lac Qui Parle	97	76	12	9	78	2	0
Lake	159	97	60	2	107	10	0
Lake of the Woods	38	24	8	6	30	5	1
Le Sueur	224	122	100	2	133	11	0
Lincoln	82	60	7	15	67	3	4
Lyon	215	175	17	23	179	3	1
McLeod	243	191	44	8	204	8	5
Mahnomen	324	244	77	3	283	37	2

**Table 1. Resident Deaths Distributed by County of Occurrence (n=44,730); Deaths by County of Occurrence Distributed by Place of Residence (n=44,734), Minnesota 2018.**

County	Deaths to MN County Residents across Place of Death				Deaths Occurring in Each County across Place of Residence		
	Total	Within County	<i>Outside County of Residence</i>		Total <sup>1</sup>	Other Minnesota Residents	Out of State Residents
			Within Minnesota	Outside Minnesota			
Marshall	70	46	14	10	50	3	1
Martin	82	42	12	28	43	1	0
Meeker	240	197	41	2	232	35	0
Mille Lacs	296	207	85	4	263	55	1
Morrison	362	258	101	3	278	20	0
Mower	402	309	89	4	328	16	3
Murray	89	60	7	22	76	16	0
Nicollet	270	173	96	1	194	21	0
Nobles	203	149	20	34	178	24	5
Norman	104	66	5	33	72	6	0
Olmsted	1,183	1,119	50	14	2,121	637	365
Otter Tail	691	553	61	77	599	35	11
Pennington	140	99	6	35	118	17	2
Pine	288	168	114	6	184	13	3
Pipestone	122	95	10	17	101	5	1
Polk	366	262	17	87	293	21	10
Pope	137	115	21	1	127	12	0
Ramsey	4,392	3,730	606	56	5,333	1,348	255
<i>St. Paul</i>	<i>2,148</i>	<i>1,749</i>	<i>371</i>	<i>28</i>	<i>3,445</i>	<i>1,452</i>	<i>244</i>
Red Lake	39	17	8	14	20	3	0
Redwood	168	120	39	9	138	17	1
Renville	166	124	42	0	138	13	1
Rice	513	381	128	4	429	42	6
Rock	107	88	0	19	114	17	9
Roseau	126	93	10	23	97	3	1
St. Louis	2,135	2,038	69	28	2,726	368	320
<i>Duluth</i>	<i>897</i>	<i>856</i>	<i>32</i>	<i>9</i>	<i>1,796</i>	<i>624</i>	<i>316</i>
Scott	686	456	216	14	556	92	8
Sherburne	540	316	219	5	411	94	1
Sibley	147	108	36	3	124	16	0
Stearns	1,121	974	134	13	1,686	698	14
Steele	319	251	67	1	299	47	1
Stevens	83	71	9	3	82	10	1
Swift	113	83	29	1	85	2	0
Todd	214	140	71	3	160	18	2
Traverse	66	44	8	14	48	1	3
Wabasha	200	134	58	8	149	4	11
Wadena	216	162	45	9	203	40	1
Waseca	183	130	51	2	137	7	0
Washington	1,707	1,123	553	31	1,411	249	39
Watonwan	128	88	38	2	100	10	2
Wilkin	89	70	2	17	93	2	21
Winona	425	330	45	50	362	13	19
Wright	813	563	239	11	629	66	0
Yellow Medicine	93	69	13	11	83	14	0

<sup>1</sup> Total deaths occurring in each county also includes deaths to MN county residents within county of residence (second column).

**NOTE:** Total deaths by county excludes those for whom county of residence (n=6) or both county of residence and county of occurrence are unknown (n=9).

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>A00- B99</b>	<b>I. INFECTIOUS AND PARASITIC DISEASES</b>	<b>T</b>	814	10	5	2	1	1	8	32	154	220	381
		<b>M</b>	405	6	1	0	1	1	2	17	85	123	169
		<b>F</b>	409	4	4	2	0	0	6	15	69	97	212
<b>A00- A09</b>	Intestinal Infections	<b>T</b>	115	1	0	1	1	0	1	1	18	31	61
		<b>M</b>	41	0	0	0	1	0	0	1	10	15	14
		<b>F</b>	74	1	0	1	0	0	1	0	8	16	47
<b>A40- A41</b>	Septicemia	<b>T</b>	478	0	2	0	0	0	3	16	67	134	256
		<b>M</b>	236	0	0	0	0	0	0	6	37	69	124
		<b>F</b>	242	0	2	0	0	0	3	10	30	65	132
<b>B15- B19</b>	Viral Hepatitis	<b>T</b>	51	0	0	0	0	0	0	2	31	11	7
		<b>M</b>	27	0	0	0	0	0	0	1	18	7	1
		<b>F</b>	24	0	0	0	0	0	0	1	13	4	6
<b>Re- sid- ual</b>	Other Infectious and Parasitic Diseases and Sequelae	<b>T</b>	170	9	3	1	0	1	4	13	38	44	57
		<b>M</b>	101	6	1	0	0	1	2	9	20	32	30
		<b>F</b>	69	3	2	1	0	0	2	4	18	12	27
<b>C00- D48</b>	<b>II. NEOPLASMS</b>	<b>T</b>	10,214	0	6	5	10	11	60	343	2,165	4,099	3,515
		<b>M</b>	5,420	0	4	3	5	7	28	148	1,185	2,240	1,800
		<b>F</b>	4,794	0	2	2	5	4	32	195	980	1,859	1,715
<b>C00- C97</b>	Malignant Neoplasms	<b>T</b>	9,906	0	5	5	9	10	60	339	2,138	4,011	3,329
		<b>M</b>	5,250	0	3	3	5	6	28	144	1,166	2,180	1,715
		<b>F</b>	4,656	0	2	2	4	4	32	195	972	1,831	1,614

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>Malignant Neoplasms continued</b>													
<b>C00- C14</b>	...of Lip, Oral Cavity, and Pharynx	<b>T</b>	149	0	0	0	0	0	0	5	44	65	35
		<b>M</b>	103	0	0	0	0	0	0	4	33	47	19
		<b>F</b>	46	0	0	0	0	0	0	1	11	18	16
<b>C15</b>	...of Esophagus	<b>T</b>	297	0	0	0	0	0	0	8	77	141	71
		<b>M</b>	245	0	0	0	0	0	0	6	67	116	56
		<b>F</b>	52	0	0	0	0	0	0	2	10	25	15
<b>C16</b>	...of Stomach	<b>T</b>	129	0	0	0	0	0	0	6	42	38	43
		<b>M</b>	80	0	0	0	0	0	0	3	26	25	26
		<b>F</b>	49	0	0	0	0	0	0	3	16	13	17
<b>C18- C21</b>	...of Colon, Rectum, and Anus	<b>T</b>	827	0	0	0	0	0	3	55	187	268	314
		<b>M</b>	437	0	0	0	0	0	1	31	112	143	150
		<b>F</b>	390	0	0	0	0	0	2	24	75	125	164
<b>C22</b>	...of Liver and Intrahepatic Bile Ducts	<b>T</b>	440	0	0	0	0	0	2	19	141	191	87
		<b>M</b>	275	0	0	0	0	0	1	12	92	116	54
		<b>F</b>	165	0	0	0	0	0	1	7	49	75	33
<b>C25</b>	...of Pancreas	<b>T</b>	698	0	0	0	1	0	0	17	149	312	219
		<b>M</b>	364	0	0	0	1	0	0	7	82	172	102
		<b>F</b>	334	0	0	0	0	0	0	10	67	140	117
<b>C32</b>	...of Larynx	<b>T</b>	61	0	0	0	0	0	0	0	19	25	17
		<b>M</b>	45	0	0	0	0	0	0	0	15	17	13
		<b>F</b>	16	0	0	0	0	0	0	0	4	8	4
<b>C33- C34</b>	....of Trachea, Bronchus, and Lung	<b>T</b>	2,137	0	0	0	0	0	2	17	496	1,048	574
		<b>M</b>	1,118	0	0	0	0	0	1	12	276	556	273
		<b>F</b>	1,019	0	0	0	0	0	1	5	220	492	301

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>Malignant Neoplasms continued</b>													
<b>C43-</b>	...Skin	<b>T</b>	214	0	0	0	0	0	0	4	56	80	74
<b>C44</b>		<b>M</b>	132	0	0	0	0	0	0	2	37	53	40
		<b>F</b>	82	0	0	0	0	0	0	2	19	27	34
<b>C50</b>	...of Breast	<b>T</b>	675	0	0	0	0	0	8	51	172	236	208
		<b>M</b>	5	0	0	0	0	0	0	0	2	2	1
		<b>F</b>	670	0	0	0	0	0	8	51	170	234	207
<b>C53</b>	...of Cervix Uteri	<b>T</b>	35	0	0	0	0	0	2	11	9	8	5
		<b>M</b>	0	0	0	0	0	0	0	0	0	0	0
		<b>F</b>	35	0	0	0	0	0	2	11	9	8	5
<b>C54-</b>	...of Corpus Uteri and	<b>T</b>	179	0	0	0	0	0	0	5	41	78	55
<b>C55</b>	Uterus	<b>M</b>	0	0	0	0	0	0	0	0	0	0	0
		<b>F</b>	179	0	0	0	0	0	0	5	41	78	55
<b>C56</b>	...of Ovary	<b>T</b>	231	0	0	0	0	1	1	13	59	90	67
		<b>M</b>	0	0	0	0	0	0	0	0	0	0	0
		<b>F</b>	231	0	0	0	0	1	1	13	59	90	67
<b>C61</b>	...of Prostate	<b>T</b>	577	0	0	0	0	0	0	3	54	191	329
		<b>M</b>	577	0	0	0	0	0	0	3	54	191	329
		<b>F</b>	0	0	0	0	0	0	0	0	0	0	0
<b>C64-</b>	...of Kidney and	<b>T</b>	254	0	0	1	0	0	0	9	51	107	86
<b>C65</b>	Renal Pelvis	<b>M</b>	156	0	0	1	0	0	0	5	32	68	50
		<b>F</b>	98	0	0	0	0	0	0	4	19	39	36

