

# Colorado Births and Deaths 201+

Selected birth characteristics: Colorado residents, 201+.....	2
Selected birth characteristics by age group of mother: Colorado residents, 201+.....	3
Selected birth characteristics by race/ethnicity of mother: Colorado residents, 201+ .....	4
Selected birth characteristics by area-based poverty status of mother's residence: Colorado residents, 201+.....	5
Live births and fertility rates by age group of mother: Colorado residents, 201+.....	6
Vital statistics summary: Colorado residents, 200+, 201' -201+.....	7
Deaths, crude death rates and age-adjusted death rates from selected causes: Colorado residents, 201+.....	9
Deaths and age-specific death rates from selected causes: Colorado residents, 201+.....	10
Deaths from selected causes by race/ethnicity: Colorado residents, 201+ .....	11
Deaths from selected causes by area-based poverty status of decedent's residence: Colorado residents, 201+ .....	12
Deaths and age-specific death rates: Colorado residents, 201+ .....	13
Notes Regarding Colorado Revised Certificate of Live Birth .....	14
Notes Regarding Colorado Area-Based Poverty Estimates .....	15

For more information about these tables, please contact the Vital Statistics Program at the Colorado Department of Public Health and Environment by telephone at **(303) 692-2160** or by email at [cdphe.healthstatistics@state.co.us](mailto:cdphe.healthstatistics@state.co.us).

## Selected birth characteristics: Colorado residents, 2017

Characteristic	Number	Percent
Total Live Births	64,387	100.0
Age of Mother		
10-17	723	1.1
18-19	2,075	3.2
20-29	29,115	45.2
30+	32,438	50.4
Low Weight Births (<2,500 Grams)	5,860	9.1
Very Low Weight Births (<1,500 Grams)	791	1.2
Prenatal Care Later than 1st Trimester/No Care	11,180	18.1
No Prenatal Care	981	1.6
Preterm Births (<37 Weeks)	5,641	8.8
Education of Mother <High School Diploma/GED	7,364	11.6
Live Births to Unmarried Women	14,631	22.8
Smoking During Pregnancy	3,940	6.1

*"Education of Mother," "Births to Unmarried Women," and "Smoking During Pregnancy" are among items collected starting in 2007, using the revised birth certificate, that are not directly comparable to data collected before 2007. See "Notes Regarding Colorado Revised Certificate of Live Birth" at end of report for details.*

*\* indicates one or two events in the category.*

*Sums may not add to total due to cases with age of mother unknown.*

*Percentages are of total births, excluding cases with specific characteristics unknown.*

*Source: Vital Statistics Program, Colorado Department of Public Health and Environment.*

## Selected birth characteristics by age group of mother: Colorado residents, 2017

Characteristic	All Ages		10-17		18-19		20-29		30+	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Total Live Births</b>	64,387	100.0	723	100.0	2,075	100.0	29,115	100.0	32,439	100.0
<b>Race/Ethnicity of Mother</b>										
White, Non-Hispanic	38,106	61.1	187	26.8	727	36.5	15,319	54.5	21,863	69.4
White, Hispanic	14,118	22.7	402	57.7	876	44.0	7,766	27.6	5,062	16.1
Black	4,016	6.4	47	6.7	182	9.1	2,167	7.7	1,617	5.1
Asian American/Pacific Islander	3,171	5.1	9	1.3	46	2.3	1,217	4.3	1,898	6.0
American Indian/Native Alaskan	779	1.2	13	1.9	43	2.2	481	1.7	241	0.8
Other	2,136	3.4	39	5.6	118	5.9	1,156	4.1	823	2.6
Unknown	2,061		26		83		1,009		935	
<b>Low Weight Births (&lt;2,500 Grams)</b>	5,860	9.1	81	11.2	207	10.0	2,553	8.8	3,017	9.3
Very Low Weight Births (<1,500 Grams)	791	1.2	8	1.1	24	1.2	349	1.2	410	1.3
<b>Prenatal Care Later than 1st Trimester/No Care</b>	11,180	18.1	278	40.3	594	29.9	5,808	20.7	4,498	14.5
No Prenatal Care	981	1.6	31	4.5	51	2.6	500	1.8	398	1.3
<b>Preterm Births (&lt;37 Weeks)</b>	5,641	8.8	60	8.3	178	8.6	2,380	8.2	3,017	9.3
<b>Education of Mother &lt;High School Diploma/GED</b>	7,364	11.6	620	88.2	789	38.5	3,494	12.1	2,460	7.7
<b>Live Births to Unmarried Women</b>	14,631	22.7	670	92.7	1,377	66.4	8,687	29.8	3,894	12.0
<b>Smoking During Pregnancy</b>	3,940	6.1	44	6.1	172	8.3	2,382	8.2	1,341	4.1

*"Education of Mother," "Births to Unmarried Women," and "Smoking During Pregnancy" are among items collected starting in 2007, using the revised birth certificate, that are not directly comparable to data collected before 2007. See "Notes Regarding Colorado Revised Certificate of Live Birth" at end of report for details.*