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>Malignant Neoplasms continued</b>													
<b>C67</b>	...of Bladder	<b>T</b>	266	0	0	0	0	0	0	1	35	91	139
		<b>M</b>	201	0	0	0	0	0	0	1	29	75	96
		<b>F</b>	65	0	0	0	0	0	0	0	6	16	43
<b>C69- C72</b>	...of Eye, Brain, and Other Parts of Central Nervous System	<b>T</b>	330	0	2	2	5	3	17	38	107	114	42
		<b>M</b>	191	0	1	1	2	1	9	20	74	61	22
		<b>F</b>	139	0	1	1	3	2	8	18	33	53	20
<b>C82- C85</b>	...Non-Hodgkin's Lymphoma	<b>T</b>	366	0	0	0	0	0	5	9	54	147	151
		<b>M</b>	237	0	0	0	0	0	2	6	37	99	93
		<b>F</b>	129	0	0	0	0	0	3	3	17	48	58
<b>C91- C95</b>	...Leukemia	<b>T</b>	492	0	2	2	0	3	5	15	65	189	211
		<b>M</b>	294	0	1	1	0	2	2	11	41	119	117
		<b>F</b>	198	0	1	1	0	1	3	4	24	70	94
<b>C88 C90</b>	...Multiple Myeloma and Immunoproliferative Neoplasms	<b>T</b>	264	0	0	0	0	0	0	3	41	118	102
		<b>M</b>	144	0	0	0	0	0	0	2	25	63	54
		<b>F</b>	120	0	0	0	0	0	0	1	16	55	48
<b>Re- sid- ual</b>	...Other Malignant Neoplasms	<b>T</b>	1,285	0	1	0	3	3	15	50	239	474	500
		<b>M</b>	646	0	1	0	2	3	12	19	132	257	220
		<b>F</b>	639	0	0	0	1	0	3	31	107	217	280
<b>D00- D48</b>	In Situ and Benign Neoplasms and Neoplasms of Uncertain Behavior	<b>T</b>	308	0	1	0	1	1	0	4	27	88	186
		<b>M</b>	170	0	1	0	0	1	0	4	19	60	85
		<b>F</b>	138	0	0	0	1	0	0	0	8	28	101

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>D50- D89</b>	<b>III. DISEASES OF THE BLOOD AND BLOOD- FORMING ORGANS</b>	<b>T</b>	198	1	1	0	2	0	1	8	22	71	92
		<b>M</b>	96	0	1	0	2	0	1	6	9	37	40
		<b>F</b>	102	1	0	0	0	0	0	2	13	34	52
<b>D50- D64</b>	Anemias	<b>T</b>	110	0	0	0	0	0	1	2	6	32	69
		<b>M</b>	52	0	0	0	0	0	1	1	2	17	31
		<b>F</b>	58	0	0	0	0	0	0	1	4	15	38
<b>D65- D89</b>	Other Diseases of the Blood and Blood-Forming Organs	<b>T</b>	88	1	1	0	2	0	0	6	16	39	23
		<b>M</b>	44	0	1	0	2	0	0	5	7	20	9
		<b>F</b>	44	1	0	0	0	0	0	1	9	19	14
<b>E00- E90</b>	<b>IV. ENDOCRINE, NUTRITIONAL, AND METABOLIC DISEASES AND IMMUNITY DISORDERS</b>	<b>T</b>	1,977	4	1	1	0	1	29	83	375	679	804
		<b>M</b>	1,066	1	0	0	0	1	17	53	226	387	381
		<b>F</b>	911	3	1	1	0	0	12	30	149	292	423
<b>E10- E14</b>	Diabetes Mellitus	<b>T</b>	1,308	0	0	0	0	1	18	47	243	475	524
		<b>M</b>	723	0	0	0	0	1	11	29	153	276	253
		<b>F</b>	585	0	0	0	0	0	7	18	90	199	271
<b>Re- sid- ual</b>	Other Endocrine, Nutritional, Metabolic, and Immunity Disorders	<b>T</b>	669	4	1	1	0	0	11	36	132	204	280
		<b>M</b>	343	1	0	0	0	0	6	24	73	111	128
		<b>F</b>	326	3	1	1	0	0	5	12	59	93	152



**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>F00- F99</b>	<b>V. MENTAL AND BEHAVIORAL DISORDERS</b>	<b>T</b>	3,304	0	0	0	0	0	16	52	160	483	2,593
		<b>M</b>	1,240	0	0	0	0	0	12	31	113	261	823
		<b>F</b>	2,064	0	0	0	0	0	4	21	47	222	1,770
<b>F01</b>	Vascular Dementia result of infarction of the brain due to vascular disease	<b>T</b>	461	0	0	0	0	0	0	0	6	55	400
		<b>M</b>	187	0	0	0	0	0	0	0	4	28	155
		<b>F</b>	274	0	0	0	0	0	0	0	2	27	245
<b>F03</b>	Unspecified dementia <b>excludes</b> Alzheimer's Disease [See G30 for Alzheimer's]	<b>T</b>	2,411	0	0	0	0	0	0	0	17	294	2,100
		<b>M</b>	766	0	0	0	0	0	0	0	9	137	620
		<b>F</b>	1,645	0	0	0	0	0	0	0	8	157	1,480
<b>F10- F18, F19</b>	Disorders due to Psychoactive Substance use [excl. tobacco]	<b>T</b>	239	0	0	0	0	0	16	50	97	62	14
		<b>M</b>	168	0	0	0	0	0	12	30	70	50	6
		<b>F</b>	71	0	0	0	0	0	4	20	27	12	8
<b>Re- sid- ual</b>	Other Mental Illness and Disorders of Psychological Development	<b>T</b>	193	0	0	0	0	0	0	2	40	72	79
		<b>M</b>	119	0	0	0	0	0	0	1	30	46	42
		<b>F</b>	74	0	0	0	0	0	0	1	10	26	37
<b>G00- G99</b>	<b>VI. DISEASES OF THE NERVOUS SYSTEM</b>	<b>T</b>	4,273	8	1	4	7	6	27	60	262	962	2,936
		<b>M</b>	1,772	2	1	2	4	4	20	40	130	503	1,066
		<b>F</b>	2,501	6	0	2	3	2	7	20	132	459	1,870
<b>G20- G21</b>	Parkinson's Disease	<b>T</b>	715	0	0	0	0	0	0	0	13	196	506
		<b>M</b>	442	0	0	0	0	0	0	0	8	136	298
		<b>F</b>	273	0	0	0	0	0	0	0	5	60	208

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>Diseases of Nervous System Continued</b>													
<b>G30</b>	Alzheimer's Disease	<b>T</b>	2,435	0	0	0	0	0	0	0	39	348	2,048
		<b>M</b>	728	0	0	0	0	0	0	0	13	138	577
		<b>F</b>	1,707	0	0	0	0	0	0	0	26	210	1,471
<b>Re-sid-ual</b>	Other Diseases of the Nervous System	<b>T</b>	1,123	8	1	4	7	6	27	60	210	418	382
		<b>M</b>	602	2	1	2	4	4	20	40	109	229	191
		<b>F</b>	521	6	0	2	3	2	7	20	101	189	191
<b>I00-I99</b>	<b>IX. DISEASES OF THE CIRCULATORY SYSTEM</b>	<b>T</b>	11,761	3	2	3	2	4	68	287	1,400	2,824	7,168
		<b>M</b>	6,028	2	0	1	1	2	44	194	992	1,771	3,021
		<b>F</b>	5,733	1	2	2	1	2	24	93	408	1,053	4,147
<b>I00-I78</b>	<b>Major Cardiovascular Diseases</b>	<b>T</b>	11,700	3	2	3	2	4	67	281	1,384	2,805	7,149
		<b>M</b>	5,996	2	0	1	1	2	44	191	983	1,759	3,013
		<b>F</b>	5,704	1	2	2	1	2	23	90	401	1,046	4,136
<b>I00-I09, I11, I13, I20-I51</b>	<b>**Diseases of the Heart</b>	<b>T</b>	8,401	2	2	1	1	4	52	224	1,038	1,968	5,109
		<b>M</b>	4,570	1	0	0	1	2	36	160	762	1,307	2,301
		<b>F</b>	3,831	1	2	1	0	2	16	64	276	661	2,808
<b>I00-I09</b>	--Acute Rheumatic Fever and Chronic Rheumatic Heart Diseases	<b>T</b>	117	0	0	0	0	0	0	3	12	21	81
		<b>M</b>	35	0	0	0	0	0	0	3	6	7	19
		<b>F</b>	82	0	0	0	0	0	0	0	6	14	62
<b>I11</b>	--Hypertensive Heart Disease	<b>T</b>	352	0	0	0	0	0	3	17	39	54	239
		<b>M</b>	159	0	0	0	0	0	1	14	31	30	83
		<b>F</b>	193	0	0	0	0	0	2	3	8	24	156

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>Diseases of Circulatory System Continued</b>													
<b>I13</b>	--Hypertensive Heart and Renal Disease	<b>T</b>	163	0	0	0	0	0	0	3	10	21	129
		<b>M</b>	65	0	0	0	0	0	0	3	3	15	44
		<b>F</b>	98	0	0	0	0	0	0	0	7	6	85
<b>I20-I25</b>	--Ischaemic Heart Disease	<b>T</b>	4,294	0	0	0	0	0	16	111	688	1,201	2,278
		<b>M</b>	2,735	0	0	0	0	0	14	85	530	858	1,248
		<b>F</b>	1,559	0	0	0	0	0	2	26	158	343	1,030
<b>I21-I22</b>	~Acute Myocardial Infarction	<b>T</b>	1,046	0	0	0	0	0	5	36	199	326	480
		<b>M</b>	613	0	0	0	0	0	4	26	147	212	224
		<b>F</b>	433	0	0	0	0	0	1	10	52	114	256
<b>I23-I24</b>	~Other Acute Ischaemic Heart Diseases	<b>T</b>	33	0	0	0	0	0	0	0	9	8	16
		<b>M</b>	14	0	0	0	0	0	0	0	5	4	5
		<b>F</b>	19	0	0	0	0	0	0	0	4	4	11
<b>I25.0, I25.1</b>	~Atherosclerotic (chronic) Cardiovascular Disease	<b>T</b>	2,830	0	0	0	0	0	10	72	448	756	1,544
		<b>M</b>	1,843	0	0	0	0	0	9	56	353	558	867
		<b>F</b>	987	0	0	0	0	0	1	16	95	198	677
<b>I20, I25.2-I25.9</b>	~Other Chronic Ischaemic Heart Diseases	<b>T</b>	385	0	0	0	0	0	1	3	32	111	238
		<b>M</b>	265	0	0	0	0	0	1	3	25	84	152
		<b>F</b>	120	0	0	0	0	0	0	0	7	27	86
<b>I26-I51</b>	--Other Heart Disease	<b>T</b>	3,475	2	2	1	1	4	33	90	289	671	2,382
		<b>M</b>	1,576	1	0	0	1	2	21	55	192	397	907
		<b>F</b>	1,899	1	2	1	0	2	12	35	97	274	1,475

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>Diseases of Circulatory System Continued</b>													
<b>I50</b>	~Heart Failure	<b>T</b>	1,126	0	0	0	0	0	1	5	36	184	900
		<b>M</b>	474	0	0	0	0	0	0	5	24	102	343
		<b>F</b>	652	0	0	0	0	0	1	0	12	82	557
<b>I26-I28, I30-I39, I42-I49, I51</b>	~All Other Forms of Heart Disease	<b>T</b>	2,349	2	2	1	1	4	32	85	253	487	1,482
		<b>M</b>	1,102	1	0	0	1	2	21	50	168	295	564
		<b>F</b>	1,247	1	2	1	0	2	11	35	85	192	918
<b>I10, I12, I15</b>	<b>**Essential Hypertension &amp; Hypertensive Renal Disease</b>	<b>T</b>	628	0	0	0	0	0	1	11	91	178	347
		<b>M</b>	292	0	0	0	0	0	1	7	72	99	113
		<b>F</b>	336	0	0	0	0	0	0	4	19	79	234
<b>I60-I69</b>	<b>**Cerebrovascular Diseases</b>	<b>T</b>	2,268	0	0	2	1	0	11	31	206	540	1,477
		<b>M</b>	940	0	0	1	0	0	5	13	113	282	526
		<b>F</b>	1,328	0	0	1	1	0	6	18	93	258	951
<b>I70-I78</b>	<b>**Diseases of arteries, arterioles and capillaries</b>	<b>T</b>	403	1	0	0	0	0	3	15	49	119	216
		<b>M</b>	194	1	0	0	0	0	2	11	36	71	73
		<b>F</b>	209	0	0	0	0	0	1	4	13	48	143
<b>I71</b>	--Aortic Aneurysm and Dissection	<b>T</b>	209	0	0	0	0	0	1	11	31	68	98
		<b>M</b>	110	0	0	0	0	0	0	8	25	41	36
		<b>F</b>	99	0	0	0	0	0	1	3	6	27	62
<b>I72-I78</b>	--Other Diseases of the Arteries, Arterioles, and Capillaries	<b>T</b>	194	1	0	0	0	0	2	4	18	51	118
		<b>M</b>	84	1	0	0	0	0	2	3	11	30	37
		<b>F</b>	110	0	0	0	0	0	0	1	7	21	81

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>Diseases of Circulatory System Continued</b>													
<b>I80- I99</b>	Other Disorders of the Circulatory System	<b>T</b>	61	0	0	0	0	0	0	3	9	12	8
		<b>M</b>	32	0	0	0	0	0	0	3	9	12	8
		<b>F</b>	29	0	0	0	0	0	1	3	7	7	11
<b>J00- J99</b>	<b>X. DISEASES OF THE RESPIRATORY SYSTEM</b>	<b>T</b>	3,975	16	10	3	4	4	24	43	398	1,354	2,119
		<b>M</b>	1,973	9	6	2	3	2	12	22	229	743	945
		<b>F</b>	2,002	7	4	1	1	2	12	21	169	611	1,174
<b>J10- J18</b>	Influenza and Pneumonia	<b>T</b>	698	11	5	0	1	2	7	21	71	134	446
		<b>M</b>	356	7	3	0	1	1	5	12	43	86	198
		<b>F</b>	342	4	2	0	0	1	2	9	28	48	248
<b>J10- J11</b>	...Influenza	<b>T</b>	229	1	2	0	1	2	1	8	19	42	153
		<b>M</b>	106	0	0	0	1	1	0	4	11	24	65
		<b>F</b>	123	1	2	0	0	1	1	4	8	18	88
<b>J12- J18</b>	...Pneumonia	<b>T</b>	469	10	3	0	0	0	6	13	52	92	293
		<b>M</b>	250	7	3	0	0	0	5	8	32	62	133
		<b>F</b>	219	3	0	0	0	0	1	5	20	30	160
<b>J40- J47</b>	Chronic Lower Respiratory Diseases	<b>T</b>	2,350	0	1	2	3	1	8	9	246	918	1,162
		<b>M</b>	1,130	0	0	1	2	0	2	3	142	478	502
		<b>F</b>	1,220	0	1	1	1	1	6	6	104	440	660
<b>J43</b>	...Emphysema	<b>T</b>	121	0	0	0	0	0	0	0	19	49	53
		<b>M</b>	69	0	0	0	0	0	0	0	13	28	28
		<b>F</b>	52	0	0	0	0	0	0	0	6	21	25

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death			Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
			<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>		<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
			<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
			<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>Diseases of Respiratory System Continued</b>														
<b>J45- J46</b>	...Asthma		<b>T</b>	62	0	1	2	3	1	6	3	19	11	16
			<b>M</b>	25	0	0	1	2	0	1	1	7	4	9
			<b>F</b>	37	0	1	1	1	1	5	2	12	7	7
<b>J44, J47</b>	...Other Chronic Lower Respiratory Diseases		<b>T</b>	2,167	0	0	0	0	0	2	6	208	858	1,093
			<b>M</b>	1,036	0	0	0	0	0	1	2	122	446	465
			<b>F</b>	1,131	0	0	0	0	0	1	4	86	412	628
<b>J69</b>	Pneumonitis Due to Solids and Liquids		<b>T</b>	198	0	0	0	0	0	2	2	18	51	125
			<b>M</b>	114	0	0	0	0	0	1	2	11	28	72
			<b>F</b>	84	0	0	0	0	0	1	0	7	23	53
<b>Re- sid- ual</b>	Other Disease of the Respiratory System		<b>T</b>	729	5	4	1	0	1	7	11	63	251	386
			<b>M</b>	373	2	3	1	0	1	4	5	33	151	173
			<b>F</b>	356	3	1	0	0	0	3	6	30	100	213
<b>K00- K93</b>	<b>XI.</b>	<b>DISEASES OF THE DIGESTIVE SYSTEM</b>	<b>T</b>	1,805	3	1	0	0	2	33	156	454	513	643
			<b>M</b>	888	1	1	0	0	0	17	96	271	262	240
			<b>F</b>	917	2	0	0	0	2	16	60	183	251	403
<b>K70, K73- K74</b>	Chronic Liver Disease and Cirrhosis		<b>T</b>	668	0	0	0	0	0	21	104	290	206	47
			<b>M</b>	395	0	0	0	0	0	10	63	175	121	26
			<b>F</b>	273	0	0	0	0	0	11	41	115	85	21
<b>K70</b>	...Alcoholic Liver Disease		<b>T</b>	471	0	0	0	0	0	19	91	233	122	6
			<b>M</b>	298	0	0	0	0	0	8	57	144	84	5
			<b>F</b>	173	0	0	0	0	0	11	34	89	38	1

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>Diseases of Respiratory System Continued</b>													
<b>K73- K74</b>	...Other Chronic Liver Disease and Cirrhosis	<b>T</b>	197	0	0	0	0	0	2	13	57	84	41
		<b>M</b>	97	0	0	0	0	0	2	6	31	37	21
		<b>F</b>	100	0	0	0	0	0	0	7	26	47	20
<b>Re- sid- ual</b>	Other Disease of the Digestive System	<b>T</b>	1,137	3	1	0	0	2	12	52	164	307	596
		<b>M</b>	493	1	1	0	0	0	7	33	96	141	214
		<b>F</b>	644	2	0	0	0	2	5	19	68	166	382
<b>L00- L99</b>	<b>XII. DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE</b>	<b>T</b>	82	0	0	0	0	0	1	1	12	27	41
		<b>M</b>	30	0	0	0	0	0	1	0	8	12	9
		<b>F</b>	52	0	0	0	0	0	0	0	1	4	15
<b>M00- M99</b>	<b>XIII. DISEASES OF THE MUSCULOSKELETAL SYSTEM AND CONNECTIVE TISSUE</b>	<b>T</b>	265	0	0	0	0	0	5	6	37	83	134
		<b>M</b>	92	0	0	0	0	0	1	3	15	38	35
		<b>F</b>	173	0	0	0	0	0	4	3	22	45	99
<b>N00- N99</b>	<b>XIV. DISEASES OF THE GENITOURINARY SYSTEM</b>	<b>T</b>	902	0	0	0	0	0	5	11	87	257	542
		<b>M</b>	462	0	0	0	0	0	3	4	57	150	248
		<b>F</b>	440	0	0	0	0	0	2	7	30	107	294
<b>N00-N07, N17-N19, N25-N27</b>	Nephritis, Nephrotic Syndrome, and Nephrosis	<b>T</b>	598	0	0	0	0	0	3	8	58	178	351
		<b>M</b>	325	0	0	0	0	0	2	4	39	115	165
		<b>F</b>	273	0	0	0	0	0	1	4	19	63	186