*\* indicates one or two events in the category.*

*Sums may not add to total due to cases with age of mother unknown.*

*Percentages are of total births, excluding cases with specific characteristics unknown.*

*Percentage not computed for cells shaded in light gray.*

**Source: Vital Statistics Program, Colorado Department of Public Health and Environment.**

## Selected birth characteristics by race/ethnicity of mother: Colorado residents, 2017

Characteristic	White Non-Hispanic		White Hispanic		Black		Asian American/Pacific Islander		American Indian/Native Alaskan	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Total Live Births</b>	38,106	100.0	14,118	100.0	4,016	100.0	3,171	100.0	779	100.0
<b>Age of Mother</b>										
<b>10-17</b>	187	0.5	402	2.8	47	1.2	9	0.3	13	1.7
<b>18-19</b>	727	1.9	876	6.2	182	4.5	46	1.5	43	5.5
<b>20-29</b>	15,319	40.2	7,766	55.0	2,167	54.0	1,217	38.4	481	61.7
<b>30+</b>	21,863	57.4	5,062	35.9	1,617	40.3	1,898	59.9	241	30.9
<b>Low Weight Births (&lt;2,500 Grams)</b>	3,233	8.5	1,281	9.1	537	13.4	318	10.0	73	9.4
<b>Very Low Weight Births (&lt;1,500 Grams)</b>	407	1.1	186	1.3	92	2.3	32	1.0	6	0.8
<b>Prenatal Care Later than 1st Trimester/No Care</b>	5,377	14.7	3,193	23.4	934	24.7	591	19.4	225	31.1
<b>No Prenatal Care</b>	408	1.1	369	2.7	90	2.4	38	1.2	18	2.5
<b>Preterm Births (&lt;37 Weeks)</b>	3,177	8.3	1,288	9.1	431	10.7	280	8.8	78	10.0
<b>Education of Mother &lt;High School Diploma/GED</b>	1,659	4.4	3,749	26.9	541	13.8	295	9.5	134	17.2
<b>Live Births to Unmarried Women</b>	6,454	16.9	4,508	31.9	1,578	39.3	357	11.3	360	46.2
<b>Smoking During Pregnancy</b>	2,661	7.0	681	4.8	304	7.6	53	1.7	83	10.7

*"Education of Mother," "Births to Unmarried Women," and "Smoking During Pregnancy" are among items collected starting in 2007, using the revised birth certificate, that are not directly comparable to data collected before 2007. See "Notes Regarding Colorado Revised Certificate of Live Birth" at end of report for details.*

*\* indicates one or two events in the category.*

*Sums may not add to total due to cases with age or race/ethnicity of mother unknown. Percentages are of total births, excluding cases with specific characteristics unknown.*

**Source: Vital Statistics Program, Colorado Department of Public Health and Environment.**

**Selected birth characteristics by area-based poverty status of mother's residence:  
Colorado residents, 2017**

Characteristic	<10%		10-19.9%		20-29.9%		30%+		Unknown	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Total Live Births</b>	30,530	100.0	19,316	100.0	9,284	100.0	4,167	100.0	1,090	100.0
<b>Race/Ethnicity of Mother</b>										
White, Non-Hispanic	21,689	72.6	10,929	58.8	3,600	40.7	1,286	32.3	602	57.6
White, Hispanic	4,120	13.8	4,774	25.7	3,307	37.4	1,670	41.9	247	23.6
Black	1,322	4.4	1,207	6.5	950	10.7	488	12.3	49	4.7
Asian American/Pacific Islander	1,820	6.1	705	3.8	367	4.1	251	6.3	28	2.7
American Indian/Native Alaskan	252	0.8	216	1.2	164	1.9	94	2.4	53	5.1
Other	679	2.3	741	4.0	456	5.2	194	4.9	66	6.3
Unknown	648		744		440		184		45	
<b>Low Weight Births (&lt;2,500 Grams)</b>	2,632	8.6	1,715	8.9	978	10.5	420	10.1	115	10.6
Very Low Weight Births (<1,500 Grams)	343	1.1	244	1.3	127	1.4	67	1.6	10	0.9
<b>Prenatal Care Later than 1st Trimester/No Care</b>	4,126	14.1	3,659	19.8	2,115	23.8	1,002	24.9	278	26.9
No Prenatal Care	272	0.9	317	1.7	231	2.6	123	3.1	38	3.7
<b>Preterm Births (&lt;37 Weeks)</b>	2,536	8.3	1,719	8.9	883	9.5	387	9.3	116	10.7
<b>Education of Mother &lt;High School Diploma/GED</b>	1,446	4.8	2,638	13.9	1,996	21.9	1,060	26.0	224	20.9
<b>Live Births to Unmarried Women</b>	4,925	16.1	5,023	26.0	2,868	30.9	1,505	36.1	310	28.4
<b>Smoking During Pregnancy</b>	1,190	3.9	1,405	7.3	825	8.9	421	10.1	99	9.2