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>Diseases of Genitourinary System Continued</b>													
<b>N17- N19</b>	Renal Failure	<b>T</b>	570	0	0	0	0	0	3	8	56	166	337
		<b>M</b>	314	0	0	0	0	0	2	4	37	107	164
		<b>F</b>	256	0	0	0	0	0	1	4	19	59	173
<b>Re- sid- ual</b>	Other Diseases of the Genitourinary System	<b>T</b>	304	0	0	0	0	0	2	3	29	79	191
		<b>M</b>	137	0	0	0	0	0	1	0	18	35	83
		<b>F</b>	167	0	0	0	0	0	1	3	11	44	108
<b>P00- P96</b>	<b>XVI. CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD</b>	<b>T</b>	164	161	0	0	0	0	2	0	1	0	0
		<b>M</b>	96	95	0	0	0	0	1	0	0	0	0
		<b>F</b>	68	66	0	0	0	0	1	0	1	0	0
<b>Q00- Q99</b>	<b>XVII. CONGENITAL MALFORMATIONS, DEFORMATIONS, AND CHROMOSOMAL ABNORMALITIE</b>	<b>T</b>	197	83	7	5	1	1	6	20	41	21	12
		<b>M</b>	97	44	3	2	0	0	6	8	20	10	4
		<b>F</b>	100	39	4	3	1	1	0	12	21	11	8
<b>R00- R99</b>	<b>XVIII. SYMPTOMS, SIGNS, AND ABNORMAL CLINICAL AND LABORATORY FINDINGS</b>	<b>T</b>	978	24	2	2	1	1	9	18	88	229	604
		<b>M</b>	421	15	2	1	1	1	6	13	60	123	199
		<b>F</b>	557	9	0	1	0	0	3	5	28	106	405



**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>V01- Y98</b>	<b>XX. EXTERNAL CAUSES</b>	<b>T</b>	3,789	28	20	15	21	111	654	564	732	560	1,084
		<b>M</b>	2,399	21	15	10	16	85	503	390	544	361	454
		<b>F</b>	1,390	7	5	5	5	26	151	174	188	199	630
<b>V01- X59, Y85-Y86</b>	<b>Accidents</b>	<b>T</b>	2,790	17	14	14	12	43	384	336	490	454	1,026
		<b>M</b>	1,610	12	13	9	9	25	276	215	359	285	407
		<b>F</b>	1,180	5	1	5	3	18	108	121	131	169	619
<b>V01- V99, Y85</b>	<b>**Transport Accidents</b>	<b>T</b>	541	1	8	8	6	30	125	91	146	90	36
		<b>M</b>	377	1	7	4	4	16	90	67	111	57	20
		<b>F</b>	164	0	1	4	2	14	35	24	35	33	16
	<b>+ --Motor Vehicle Accidents</b>	<b>T</b>	489	1	8	7	5	28	116	82	129	79	34
		<b>M</b>	336	1	7	3	3	14	83	62	95	49	19
		<b>F</b>	153	0	1	4	2	14	33	20	34	30	15
<b>V90- V99,Y85</b>	<b>++ --Other Transport Accidents (land, water, air, space)</b>	<b>T</b>	52	0	0	1	1	2	9	9	17	11	2
		<b>M</b>	41	0	0	1	1	2	7	5	16	8	1
		<b>F</b>	11	0	0	0	0	0	2	4	1	3	1
+ V02-V04,V09.0,V09.2,V12-V14,V19.0-V19.2,V19.4-V19.6,V20-V79,V80.3-V80.5,V81.0-V81.1,V82.0-V82.1,V83-V86,V87.0-V87.8,V88.0-V88.8,V89.0,V89.2													
++ V1,V5-V6,V09.1,V09.3-V09.9,V10-V11,V15-V18,V19.3,V19.8-V19.9,V80.0-V80.2,V80.6-V80.9,V81.2-V81.9,V82.2-V82.9,V87.9,V88.9,V89.1,V89.3,V89.9													
<b>W00- X59, Y86</b>	<b>**Non-Transport Accidents</b>	<b>T</b>	2,249	16	6	6	6	13	259	245	344	364	990
		<b>M</b>	1,233	11	6	5	5	9	186	148	248	228	387
		<b>F</b>	1,016	5	0	1	1	4	73	97	96	136	603
<b>W00- W19</b>	<b>--Falls</b>	<b>T</b>	1,230	0	0	1	0	2	6	16	80	237	888
		<b>M</b>	569	0	0	1	0	1	4	13	57	151	342
		<b>F</b>	661	0	0	0	0	1	2	3	23	86	546

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>External Causes -- Accidents Continued</b>													
<b>X00- X09</b>	--Accidental Exposure to Smoke, Fire, and Flames	<b>T</b>	28	0	0	0	0	0	6	3	7	9	3
		<b>M</b>	16	0	0	0	0	0	3	3	3	5	2
		<b>F</b>	12	0	0	0	0	0	3	0	4	4	1
<b>X40- X49</b>	--Accidental Poisoning <sup>1</sup> and Exposure to Noxious Substances	<b>T</b>	639	0	0	0	0	8	216	193	185	29	8
		<b>M</b>	424	0	0	0	0	5	154	111	130	21	3
		<b>F</b>	215	0	0	0	0	3	62	82	55	8	5
<b>Re- sid- ual</b>	--Other Non-Transport Accidents and Their Sequelae	<b>T</b>	352	16	6	5	6	3	31	33	72	89	91
		<b>M</b>	224	11	6	4	5	3	25	21	58	51	40
		<b>F</b>	128	5	0	1	1	0	6	12	14	38	51
<b>X60- X84, Y87.0</b>	<b><u>Intentional Self-Harm</u></b> <b><u>(Suicide)</u></b>	<b>T</b>	737	0	0	0	9	42	216	183	195	69	23
		<b>M</b>	603	0	0	0	7	36	180	145	156	57	22
		<b>F</b>	134	0	0	0	2	6	36	38	39	12	1
<b>X72- X74</b>	**By Discharge of Firearms	<b>T</b>	356	0	0	0	2	23	106	70	96	39	20
		<b>M</b>	333	0	0	0	2	22	98	64	88	39	20
		<b>F</b>	23	0	0	0	0	1	8	6	8	0	0
<b>X60-X71, X75-X84, Y87.0</b>	**By Other and Unspecified Means and Their Sequelae	<b>T</b>	381	0	0	0	7	19	110	113	99	30	3
		<b>M</b>	270	0	0	0	5	14	82	81	68	18	2
		<b>F</b>	111	0	0	0	2	5	28	32	31	12	1

**Table 2. Deaths from Selected Causes by Age Group and Sex, Minnesota Residents, 2018.**

Cause of Death		Total	< 1	1-4	5-9	10-14	15-19	20-34	35-49	50-64	65-79	80+	
		<b>Sex</b>											
<b>ICD10 Code</b>	<b>ALL CAUSES, Total</b>	<b>T</b>	44,698	341	56	40	49	142	948	1,684	6,388	12,382	22,668
		<b>M</b>	22,485	196	34	21	33	103	674	1,025	3,944	7,021	9,434
		<b>F</b>	22,213	145	22	19	16	39	274	659	2,444	5,361	13,234
<b>External Causes Continued</b>													
<b>X85- Y09, Y87.1</b>	<b><u>Assault (Homicide)</u></b>	<b>T</b>	122	7	4	0	0	20	41	29	15	2	4
		<b>M</b>	98	7	2	0	0	19	38	21	9	0	2
		<b>F</b>	24	0	2	0	0	1	3	8	6	2	2
<b>X93- X95</b>	<b>**By Discharge of Firearms</b>	<b>T</b>	66	0	0	0	0	16	29	17	3	1	0
		<b>M</b>	60	0	0	0	0	15	28	14	3	0	0
		<b>F</b>	6	0	0	0	0	1	1	3	0	1	0
<b>X85-X92, X96-Y09, Y87.1</b>	<b>**By Other and Unspecified Means and Their Sequelae</b>	<b>T</b>	56	7	4	0	0	4	12	12	12	1	4
		<b>M</b>	38	7	2	0	0	4	10	7	6	0	2
		<b>F</b>	18	0	2	0	0	0	2	5	6	1	2
<b>Y10- Y34, Y87.2,Y89.9</b>	<b><u>Events of Undetermined Intent</u></b>	<b>T</b>	63	4	1	1	0	6	12	12	16	5	6
		<b>M</b>	38	2	0	1	0	5	9	6	11	2	2
		<b>F</b>	25	2	1	0	0	1	3	6	5	3	4
<b>Y40- Y84, Y88</b>	<b><u>Complications of Medical and Surgical Care</u></b>	<b>T</b>	77	0	1	0	0	0	1	4	16	30	25
		<b>M</b>	50	0	0	0	0	0	0	3	9	17	21
		<b>F</b>	27	0	1	0	0	0	1	1	7	13	4

**Note:** 33 deaths were unclassified. [H00-H99] Diseases of the eye or ear (2); [O00-O96] Pregnancy and childbirth (10); [Y35] Legal intervention (11); [Y89] Sequelae of war operations; missing cause (9).

<sup>1</sup> 56% of accidental poisonings are due to narcotics and hallucinogens in ages 20-64 years.

**Table 3. MN Ten Leading Causes of Death<sup>1</sup>, Death Rates per 100,000 Population, Percent of Total Deaths, and Rank Order, Minnesota Residents, 2018.**

Cause of Death	Minnesota				United States <sup>2</sup>	
	Number of Deaths	Death Rates	Percent of Total	RANK	Death Rates	RANK
Malignant Neoplasms [Cancer] (C00-C97)	9,906	176.5	22.2%	1	183.9	2
Diseases of the Heart (I00-I09,I11,I13,I20-I51)	8,401	149.7	18.8%	2	198.8	1
Accidents (V01-X59,Y85-Y86)	2,790	49.7	6.2%	3	52.2	3
Falls (W00-W19)	1,230	21.9	2.8%			
Accidental poisoning (X40-X49)	716	12.8	1.6%			
Motor Vehicle <sup>3</sup>	489	8.7	1.1%			
Alzheimer's Disease (G30)	2,435	43.4	5.4%	4	37.3	6
Chronic Lower Respiratory Diseases (J40-J47)	2,350	41.9	5.3%	5	49.2	4
Cerebrovascular Diseases [Stroke] (I60-I69)	2,268	40.4	5.1%	6	44.9	5
Diabetes Mellitus (E10-E14)	1,308	23.3	2.9%	7	25.7	7
Intentional Self-harm [Suicide] (X60-X84,Y87.0)	737	13.1	1.6%	8	14.5	10
Parkinsons (G20, G21)	715	12.7	1.6%	9	9.8	14
Influenza and Pneumonia (J10-J18)	698	12.4	1.6%	10	17.1	8
Influenza (J10-J11)	229	4.1	0.5%			
Pneumonia (J12-J18)	469	8.4	1.0%			
All Other Causes	13,090	233.3	29.3%		224.7	
Total - All Causes	44,698	796.6			863.8	

<sup>1</sup>These are the 10 leading causes of death for residents of Minnesota listed in descending order of prevalence. Categories based on US 113 causes deemed rankable. MN rates and rank order are compared with US rates and rank order.

<sup>2</sup>United States data are from 2017, the most current available.

<sup>3</sup>Motor Vehicle cause codes: V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0,V89.2

**Note:** Codes listed in parantheses are the ICD10 codes included in each category.

**Note:** 32 deaths were unclassified. [H00-H99] Diseases of the eye or ear (1); [O00-O99] Pregnancy and childbirth (11); [Y35] Legal intervention (11); [Y89] Sequelae of war operations; missing cause (9).

**Mortality Table 4. Leading Causes of Death by Age Groups, Counts, and Age/Cause-specific Death Rates, Minnesota Residents, 2018.**

	No. <sup>1</sup> of Deaths			Death Rate <sup>2</sup> Per 100,000		
	No. <sup>1</sup> of Deaths	%	Death Rate <sup>2</sup> Per 100,000	No. <sup>1</sup> of Deaths	%	Death Rate <sup>2</sup> Per 100,000
<b>1-4 Years</b>				<b>35-49 Years</b>		
Total - all causes	56		19.5	Total - all causes		160.8
Accidents	14	25.0%	--	Malignant Neoplasms	339	20.1%
Motor Vehicle	8	14.3%	--	Accidents	336	20.0%
Congenital Anomalies	7	12.5%	--	Accidental poisoning <sup>3</sup>	193	11.5%
Assault (Homicide)	5	8.9%	--	Motor Vehicle	82	4.9%
Malignant Neoplasm	5	8.9%	--	Diseases of the Heart	224	13.3%
Influenza & Pneumonia	5	8.9%	--	Intentional Self-Harm	183	10.9%
				Liver Disease, Cirrhosis	104	6.2%
<b>5-9 Years</b>				<b>50-64 Years</b>		
Total - all causes	40		11.1	Total - all causes		576.0
Accidents	14	35.0%	--	Malignant Neoplasms	2,138	33.5%
Motor Vehicle	7	17.5%	--	Diseases of the Heart	1,038	16.2%
Congenital Anomalies	5	12.5%	--	Accidents	490	7.7%
Malignant Neoplasms	5	12.5%	--	Accidental poisoning <sup>3</sup>	185	2.9%
				Motor Vehicle	129	2.0%
<b>10-14 Years</b>				Liver Disease, Cirrhosis	290	4.5%
Total - all causes	49		13.2	Chron. Lower Resp Dis.	246	3.9%
Accidents	12	24.5%	--	Diabetes Mellitus	243	3.8%
Motor Vehicle	5	10.2%	--	Intentional Self-Harm	195	3.1%
Intentional Self-Harm	9	18.4%	--			
Malignant Neoplasms	9	18.4%	--	<b>65-79 Years<sup>2</sup></b>		
				Total - all causes		1,866.6
<b>15-19 Years</b>				Malignant Neoplasms	4,011	32.4%
Total - all causes	142		39.7	Diseases of the Heart	1,968	15.9%
Accidents	43	30.3%	12.0	Chron. Lower Resp Dis.	918	7.4%
Motor Vehicle	28	19.7%	7.8	Cerebrovascular Diseases	540	4.4%
Accidental poisoning <sup>3</sup>	8	5.6%	--	Diabetes Mellitus	475	3.8%
Intentional Self-Harm	42	29.6%	11.7	Accidents	454	3.7%
Assault (Homicide)	20	14.1%	5.6	Falls	237	1.9%
Malignant Neoplasms	10	7.0%	--	Motor Vehicle	79	0.6%
<b>20-34 Years</b>				<b>80 Years and Over<sup>2</sup></b>		
Total - all causes	948		84.6	Total - all causes		10,009.4
Accidents	384	40.5%	34.3	Diseases of the Heart	5,109	22.5%
Accidental poisoning <sup>3</sup>	216	22.8%	19.3	Malignant Neoplasms	3,329	14.7%
Motor Vehicle	116	12.2%	10.3	Unspecified Dementia	2,100	9.3%
Intentional Self-Harm	216	22.8%	19.3	Alzheimer's Disease	2,048	9.0%
Malignant Neoplasms	60	6.3%	5.4	Cerebrovascular Diseases	1,477	6.5%
Diseases of the Heart	52	5.5%	4.6	Chron. Lower Resp Dis.	1,162	5.1%
Assault (Homicide)	41	4.3%	3.7	Accidents	1,026	4.5%
				Falls	888	3.9%

<sup>1</sup> Rates are per 100,000 age group-specific population. Rates are only calculated for those with a count of 20 or more due to the instability and unreliability of rate estimates with fewer than 20 deaths.

<sup>2</sup> Age groups for those 65 and older were redefined and are not comparable to 65-74 and 75+ from previous years.

<sup>3</sup> 56% of accidental poisonings are due to narcotics and hallucinogens in ages 20-64 years.

**Mortality Table 5a. Deaths Due to Selected Causes by Race/Ethnicity, MN Residents, 2018.**

	Non-Hispanic						Hispanic
	Total	White	African American	American Indian	Asian or Pacific Islander	Other/Unknown	
<b>TOTAL POPULATION<sup>1</sup></b>	5,611,179	4,524,531	406,460	68,556	302,349	N/A	309,283
<b>TOTAL - ALL CAUSES</b>	<b>44,315</b>	<b>40,955</b>	<b>1,441</b>	<b>649</b>	<b>754</b>	<b>44</b>	<b>472</b>
<b>TOTAL - Natural Causes</b>	<b>40,526</b>	<b>37,705</b>	<b>1,189</b>	<b>522</b>	<b>680</b>	<b>37</b>	<b>393</b>
<b>Malignant Neoplasms</b>	<b>9,906</b>	<b>9,183</b>	<b>346</b>	<b>93</b>	<b>178</b>	<b>7</b>	<b>99</b>
Stomach	129	112	6	1	6	0	4
Colon, Rectum and Anus	827	770	23	7	17	2	8
Pancreas	698	656	18	4	11	1	8
Trachea, Bronchus, Lung	2,137	1,985	69	39	33	1	10
Breast	675	622	35	2	8	0	8
Cervix, Uterus, Ovary	445	404	23	4	10	0	4
Prostate	577	544	22	1	6	0	4
Non-Hodgkins Lymphoma	366	345	7	1	10	0	3
Leukemia	492	461	13	2	7	0	9
Other Malignancies	3,560	3,284	130	32	70	3	41
Diabetes Mellitus	1,308	1,115	75	40	47	3	28
Alzheimer's Disease	2,435	2,363	25	12	22	2	11
<b>Major Cardiovascular</b>	<b>11,700</b>	<b>10,931</b>	<b>357</b>	<b>126</b>	<b>191</b>	<b>8</b>	<b>87</b>
Diseases of the Heart	8,401	7,879	244	100	104	6	68
Essential Hypertension & Hypertensive Renal	628	585	28	5	8	0	2
Cerebrovascular	2,268	2,087	77	16	73	2	13
Influenza & Pneumonia	698	649	21	8	13	0	7
Chronic Lower Respiratory Diseases	2,350	2,231	60	20	31	0	8
Chronic Liver Disease and Cirrhosis	668	568	26	39	12	3	20
Nephritis, Nephrotic Syndrome, and Nephrosis	598	532	26	8	22	0	10
All Other Diseases	10,863	10,133	253	176	164	14	123
<b>Total Accidents</b>	<b>2,790</b>	<b>2,429</b>	<b>179</b>	<b>86</b>	<b>39</b>	<b>2</b>	<b>55</b>
Motor Vehicle Accidents	489	411	39	13	8	2	16
Falls	1,230	1,178	21	9	15	0	7
Accidental poisoning	639	465	94	52	7	0	21
<b>Intentional Self-Harm (Suicide)</b>	<b>737</b>	<b>656</b>	<b>21</b>	<b>19</b>	<b>24</b>	<b>4</b>	<b>13</b>
<b>Assault (Homicide)</b>	<b>122</b>	<b>53</b>	<b>40</b>	<b>18</b>	<b>4</b>	<b>1</b>	<b>6</b>
<b>Other External Causes</b>	<b>140</b>	<b>112</b>	<b>12</b>	<b>4</b>	<b>7</b>	<b>0</b>	<b>5</b>