*Area-based poverty status represents the percentage of population in the census tract of maternal residence living at or below the federal poverty level, based on the 2016 5-Year American Community Survey. Census tracts of maternal residence were determined by linking the maternal residence address at the time of infant birth to its respective census tract as defined by the 2010 U.S. census-designated boundaries. See "Notes Regarding Colorado Area-Based Poverty Estimates" at end of report for details.*

*"Education of Mother," "Births to Unmarried Women," and "Smoking During Pregnancy" are among items collected starting in 2007, using the revised birth certificate, that are not directly comparable to data collected before 2007. See "Notes Regarding Colorado Revised Certificate of Live Birth" at end of report for details.*

*\* indicates one or two events in the category.*

*Sums may not add to total due to cases with age of mother unknown.*

*Percentages are of total births, excluding cases with specific characteristics unknown.*

*Percentage not computed for cells shaded in light gray.*

**Source: Vital Statistics Program, Colorado Department of Public Health and Environment.**

**Live births and fertility rates with 95% confidence limits by age group of mother:  
Colorado residents, 2017**

<b>Age Group</b>	<b>Births</b>	<b>Population</b>	<b>Fertility Rate</b>	<b>Lower Limit</b>	<b>Upper Limit</b>
<b>All Ages</b>	64,387	1,149,884	56.0	55.6	56.4
<b>Teen Age Groups</b>					
<b>13-14</b>	18	72,137	0.2	0.1	0.4
<b>15-17</b>	704	106,353	6.6	6.1	7.1
<b>18-19</b>	2,075	73,058	28.4	27.2	29.6
<b>10-17</b>	723	286,536	2.5	2.3	2.7
<b>10-19</b>	2,798	359,595	7.8	7.5	8.1
<b>All Age Groups</b>					
<b>10-14</b>	19	180,183	0.1	0.1	0.2
<b>15-19</b>	2,779	179,411	15.5	14.9	16.1
<b>20-24</b>	11,040	185,494	59.5	58.4	60.6
<b>25-29</b>	18,075	205,311	88.0	86.8	89.3
<b>30-34</b>	19,758	210,548	93.8	92.6	95.1
<b>35-39</b>	10,474	190,608	55.0	53.9	56.0
<b>40-49</b>	2,189	360,564	6.1	5.8	6.3

*\* indicates one or two events in the category.*

*Sums may not add to total due to cases with age of mother unknown.*

*Rates are live births per 1,000 female population in each age group.*

*Lower and upper limits represent the 95% confidence interval of the fertility rate.*

*Population data for 'all ages' are females ages 15-44.*

**Source: Vital Statistics Program, Colorado Department of Public Health and Environment.**

## Vital statistics summary: Colorado residents, 2007, 2013-2017

	2007	2013	2014	2015	2016	2017	2013-2017 Annual Average
<b>Total Population</b>	4,821,784	5,266,112	5,345,320	5,444,502	5,533,788	5,609,171	5,439,779
<b>Total Births</b>							
Number	70,804	65,004	65,816	66,566	66,611	64,387	65,677
Birth Rate	14.7	12.3	12.3	12.2	12.0	11.5	12.1
General Fertility Rate	70.0	60.6	60.4	60.0	58.9	56.0	59.1
<b>Age of Mother 10-17</b>							
Number	2,297	1,148	903	873	846	723	899
Percent of Total Births	3.2	1.8	1.4	1.3	1.3	1.1	1.4
Fertility Rate	8.9	4.3	3.3	3.1	3.0	2.5	3.2
<b>Low Weight Births (&lt;2,500 Grams)</b>							
Number	6,397	5,728	5,779	6,007	5,972	5,860	5,869
Percent	9.0	8.8	8.8	9.0	9.0	9.1	8.9
<b>Prenatal Care Later Than 1st Trimester/No Care</b>							
Number	15,129	12,039	12,487	12,742	11,892	11,180	12,068
Percent	21.9	19.2	19.7	19.9	18.6	18.1	19.1
<b>Births to Unmarried Women</b>							
Number	18,062	15,215	14,957	15,334	15,153	14,631	15,058
Percent	25.5	23.4	22.7	23.0	22.7	22.7	22.9
<b>Mother's Education &lt;12 Years</b>							
Number	14,804	8,690	7,939	8,102	7,727	7,364	7,964
Percent	21.2	13.5	12.2	12.3	11.7	11.6	12.3
<b>Infant Deaths</b>							
Number	433	331	315	309	321	290	313
Rate	6.1	5.1	4.8	4.6	4.8	4.5	4.8
<b>Neonatal Deaths</b>							
Number	296	239	238	230	217	195	224
Rate	4.2	3.7	3.6	3.5	3.3	3.0	3.4
<b>Total Deaths</b>							
Number	29,888	33,717	35,194	36,353	37,488	37,996	36,150
Crude Rate	619.9	640.3	658.4	667.7	677.4	677.4	664.5
Age-Adjusted Rate	720.1	656.3	663.9	664.3	666.5	654.1	660.9
<b>Cardiovascular Disease</b>							
Number	8,411	8,762	9,204	9,563	9,813	9,662	9,401
Age-Adjusted Rate	209.1	172.3	175.0	176.0	175.1	166.7	173.0
<b>Heart Disease</b>							
Number	6,073	6,454	6,779	7,002	7,243	7,035	6,903
Age-Adjusted Rate	149.7	125.8	128.1	128.0	128.7	120.5	126.2
<b>Cerebrovascular Disease</b>							

(Continued)

\* indicates one or two events in the category.