<sup>1</sup> Annual Estimates are bridged-race Vintage 2018 postcensal estimates of the July 1 resident population. These estimates were prepared by the Census Bureau in collaboration with NCHS. Bridged race estimates created for the 5 race or Hispanic categories. Thus, there are no population estimates for other/unknown. For more information or access to the data, see:

<https://wonder.cdc.gov/wonder/help/bridged-race.html>

**Note:** see Table 5b for crude rates.

**Mortality Table 5b. Cause-Specific Mortality Rates<sup>1,2</sup> by Race/Ethnicity, MN Residents, 2018.**

	Non-Hispanic						Hispanic
	Total	White	African American	American Indian	Asian or Pacific Islander	Other/ <sup>3</sup> Unknown	
<b>TOTAL - ALL CAUSES</b>	<b>789.8</b>	<b>905.2</b>	<b>354.5</b>	<b>946.7</b>	<b>249.4</b>	<b>N/A</b>	<b>152.6</b>
<b>TOTAL - Natural Causes</b>	<b>722.2</b>	<b>833.3</b>	<b>292.5</b>	<b>761.4</b>	<b>224.9</b>	<b>N/A</b>	<b>127.1</b>
Malignant Neoplasms	176.5	203.0	85.1	135.7	58.9	N/A	32.0
Stomach	2.3	2.5	--	--	--	N/A	--
Colon, Rectum and Anus	14.7	17.0	5.7	--	--	N/A	--
Pancreas	12.4	14.5	--	--	--	N/A	--
Trachea, Bronchus, Lung	38.1	43.9	17.0	56.9	10.9	N/A	--
Breast	12.0	13.7	8.6	--	--	N/A	--
Cervix, Uterus, Ovary	7.9	8.9	5.7	--	--	N/A	--
Prostate	10.3	12.0	5.4	--	--	N/A	--
Non-Hodgkins Lymphoma	6.5	7.6	--	--	--	N/A	--
Leukemia	8.8	10.2	--	--	--	N/A	--
Other Malignancies	63.4	72.6	32.0	46.7	23.2	N/A	13.3
Diabetes Mellitus	23.3	24.6	18.5	58.3	15.5	N/A	9.1
Alzheimer's Disease	43.4	52.2	6.2	--	7.3		--
Major Cardiovascular	208.5	241.6	87.8	183.8	63.2	N/A	28.1
Diseases of the Heart	149.7	174.1	60.0	145.9	34.4	N/A	22.0
Essential Hypertension & Hypertensive Renal	11.2	12.9	6.9	--	--	N/A	--
Cerebrovascular	40.4	46.1	18.9	--	24.1	N/A	--
Influenza & Pneumonia	12.4	14.3	5.2	--	--	N/A	--
Chronic Lower Respiratory Diseases	41.9	49.3	14.8	29.2	10.3	N/A	--
Chronic Liver Disease and Cirrhosis	11.9	12.6	6.4	56.9	--	N/A	6.5
Nephritis, Nephrotic Syndrome, and Nephrosis	10.7	11.8	6.4	--	7.3	N/A	--
All Other Diseases	193.6	224.0	62.2	256.7	54.2	N/A	39.8
<b>Total Accidents</b>	<b>49.7</b>	<b>53.7</b>	<b>44.0</b>	<b>125.4</b>	<b>12.9</b>	<b>N/A</b>	<b>17.8</b>
Motor Vehicle Accidents	8.7	9.1	9.6	--	--		--
Falls	21.9	26.0	5.2	--	--	N/A	--
Accidental poisoning	11.4	10.3	23.1	75.9	--	N/A	6.8
<b>Intentional Self-Harm (Suicide)</b>	<b>13.1</b>	<b>14.5</b>	<b>5.2</b>	<b>--</b>	<b>7.9</b>	<b>N/A</b>	<b>--</b>
<b>Assault (Homicide)</b>	<b>2.2</b>	<b>1.2</b>	<b>9.8</b>	<b>--</b>	<b>--</b>	<b>N/A</b>	<b>--</b>
<b>Other External Causes</b>	<b>2.5</b>	<b>2.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>N/A</b>	<b>--</b>

<sup>1</sup> Rates are per 100,000 race/ethnicity specific population. Rates not computed for counts <20 due to unreliability (--).

<sup>2</sup> Population denominator data are Bridged intersensal estimates obtained from CDC WONDER: wonder.cdc.gov.

<sup>3</sup> No cause-specific rates can be calculated for persons of other or unknown races due to no population data for this subgroup.

**Note:** see Table 5a for counts.

**Mortality Table 6a. Deaths Due to Selected Causes by Rural/Urban Residence, MN Residents, 2018.**

	Geographic Residence <sup>2</sup>					
	Total <sup>1</sup>	Large Urban	Large Suburban	Medium/ Small Metro	Micropolitan	Noncore
<b>TOTAL POPULATION</b>	5,577,487	1,795,829	1,672,349	867,730	664,709	576,870
<b>TOTAL - ALL CAUSES</b>	44,308	13,200	10,578	7,292	6,705	6,533
<b>TOTAL - Natural Causes</b>	<b>40,524</b>	<b>11,947</b>	<b>9,625</b>	<b>6,680</b>	<b>6,185</b>	<b>6,087</b>
Malignant Neoplasms	9,906	2,808	2,552	1,661	1,439	1,446
Stomach	129	38	37	22	18	14
Colon, Rectum and Anus	827	220	214	125	144	124
Pancreas	698	194	175	105	112	112
Trachea, Bronchus, Lung	2,137	538	583	376	309	331
Breast	675	223	179	88	94	91
Cervix, Uterus, Ovary	445	155	117	70	53	50
Prostate	577	162	136	92	101	86
Non-Hodgkins Lymphoma	366	99	79	78	52	58
Leukemia	492	145	123	87	70	67
Other Malignancies	3,560	1,034	909	618	486	513
Diabetes Mellitus	1,306	367	291	209	213	226
Alzheimer's Disease	2,435	713	621	467	340	294
Major Cardiovascular	11,696	3,284	2,589	2,069	1,848	1,906
Diseases of the Heart	8,397	2,241	1,837	1,552	1,372	1,395
Essential Hypertension & Hypertensive Renal	628	215	153	93	66	101
Cerebrovascular	2,268	708	510	358	348	344
Influenza & Pneumonia	697	202	133	130	112	120
Chronic Lower Respiratory Diseases	2,350	619	573	396	388	374
Chronic Liver Disease and Cirrhosis	667	216	172	110	70	99
Nephritis, Nephrotic Syndrome, and Nephrosis	598	178	152	86	84	98
All Other Diseases	10,869	3,560	2,542	1,552	1,691	1,524
<b>Total Accidents</b>	<b>2,786</b>	<b>944</b>	<b>686</b>	<b>434</b>	<b>385</b>	<b>337</b>
Motor Vehicle Accidents	488	103	142	81	86	76
Falls	1,230	455	301	182	153	139
Accidental Poisoning	637	274	143	86	77	57
<b>Intentional Self-Harm (Suicide)</b>	<b>736</b>	<b>196</b>	<b>221</b>	<b>144</b>	<b>96</b>	<b>79</b>
<b>Assault (Homicide)</b>	<b>122</b>	<b>54</b>	<b>21</b>	<b>16</b>	<b>19</b>	<b>12</b>
<b>Other External Causes</b>	<b>140</b>	<b>59</b>	<b>25</b>	<b>18</b>	<b>20</b>	<b>18</b>

<sup>1</sup> Total excludes 32 missing cause of death and/or 16 missing county of residence.

<sup>2</sup> Classification is based on the National Center for Health Statistics (NCHS) Urban-Rural Classification Scheme for Counties. See [https://www.cdc.gov/nchs/data\\_access/urban\\_rural.htm](https://www.cdc.gov/nchs/data_access/urban_rural.htm) for more information.