Birth rates are per 1,000 total population. General fertility rates are births per 1,000 females ages 15-44.

Fertility rates for mothers ages 10-17 are births per 1,000 females of this age group.

Infant and neonatal mortality rates are per 1,000 live births. Other death rates are per 100,000 population.

Age-adjusted rates are adjusted to the 2000 U.S. population using the direct method applied to 10-year age groups.

Source: Vital Statistics Program, Colorado Department of Public Health and Environment.

## Vital statistics summary: Colorado residents, 2007, 2013-2017

	2007	2013	2014	2015	2016	2017	2013-2017 Annual Average
<b>Number</b>	1,589	1,576	1,692	1,857	1,925	1,980	1,806
<b>Age-Adjusted Rate</b>	40.3	31.8	32.9	34.8	35.0	35.1	34.0
<b>Malignant Neoplasms</b>							
<b>Number</b>	6,590	7,364	7,289	7,597	7,926	7,812	7,598
<b>Age-Adjusted Rate</b>	156.0	139.6	134.2	134.3	136.9	129.5	134.8
<b>Lung Cancer</b>							
<b>Number</b>	1,579	1,558	1,564	1,543	1,590	1,493	1,550
<b>Age-Adjusted Rate</b>	37.9	29.8	28.7	27.5	27.5	24.6	27.5
<b>Breast Cancer</b>							
<b>Number</b>	456	537	553	585	618	638	586
<b>Age-Adjusted Rate</b>	10.3	10.0	10.0	10.3	10.6	10.6	10.3
<b>Total Unintentional Injuries</b>							
<b>Number</b>	2,029	2,423	2,413	2,724	2,838	3,029	2,685
<b>Age-Adjusted Rate</b>	44.6	46.4	45.2	49.7	50.4	53.1	49.0
<b>Motor Vehicle</b>							
<b>Number</b>	577	507	486	586	627	672	576
<b>Age-Adjusted Rate</b>	12.0	9.5	9.0	10.4	10.9	11.6	10.3
<b>Other Unintentional Injuries</b>							
<b>Number</b>	1,452	1,916	1,927	2,138	2,211	2,357	2,110
<b>Age-Adjusted Rate</b>	32.6	36.9	36.2	39.2	39.4	41.5	38.7
<b>Chronic Lower Respiratory Diseases</b>							
<b>Number</b>	1,997	2,294	2,419	2,576	2,573	2,598	2,492
<b>Age-Adjusted Rate</b>	50.4	46.0	46.6	47.7	46.2	44.8	46.2
<b>Suicide</b>							
<b>Number</b>	805	1,004	1,058	1,093	1,156	1,175	1,097
<b>Age-Adjusted Rate</b>	16.5	18.5	19.4	19.5	20.3	20.2	19.6
<b>Homicide and Legal Intervention</b>							
<b>Number</b>	176	194	181	216	251	279	224
<b>Age-Adjusted Rate</b>	3.6	3.7	3.4	3.9	4.6	4.9	4.1
<b>Work-Related Injury</b>							
<b>Number</b>	91	64	76	64	74	72	70
<b>Age-Adjusted Rate</b>	1.8	1.2	1.4	1.1	1.3	1.2	1.2

\* indicates one or two events in the category.

Birth rates are per 1,000 total population. General fertility rates are births per 1,000 females ages 15-44.

Fertility rates for mothers ages 10-17 are births per 1,000 females of this age group.

Infant and neonatal mortality rates are per 1,000 live births. Other death rates are per 100,000 population.

Age-adjusted rates are adjusted to the 2000 U.S. population using the direct method applied to 10-year age groups.

Source: Vital Statistics Program, Colorado Department of Public Health and Environment.



**Deaths, crude death rates and age-adjusted death rates with 95% confidence limits from selected causes:  
Colorado residents, 2017**

<b>Cause of Death</b>	<b>N</b>	<b>Crude Rate</b>	<b>Age-Adjusted Rate</b>	<b>Lower Limit</b>	<b>Upper Limit</b>
<b>All Causes</b>	37,996	677.4	654.2	647.7	660.6
<b>Cardiovascular Disease</b>	9,662	172.3	166.7	163.4	170.0
<b>Heart Disease</b>	7,035	125.4	120.5	117.6	123.3
<b>Cerebrovascular Disease</b>	1,980	35.3	35.1	33.5	36.6
<b>Atherosclerosis</b>	51	0.9	0.9	0.6	1.1
<b>Malignant Neoplasms</b>	7,812	139.3	129.5	126.6	132.4
<b>Lung Cancer</b>	1,493	26.6	24.6	23.3	25.9
<b>Breast Cancer</b>	638	11.4	10.6	9.7	11.4
<b>Chronic Lower Respiratory Diseases</b>	2,598	46.3	44.8	43.1	46.6
<b>Unintentional Injuries</b>	3,029	54.0	53.1	51.2	55.0
<b>Motor Vehicle</b>	672	12.0	11.6	10.8	12.5
<b>Other Unintentional Injuries</b>	2,333	41.6	41.1	39.4	42.8
<b>Pneumonia and Influenza</b>	576	10.3	9.9	9.1	10.8
<b>Suicide</b>	1,175	20.9	20.2	19.0	21.4
<b>Diabetes Mellitus</b>	1,017	18.1	17.1	16.0	18.1
<b>HIV Infection</b>	55	1.0	0.9	0.7	1.2
<b>Chronic Liver Disease and Cirrhosis</b>	864	15.4	14.0	13.0	14.9
<b>Alzheimer's Disease</b>	1,829	32.6	33.3	31.8	34.9
<b>Nephritis, Nephrosis, Nephrotic Syndrome</b>	502	8.9	8.7	7.9	9.5
<b>Homicide and Legal Intervention</b>	279	5.0	4.9	4.3	5.5
<b>Septicemia</b>	484	8.6	8.3	7.6	9.1
<b>Congenital Anomalies</b>	170	3.0	3.2	2.7	3.7
<b>Perinatal Period Conditions</b>	136	2.4	2.9	2.4	3.3
<b>All Other</b>	7,808	139.2	136.5	133.5	139.6
<b>Injury by Firearm</b>	777	13.9	13.3	12.4	14.3
<b>Drug-Induced Deaths</b>	1,045	18.6	18.1	17.0	19.3
<b>Alcohol-Induced Deaths</b>	999	17.8	16.1	15.1	17.2
<b>Work-Related Injury (Y/N Check Death Certificate)</b>	72	1.3	1.2	0.9	1.5

*\* indicates one or two events in the category.*

*Rates are deaths per 100,000 population.*

*Crude death rates are calculated without age-adjustment.*

*Age-adjusted rates are adjusted to the 2000 U.S. standard population using the direct method applied to 10-year age groups.*

*Age-adjusted rates provide a better basis for comparison among different geographical areas or time periods.*

*Lower and upper limits represent the 95% confidence interval of the age-adjusted rate.*

**Source: Vital Statistics Program, Colorado Department of Public Health and Environment.**

## Deaths and age-specific death rates from selected causes: Colorado residents, 2017

Cause of Death	<1		1-14		15-24		25-44		45-64		65+	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
All Causes	290	4.5	158	0.2	553	0.7	2,269	1.4	7,418	5.2	27,307	35.3
Cardiovascular Disease	3	0.0	*	*	9	0.0	195	0.1	1,510	1.1	7,943	10.3
Heart Disease	*	*	*	*	6	0.0	159	0.1	1,238	0.9	5,628	7.3
Cerebrovascular Disease	*	*	0	0.0	*	*	23	0.0	181	0.1	1,773	2.3
Atherosclerosis	0	0.0	0	0.0	0	0.0	0	0.0	9	0.0	42	0.1
Malignant Neoplasms	0	0.0	19	0.0	18	0.0	189	0.1	1,952	1.4	5,634	7.3
Lung Cancer	0	0.0	0	0.0	0	0.0	7	0.0	328	0.2	1,158	1.5
Breast Cancer	0	0.0	0	0.0	0	0.0	34	0.0	206	0.1	398	0.5
Chronic Lower Respiratory Diseases	0	0.0	*	*	*	*	18	0.0	346	0.2	2,231	2.9
Unintentional Injuries	29	0.5	42	0.0	240	0.3	742	0.5	732	0.5	1,243	1.6
Motor Vehicle	*	*	23	0.0	129	0.2	193	0.1	188	0.1	138	0.2
Other Unintentional Injuries	28	0.4	19	0.0	111	0.1	549	0.3	544	0.4	1,105	1.4
Pneumonia and Influenza	0	0.0	4	0.0	*	*	9	0.0	109	0.1	453	0.6
Suicide	0	0.0	23	0.0	169	0.2	418	0.3	408	0.3	157	0.2
Diabetes Mellitus	0	0.0	*	*	5	0.0	36	0.0	280	0.2	694	0.9
HIV Infection	0	0.0	0	0.0	*	*	9	0.0	31	0.0	14	0.0
Chronic Liver Disease and Cirrhosis	0	0.0	0	0.0	0	0.0	146	0.1	486	0.3	232	0.3
Alzheimer's Disease	0	0.0	0	0.0	0	0.0	0	0.0	17	0.0	1,812	2.3
Nephritis, Nephrosis, Nephrotic Syndrome	*	*	0	0.0	*	*	6	0.0	89	0.1	404	0.5
Homicide and Legal Intervention	8	0.1	15	0.0	53	0.1	123	0.1	63	0.0	17	0.0
Septicemia	0	0.0	*	*	*	*	18	0.0	88	0.1	374	0.5
Congenital Anomalies	73	1.1	18	0.0	7	0.0	15	0.0	38	0.0	19	0.0
Perinatal Period Conditions	135	2.1	*	*	0	0.0	0	0.0	0	0.0	0	0.0
All Other	41	0.6	29	0.0	44	0.1	345	0.2	1,269	0.9	6,080	7.9
Injury by Firearm	0	0.0	10	0.0	119	0.2	299	0.2	235	0.2	114	0.1
Drug-Induced Deaths	0	0.0	4	0.0	90	0.1	484	0.3	387	0.3	79	0.1
Alcohol-Induced Deaths	0	0.0	0	0.0	4	0.0	206	0.1	606	0.4	183	0.2
Work-Related Injury (Y/N Check Death Certificate)	0	0.0	0	0.0	8	0.0	23	0.0	32	0.0	9	0.0