**Note:** see Table 6b for crude rates.



**Mortality Table 6b. Cause-Specific Mortality Rates<sup>1,2</sup> by Rural/Urban Residence, MN Residents, 2018.**

	Geographic Residence					
	Total <sup>1</sup>	Large Urban	Large Suburban	Medium/ Small Metro	Micropolitan	Noncore
<b>TOTAL - ALL CAUSES</b>	<b>794.4</b>	<b>735.0</b>	<b>632.5</b>	<b>840.4</b>	<b>1,008.7</b>	<b>1,132.5</b>
<b>TOTAL - Natural Causes</b>	<b>726.6</b>	<b>665.3</b>	<b>575.5</b>	<b>769.8</b>	<b>930.5</b>	<b>1,055.2</b>
Malignant Neoplasms	177.6	156.4	152.6	191.4	216.5	250.7
Stomach	2.3	2.1	2.2	2.5	--	--
Colon, Rectum and Anus	14.8	12.3	12.8	14.4	21.7	21.5
Pancreas	12.5	10.8	10.5	12.1	16.8	19.4
Trachea, Bronchus, Lung	38.3	30.0	34.9	43.3	46.5	57.4
Breast	12.1	12.4	10.7	10.1	14.1	15.8
Cervix, Uterus, Ovary	8.0	8.6	7.0	8.1	8.0	8.7
Prostate	10.3	9.0	8.1	10.6	15.2	14.9
Non-Hodgkins Lymphoma	6.6	5.5	4.7	9.0	7.8	10.1
Leukemia	8.8	8.1	7.4	10.0	10.5	11.6
Other Malignancies	63.8	57.6	54.4	71.2	73.1	88.9
Diabetes Mellitus	23.4	20.4	17.4	24.1	32.0	39.2
Alzheimer's Disease	43.7	39.7	37.1	53.8	51.2	51.0
Major Cardiovascular	209.7	182.9	154.8	238.4	278.0	330.4
Diseases of the Heart	150.6	124.8	109.8	178.9	206.4	241.8
Essential Hypertension & Hypertensive Renal	11.3	12.0	9.1	10.7	9.9	17.5
Cerebrovascular	40.7	39.4	30.5	41.3	52.4	59.6
Influenza & Pneumonia	42.1	11.2	8.0	15.0	16.8	20.8
Chronic Lower Respiratory Diseases	12.0	34.5	34.3	45.6	58.4	64.8
Chronic Liver Disease and Cirrhosis	10.7	12.0	10.3	12.7	10.5	17.2
Nephritis, Nephrotic Syndrome, and Nephrosis	10.7	9.9	9.1	9.9	12.6	17.0
All Other Diseases	194.9	198.2	152.0	178.9	254.4	264.2
<b>Total Accidents</b>	<b>50.0</b>	<b>52.6</b>	<b>41.0</b>	<b>50.0</b>	<b>57.9</b>	<b>58.4</b>
Motor Vehicle Accidents	8.7	5.7	8.5	9.3	12.9	13.2
Falls	22.1	25.3	18.0	21.0	23.0	24.1
Accidental Poisoning	11.4	15.3	8.6	9.9	11.6	9.9
<b>Intentional Self-Harm (Suicide)</b>	<b>13.2</b>	<b>10.9</b>	<b>13.2</b>	<b>16.6</b>	<b>14.4</b>	<b>13.7</b>
<b>Assault (Homicide)</b>	<b>2.2</b>	<b>3.0</b>	<b>1.3</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Other External Causes</b>	<b>2.5</b>	<b>3.3</b>	<b>1.5</b>	<b>--</b>	<b>3.0</b>	<b>--</b>

<sup>1</sup> Rates are per 100,000 rural/urban specific population. Rates not computed for counts <20 due to instability and unreliability.

<sup>2</sup> Population denominator data are summed from MN State Demographer's 2017 estimates of population by county: <https://mn.gov/admin/demography/data-by-topic/population-data/our-estimates/>.

**Note:** see Table 6a for counts.

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# Appendices

## Appendix A -- Technical Notes

### Sources of Data

#### Vital Events

Birth and death registration and fetal death reports filed with the Office of the Vital Records, Minnesota Department of Health for calendar year 2018 are the source documents for data on vital statistics of Minnesota residents. Late 2018 vital event certificates may have been filed after preparation of the annual report. Future data obtained from MDH may differ from that which appears in this report due to updates to the data year made after the cutoff date.

Live births and deaths to Minnesota residents that occurred in another state are included in this report insofar as they are reported to the Office of Vital Records. The inclusion of these data is made possible by an agreement for exchange of copies of resident certificates among all registration areas in the United States. Not all of the states participate in the exchange of fetal death reports; thus, this report includes only fetal deaths that occurred in Minnesota.

#### Population Data

Population estimates for 2018 by county, gender, and age group were obtained from the “Annual Estimates of the Resident Population for Selected Age Groups by Sex for the United States, States, Counties: April 1, 2010 to July 1, 2018.” Source: U.S. Census Bureau, Population Division; American FactFinder, Table PEPAGESEX. For additional information, see <https://factfinder.census.gov/>.

Population estimates by race/ethnicity are from the bridged-race Vintage 2018 postcensal estimates of the July 1 resident population. These estimates were prepared by the Census Bureau in collaboration with NCHS. Bridged race estimates are created only for the five race or Hispanic categories. Thus, there are no population estimates for other/unknown races. For more information, see: <https://wonder.cdc.gov/wonder/help/bridged-race.html>.

Sociodemographic data are obtained from the American Community Survey, 1-year and 5-year estimates, which are produced by the United States Census Bureau. The 1-year estimates for the preceding year are available in late summer. The 5-year estimates are based on pooled data from the preceding five years and are typically available in December. Five-year estimates are more reliable because they are based on a larger sample size. The 1-year and 5-year estimates are not typically dramatically different from one another.

Estimates of the total populations for Minneapolis, Edina, Bloomington, Richfield, St. Paul, and Duluth were also obtained from the U.S. Census Bureau. However, no age or race-specific data are available for cities.

#### Rates

Absolute counts of health-related events do not readily lend themselves to comparison between years or across various geographic areas because of population differences and, in

some cases, the small number of reported events. These demographic differences include total numbers of events and of the population, age and sex distributions, and ethnic and/or racial composition. In order to assess the health status of a particular population at a specified time, the absolute number of events is converted to a relative number such as a rate, a ratio, or an index. In cases where there are a small number of birth or death events, rate calculations and sometimes counts, are suppressed (see description at the end of the section). Some of the most common rates are described below. Additional definitions are provided in Appendix B at the end of this document.

## Crude Rates

A crude rate is a good measure of the overall magnitude of an event (e.g., birth or death) in a population. The crude rate is useful information for some purposes, such as planning for the delivery of health care services. One should be cautious when comparing crude rates over time or across other geographies such as a county or another state. Notably, differences in crude rates may be due to a substantially younger or older population.

A crude birth or death rate is simply the number of events divided by the total population (the denominator), multiplied by some constant so that the result is not a fraction. For birth rates and death rates, 100,000 is the most commonly used multiplier, resulting in rates per 100,000 total population.

Other frequently reported rates include crude fertility rates, pregnancy rates, and abortion rates, all of which use the population of women ages 15 to 44 years as the denominator. Fertility rates are the number of births divided by the population of women ages 15 to 44 years. Pregnancy rates are the number of pregnancies divided by the population of women ages 15 to 44 years. Abortion rates are the number of abortions divided by the population of women ages 15 to 44 years.

## Age-Specific Death Rates

An age-specific death rate is useful in understanding the influence each age group has on the overall crude death rate. Mortality Table 3 shows age-specific death rates for the state of Minnesota, its counties and CHBs, using 10 age groups. Note that the death rate for ages 0-4 is substantially higher than the death rates for the other young age groups (primarily due to a high death rate during infancy); only starting at ages 50-64 does the death rate exceed that for ages 0-4. Not surprisingly, the death rates are many times higher in the oldest age groups. Therefore, a county or CHB with an older population will have a higher overall crude death rate because of the older age distribution.

An age-specific death rate is the number of deaths to an age group divided by the population for that age group, often multiplied by some constant so that the result is not a fraction (for death rates, 100,000 is the most commonly used multiplier). Infant mortality rates are a special case with several different measures. Crude infant death rates can be calculated from the annual mortality data as infant deaths reported in a given year per population of those younger

than one year of age in that year. However, this calculation is not the rate used for research or monitoring infant mortality.

## Infant Death Rates

Because infant deaths are strongly associated with characteristics of their birth mothers, the standard is to use a linked birth/infant death data set, which comprises infant death records linked with their individual birth records. This allows for a more thorough examination of maternal demographic, pregnancy, or labor and delivery characteristics, and birth outcomes. This also allows for a more relevant denominator, namely the number of live-born infants rather than the total population of infants.

The national standard for reporting infant mortality is an annual period rate. Annual period rates are based on the linked birth/infant death records for all infants who die in a given year (period) using all live births from that same period as the denominator. Cohort rates are also used in infant mortality research, although they are not reported here (see Infant Mortality in Appendix B for additional information). The infant mortality rate is then defined as the number of infants born alive in a given year that die within the first year of life for every 1,000 live births in that same year.

Additional details about several other infant death-related measures are included in the appendix. This includes fetal deaths, neonatal deaths, and postneonatal deaths.

## Age-Adjusted Death Rates

Age adjusting rates is a way to make fairer comparisons between counties/CHBs with different age distributions. For example, a county having a higher percentage of elderly people may have a higher crude death than a county with a younger population merely because the elderly are more likely to die. Age-adjusted death rates are used to eliminate this age bias in the makeup of the populations being compared, thereby providing a much more reliable rate for comparison purposes. The age-adjusted rates provided in Mortality Tables 1 and 8 are calculated using the direct method of age adjustment. Age adjusted death rates are the total number of deaths per 100,000 persons, age-adjusted to the 2000 U.S standard population. For additional information about age-adjustment see: <https://seer.cancer.gov/stdpopulations/>.

## Premature Death Rates

Nearly four out of every 10 deaths to Minnesota residents occur to people under 75 years of age. These deaths occur prior to the average life expectancy, thus, it is important to investigate premature deaths that may be potentially preventable. The premature death rate for those under age 75 is the number of deaths to residents under age 75 per 100,000 persons age-adjusted to the 2000 U.S. standard population. Although not included in the Annual Summary, Tables 1, 7, and 8 of the Minnesota County Health Tables include premature deaths to those under age 75, as well as premature death rates (age-adjusted).

## Data suppression

In cases where there are fewer than 20 birth or deaths in a specific geography or by a certain characteristic, data may be suppressed in this report. There is a range of different suppression rules used by different agencies. However, we are reporting vital statistics data, so we use the rules from the National Vital Statistics System. Suppression of data serves two purposes: 1) to protect confidentiality and 2) to ensure statistical reliability when calculating rates. Local public health agencies may request unsuppressed counts by sending a request to [HealthStats@state.mn.us](mailto:HealthStats@state.mn.us).