\* indicates one or two events in the category.  
 Infant (<1 year) mortality rates are per 1,000 live births.  
 Other rates are deaths per 1,000 population of the age group.

Source: Vital Statistics Program, Colorado Department of Public Health and Environment.

## Deaths from selected causes by race/ethnicity: Colorado residents, 2017

Cause of Death	All Races		White Non-Hispanic		White Hispanic		Black		Asian American/Pacific Islander		American Indian/Native Alaskan	
	N	%	N	%	N	%	N	%	N	%	N	%
<b>Total</b>	37,996	100.0	30,605	100.0	4,198	100.0	1,469	100.0	590	100.0	310	100.0
<b>Cardiovascular Disease</b>	9,662	25.4	7,997	26.1	831	19.8	409	27.8	147	24.9	71	22.9
Heart Disease	7,035	18.5	5,829	19.0	616	14.7	300	20.4	95	16.1	48	15.5
Cerebrovascular Disease	1,980	5.2	1,630	5.3	166	4.0	85	5.8	40	6.8	15	4.8
Atherosclerosis	51	0.1	46	0.2	0	0.0	*	*	*	*	0	0.0
<b>Malignant Neoplasms</b>	7,812	20.6	6,390	20.9	797	19.0	304	20.7	131	22.2	53	17.1
Lung Cancer	1,493	3.9	1,253	4.1	117	2.8	62	4.2	41	6.9	6	1.9
Breast Cancer	638	1.7	519	1.7	65	1.5	28	1.9	10	1.7	5	1.6
<b>Chronic Lower Respiratory Disease</b>	2,598	6.8	2,298	7.5	152	3.6	63	4.3	22	3.7	19	6.1
<b>Unintentional Injuries</b>	3,029	8.0	2,278	7.4	483	11.5	100	6.8	49	8.3	29	9.4
Motor Vehicle	672	1.8	439	1.4	162	3.9	23	1.6	11	1.9	5	1.6
Other Unintentional Injuries	2,357	6.2	1,839	6.0	321	7.6	77	5.2	38	6.4	24	7.7
<b>Pneumonia and Influenza</b>	576	1.5	480	1.6	52	1.2	16	1.1	6	1.0	6	1.9
<b>Suicide</b>	1,175	3.1	909	3.0	153	3.6	36	2.5	27	4.6	16	5.2
<b>Diabetes Mellitus</b>	1,017	2.7	676	2.2	203	4.8	70	4.8	18	3.1	21	6.8
<b>HIV Infection</b>	55	0.1	34	0.1	11	0.3	8	0.5	0	0.0	*	*
<b>Chronic Liver Disease and Cirrhosis</b>	864	2.3	537	1.8	235	5.6	24	1.6	11	1.9	35	11.3
<b>Alzheimer's Disease</b>	1,829	4.8	1,601	5.2	127	3.0	44	3.0	22	3.7	6	1.9
<b>Nephritis, Nephrosis, Nephrotic Syndrome</b>	502	1.3	353	1.2	95	2.3	28	1.9	15	2.5	*	*
<b>Homicide and Legal Intervention</b>	279	0.7	120	0.4	89	2.1	44	3.0	8	1.4	4	1.3
<b>Septicemia</b>	484	1.3	383	1.3	61	1.5	18	1.2	12	2.0	0	0.0
<b>Congenital Anomalies</b>	170	0.4	98	0.3	49	1.2	10	0.7	5	0.8	*	*
<b>Perinatal Period Conditions</b>	136	0.4	62	0.2	34	0.8	20	1.4	3	0.5	*	*
<b>All Other</b>	7,808	20.5	6,389	20.9	826	19.7	275	18.7	114	19.3	42	13.5
<b>Injury by Firearm</b>	777	2.0	559	1.8	126	3.0	48	3.3	14	2.4	13	4.2
<b>Drug-Induced Deaths</b>	1,045	2.8	770	2.5	173	4.1	48	3.3	10	1.7	13	4.2
<b>Alcohol-Induced Deaths</b>	999	2.6	682	2.2	228	5.4	28	1.9	5	0.8	33	10.6
<b>Work-Related Injury (Y/N Check Death Certificate)</b>	72	0.2	42	0.1	24	0.6	*	*	0	0.0	0	0.0

\* indicates one or two events in the category.  
Percentages are of total deaths of each race/ethnicity category.

Source: Vital Statistics Program, Colorado Department of Public Health and Environment.

**Deaths from selected causes by area-based poverty status of decedent's residence:  
Colorado residents, 2017**

Cause of Death	<10%		10-19.9%		20-29.9%		30%+		Unknown	
	N	%	N	%	N	%	N	%	N	%
<b>Total</b>	16,610	100.0	12,132	100.0	5,290	100.0	2,237	100.0	1,727	100.0
<b>Cardiovascular Disease</b>	4,160	25.0	3,160	26.0	1,370	25.9	576	25.7	396	22.9
Heart Disease	3,036	18.3	2,303	19.0	980	18.5	422	18.9	294	17.0
Cerebrovascular Disease	878	5.3	629	5.2	287	5.4	114	5.1	72	4.2
Atherosclerosis	19	0.1	16	0.1	9	0.2	5	0.2	*	*
<b>Malignant Neoplasms</b>	3,682	22.2	2,497	20.6	954	18.0	380	17.0	299	17.3
Lung Cancer	673	4.1	503	4.1	183	3.5	80	3.6	54	3.1
Breast Cancer	309	1.9	192	1.6	87	1.6	27	1.2	23	1.3
<b>Chronic Lower Respiratory Disease</b>	1,000	6.0	872	7.2	464	8.8	155	6.9	107	6.2
<b>Unintentional Injuries</b>	1,229	7.4	928	7.6	423	8.0	192	8.6	257	14.9
Motor Vehicle	271	1.6	224	1.8	85	1.6	35	1.6	57	3.3
Other Unintentional Injuries	958	5.8	704	5.8	338	6.4	157	7.0	200	11.6
<b>Pneumonia and Influenza</b>	238	1.4	202	1.7	76	1.4	28	1.3	32	1.9
<b>Suicide</b>	528	3.2	342	2.8	143	2.7	75	3.4	87	5.0
<b>Diabetes Mellitus</b>	370	2.2	348	2.9	177	3.3	79	3.5	43	2.5
<b>HIV Infection</b>	11	0.1	17	0.1	16	0.3	7	0.3	4	0.2
<b>Chronic Liver Disease and Cirrhosis</b>	304	1.8	264	2.2	153	2.9	83	3.7	60	3.5
<b>Alzheimer's Disease</b>	939	5.7	543	4.5	200	3.8	93	4.2	54	3.1
<b>Nephritis, Nephrosis, Nephrotic Syndrome</b>	209	1.3	162	1.3	93	1.8	28	1.3	10	0.6
<b>Homicide and Legal Intervention</b>	83	0.5	94	0.8	57	1.1	24	1.1	21	1.2
<b>Septicemia</b>	208	1.3	156	1.3	65	1.2	33	1.5	22	1.3
<b>Congenital Anomalies</b>	81	0.5	47	0.4	30	0.6	6	0.3	6	0.3
<b>Perinatal Period Conditions</b>	63	0.4	40	0.3	20	0.4	10	0.4	3	0.2
<b>All Other</b>	3,505	21.1	2,460	20.3	1,049	19.8	468	20.9	326	18.9
<b>Injury by Firearm</b>	336	2.0	237	2.0	105	2.0	49	2.2	50	2.9
<b>Drug-Induced Deaths</b>	354	2.1	299	2.5	185	3.5	89	4.0	118	6.8
<b>Alcohol-Induced Deaths</b>	344	2.1	302	2.5	181	3.4	90	4.0	82	4.7
<b>Work-Related Injury (Y/N Check Death Certificate)</b>	27	0.2	19	0.2	10	0.2	4	0.2	12	0.7

*Area-based poverty status represents the percentage of population in the census tract of decedent's residence living at or below the federal poverty level, based on the 2016 5-Year American Community Survey. Census tracts of decedent residence were determined by linking the decedent residence address at the time of death to its respective census tract as defined by the 2010 U.S. census-designated boundaries. See "Notes Regarding Colorado Area-Based Poverty Estimates" at end of report for details.*

*\* indicates one or two events in the category.  
Percentages are of total deaths of each race/ethnicity category.*

*Source: Vital Statistics Program, Colorado Department of Public Health and Environment.*

## Deaths and age-specific death rates: Colorado residents, 2017

Age Group	Deaths	Population	Age-Specific Death Rate
All Ages	37,996	5,609,171	6.8
Infant	290	64,387	4.5
Neonatal	195	64,387	3.0
1-4	58	268,031	0.2
5-9	37	345,015	0.1
10-14	63	368,373	0.2
15-19	216	369,074	0.6
20-24	337	397,210	0.8
25-29	501	420,902	1.2
30-34	549	426,023	1.3
35-39	566	386,414	1.5
40-44	653	362,864	1.8
45-49	994	369,619	2.7
50-54	1,377	352,761	3.9
55-59	2,210	371,743	5.9
60-64	2,837	332,468	8.5
65-69	3,374	274,484	12.3
70-74	3,576	198,578	18.0
75-79	3,847	127,151	30.3
80-84	4,591	83,921	54.7
85+	11,919	88,659	134.4
1-14	158	981,420	0.2
15-24	553	766,284	0.7
25-64	9,687	3,022,795	3.2
65+	27,307	772,792	35.3

\* indicates one or two events in the category.