Suppression rules for confidentiality are based on both the size of the geographic area and the number of events. For example, a county can be an area that is sparsely populated or it can have a large population but small cells still occur when stratifying outcomes by other factors such as small ethnicity groups and small age groups. In these cases, there is risk of deductive disclosure. In other words, with the combination of variables, it may be possible to identify a specific person and deduce something about their private health information. In national reports, small counts are sometimes reported (but not a corresponding rate). However, these counts are for VERY large geographic areas, so there is no risk of deductive disclosure. Risk of deductive disclosure only applies to data that include protected health information, most commonly birth or fetal death data.

Suppression rules for reliability are based on the production of unstable rate estimates due to the increased amount of variability (standard deviation) around the estimate. This means that the actual rate may be much higher or much lower. Moreover, a change of one or two events more or less can change the rate dramatically, giving the impression that there is a large change when in fact it is due to random variability of the estimates. For example, in a fictitious place where there are 146 births and 2 infant deaths, the infant mortality rate appears to be 13.7 deaths per 1,000 live births. The following year, in this same place, there are 154 births and 3 infant deaths. The infant mortality rate now appears to be 19.5 deaths per 1,000 live births. It is inappropriate to draw any conclusion from these data because the numbers are too small to produce an estimate that is not subject to random variation. More events in a given time and place will produce relatively stable estimates over time, unless there is an actual cause for a change. This situation applies to any vital event that is reported.

## Race/Hispanic Ethnicity Data Collection and Reporting

More than one race may be selected when reporting race of mother and father on a birth record or fetal death report or when reporting the race of decedent on a death record. In 2018, approximately 2.8% of Minnesota resident birth mothers chose more than one race, while approximately 0.6% of resident death records indicated multiple races.

For those who report more than one race, a bridged-race code is generated by the National Center for Health Statistics (NCHS), assigning that individual to one of the four race categories of White, Black, American Indian, or Asian/Pacific Islander, allowing for statistical comparisons to previous years' data. Due to the small number of multi-race persons in Minnesota, this generated code has little or no effect on the percentages and rates by race reported in this report.

Beginning with reporting year 2017, race/ethnicity data reporting changed from reporting race and Hispanic ethnicity separately to reporting each non-Hispanic race group individually. All birth and death events to those identified as Hispanic are included in the Hispanic group regardless of any other reported races. The final set of mutually exclusive groups are now: non-Hispanic White, non-Hispanic Black, non-Hispanic American Indian, non-Hispanic Asian or other Pacific Islander, non-Hispanic Other or Unknown, and Hispanic. These changes are based on National Vital Statistics System (NVSS) and NCHS practices for reporting race and ethnicity.

## Geographic Allocation

Vital events are classified geographically in two ways. The first is by place of occurrence, (i.e., the state, county, and city in which the birth or death took place). The second and more customary way is by place of residence, (i.e., the state, county, and city that is the usual residence of the decedent in the case of a death or of the mother in the case of a birth). Fetal deaths and infant deaths in cases where the child was never discharged from the hospital are classified to the residence of the mother. While occurrence statistics are accurate and have both administrative value and some statistical importance, resident statistics are the more useful tool when constructing health indices for planning and evaluation purposes. The statistics provided in this report are residence data unless otherwise stated.

## Rural/Urban Classification

It is often meaningful to examine health differences across the urban/rural continuum. For many health indicators, residents of large suburban metropolitan areas fare better than residents of either urban metro areas or rural areas. In this report, we use the urban-rural classification scheme for counties that was developed by the National Center for Health Statistics. Counties are classified into six urbanization levels (four metropolitan and two nonmetropolitan), and range from most urban to most rural.

	Urbanization Level	Population	Largest city
Metropolitan	Large urban metro	$\geq 1,000,000$	largest city $\geq 250,000$
	Large suburban metro	$\geq 1,000,000$	largest city $< 250,000$
	Medium metro	250,000 - 999,999	N/A
	Small metro	$< 250,000$	N/A
Nonmetro (rural)	Micropolitan	10,000 - 49,999	urban area $\geq 2,500$
	Non-core	$< 49,999$	no urban area $> 2,500$



## Appendix B -- Definitions

### Abortion (induced termination of pregnancy):

An act, procedure, or use of any instrument, medicine, or drug, which is supplied or prescribed for or administered to a pregnant woman, which results in the termination of pregnancy.

### Age/cause-specific death rate:

Number of deaths due to a particular underlying cause for a specified age group per 100,000 population comprising the same specified age group.

### Age-specific pregnancy rate:

Number of pregnancies (live births plus fetal deaths plus induced abortions) to women of a specified age group per 1,000 females in the population of the same specified age group. The standard pregnancy rate is the number of pregnancies per 1,000 females ages 15-44.

### Birthweight:

Birthweight is documented and reported in grams. An infant is considered to have low birthweight if it weighs less than 2,500 grams (5.5 pounds) at birth. Infants defined as macrosomic or high birthweight weigh equal to or more than 4,000 grams (8 pounds, 13 ounces) at birth.

### Cause of death:

Causes of death are classified according to the International Classification of Diseases of the World Health Organization (ICD-10). In this report, the underlying cause of death is used to classify the cause of death. The underlying cause of death is either the disease or injury that initiated the series of events leading directly to death or the accident or violence that produced the fatal injury. Other potentially contributing causes of death are not shown in this report.

### Crude birth rate:

Number of live births per 1,000 total population.

### Crude death rate:

Number of deaths per 1,000 total population or per 100,000 total population.

### Fertility rate:

Total number of live births per 1,000 females ages 15 to 44 years.

### Fetal death:

Death prior to the complete expulsion or extraction of a product of conception from its mother, irrespective of the duration of the pregnancy. The death is indicated by the fact that, after expulsion or extraction, the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. All fetal deaths of 20 weeks or more are required by state statute to be reported using the report of stillbirth/fetal death. In the Minnesota Annual reports, only fetal deaths of 20 weeks or more gestation are reported unless otherwise noted.

**Fetal death rate:**

Number of fetal deaths per 1,000 live births plus fetal deaths.

**Gestation or gestational age:**

The period of intrauterine development of the fetus, expressed in completed weeks, defined by the physician's estimate of gestation. Gestational age was previously reported based on documented last menstrual period. Beginning in 2017, gestational age is based on physician's estimate. Comparisons of the classifications are remarkably similar, except physician's estimate has fewer missing cases.

**Infant death:**

The death of a live-born infant under one year of age. Infants born with no signs of life are classified as fetal deaths (see Fetal death, above).

**Infant mortality rate:**

The national standard for reporting infant mortality is an annual period rate using linked birth/infant death records. Annual period rates are calculated from records for all infants who die in a given year (period) using all live births from that same period as the denominator. In other words, all infants that die in 2018, regardless of whether they were born in 2017 or 2018 are included for annual period rate calculations. The infant mortality rate is then defined as the number of infants born alive in a given year that die within the first year of life for every 1,000 live births in that same year.

**Live birth:**

The complete expulsion or extraction of a product of conception from its mother 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 whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered a live birth and is required by state statute to be registered as a live birth, regardless of gestation or length of time living after birth.

**Neonatal death:**

The death of a live-born infant under 28 days of age.

**Neonatal death rate:**

Number of neonatal deaths per 1,000 live births.

**Perinatal death:**

The death of a fetus after 28 weeks of gestation or a live-born infant under 7 days of age.

**Perinatal death rate:**

Number of perinatal deaths per 1,000 live births plus fetal deaths.

**Postneonatal death:**

The death of a live-born infant between 28 days and 1 year of age.

### **Postneonatal death rate:**

Number of postneonatal deaths per 1,000 live births.

### **Prenatal Care (Indices):**

Late prenatal care is defined as a woman entering prenatal care in the third trimester or receiving no prenatal care.

Adequacy of prenatal care can be calculated using a variety of indices. For the Minnesota Annual reports, a new index is being used. In previous years, prenatal care adequacy was assessed using the graduated index (GINDEX). The GINDEX is calculated by combining measures of the month or trimester that prenatal care began, the number of prenatal visits, and the gestational age of the infant/fetus at the time of birth. Starting in 2017, Kotelchuck's Adequacy of Prenatal Care Utilization (APNCU) is being used, in keeping with the standards for national reporting. It should be noted that the APNCU results in a different distribution of the adequacy of prenatal care than provided by the previously used GINDEX; thus, previous years' adequacy measures are not comparable. Specifically, in national data, the APNCU identified both a greater number of intensive and slightly more inadequate PNC users.

The APNCU is also calculated using the month prenatal care began, the number of prenatal visits, and the gestational age of the infant/fetus at the time of birth. However, this measure incorporates an estimate of the expected number of prenatal care visits compared with the actual number of prenatal care visits received. The month prenatal care began is used to calculate the adequacy of entry into prenatal care. The expected number of prenatal care visits given gestational age (defined by the American College of Obstetricians and Gynecologists (ACOG)) is calculated and divided by the actual number of visits to create a ratio of expected to actual visits. This ratio is then combined with the adequacy of entry into prenatal care variable to classify the adequacy of prenatal care as Adequate Plus, Adequate, Intermediate, Inadequate, or None.

Intensive use of prenatal care (adequate plus) is associated with poor birth outcomes, due in most part to more prenatal care needed for high risk pregnancies. Thus, distinguishing those with intensive use of prenatal care from those with adequate/expected prenatal care is meaningful for understanding pregnancy risks and adverse birth outcomes.

### **Residence:**

Residence is the geographic area of the usual place of residence of the mother (in the case of a live birth or fetal death) or of the deceased at the time of death. This means, in general, the place where one lives and sleeps most of the time. However, when the decedent's usual residence is in a nursing home or other institution where a patient resided for receiving care, residence is coded to the place, if known, where the patient lived prior to admission to the institution.

### **Trimester:**

One third of the total gestational period necessary for a full-term pregnancy (9 months). Thirteen weeks are allotted to each trimester. The count of weeks begins with the first day of the last menstrual period.