Infant death is death in the first year of life. Neonatal death is death occurring prior to the 28th day of life.

Infant and neonatal mortality rates are per 1,000 live births. Other death rates are per 1,000 population of the age group. Population figures for infant and neonatal groups are live births.

Source: Vital Statistics Program, Colorado Department of Public Health and Environment.

## Notes Regarding Colorado's Revised Certificate of Live Birth

Previously-released state and county birth and death summary tables contain Colorado birth data that were collected using the 1989 Revision of the U.S. Standard Certificate of Live Birth (unrevised) and the 2003 Revision of the U.S. Standard Certificate of Live Birth (revised)<sup>1,2,3</sup>. Colorado's birth registration system used the unrevised certificate for births through calendar year 2006; while births in 2007 through the present were registered using the revised certificate. Among the differences in the revised birth certificate are changes to the following data items:

- Mother's and father's race, captures multiple race identification instead of single race identification
- Mother's and father's education, captures highest degree attained instead of total years of education
- Mother's marital status at time of birth, captures never married, married, widowed, separated, and divorced instead of just married or unmarried
- Cigarette smoking before and during pregnancy, captures levels of smoking in each trimester instead of just smoking any time during pregnancy

And the addition of the following data items:

- Method of delivery includes fetal presentation and trial of labor prior to cesarean delivery
- Pre-pregnancy weight, weight at delivery and height, used to calculate Body Mass Index
- Congenital anomalies, certain conditions have been added or removed
- Fertility therapy
- Did mother get WIC food for herself during this pregnancy
- Infections during pregnancy
- Maternal morbidity
- Breast feeding
- Principal source of payment for the delivery

Data items noted above that were collected using both the unrevised certificate and the revised certificate are not directly comparable. Analyses of birth data for time periods that include both revised and unrevised data should be performed with caution.

To facilitate analyses of births by race, the multiple race identification in revised certificates has been bridged back to a single race using a system developed by the National Center for Health Statistics at the Centers for Disease Control and Prevention<sup>4</sup>. *Please note*, however, that there has been an increase in the number of births reported with "other" or "unknown" maternal and paternal race and/or Hispanic ethnicity beginning in 2007 compared to previous years. This is likely attributable to the change to the revised certificate.

The Vital Statistics Program at the Colorado Department of Public Health and Environment is available to assist with further analyses of these data, as well as to answer questions one might have regarding the revised certificate and the affected data items. For further information or assistance, please contact the Health Statistics Section at **(303) 692-2160** or by e-mail at **[cdphe.healthstatistics@state.co.us](mailto:cdphe.healthstatistics@state.co.us)**.

### References:

<sup>1</sup> National Center for Health Statistics. 2003 revision of the U.S. Standard Certificate of Live Birth. 2003. Available from: [http://www.cdc.gov/nchs/vital\\_certs\\_rev.htm](http://www.cdc.gov/nchs/vital_certs_rev.htm).

<sup>2</sup> National Center for Health Statistics. Report of the Panel to Evaluate the U.S. Standard Certificates and Reports. National Center for Health Statistics. 2000. Available from: [http://www.cdc.gov/nchs/data/dvs/panelreport\\_acc.pdf](http://www.cdc.gov/nchs/data/dvs/panelreport_acc.pdf).

<sup>3</sup> Martin JA, Hamilton BE, Sutton PD, et al. Births: Final data for 2004. National vital statistics reports; vol 55 no 1. Hyattsville, MD: National Center for Health Statistics. 2006.

<sup>4</sup> NCHS Procedures for Multiple-Race and Hispanic Origin Data: Collection, Coding, Editing, and Transmitting. Division of Vital Statistics, National Center for Health Statistics, Centers for Disease Control and Prevention, May 7, 2004. Available from: [http://www.cdc.gov/nchs/data/dvs/Multiple\\_race\\_docu\\_5-10-04.pdf](http://www.cdc.gov/nchs/data/dvs/Multiple_race_docu_5-10-04.pdf).

## Notes Regarding Colorado's Area-Based Poverty Estimates

Poverty continues to be an important factor that increases the risk of adverse birth outcomes, disease, and mortality across all ages. The relationships between poverty and such outcomes are unsurprising given the socioeconomic differences in health behaviors, familial and other risk factors, access to appropriate prenatal and preventive health care and treatment for illness and disease. Consequently, considering poverty when exploring changes in the health status of Colorado's communities and the persistence of health disparities is increasingly important<sup>1,2,3</sup>.

These summary tables now contain counts and proportions of births and deaths by area-based poverty status of residence. *Area-based poverty status represents the percentage of the population in the census tract of one's residence living at or below the federal poverty level.* Residence is based on the maternal self-reported residence address at the time of an infant's birth for birth statistics, and the residence address of decedent at the time of death, collected from next of kin, for death statistics. Census tracts of residence are determined by linking these residence addresses to their respective census tracts as defined by the 2010 U.S. Census-designated boundaries. The percentage of the population in a census tract living at or below the federal poverty level of census tracts is ascertained from the most current 5-Year American Community Survey estimates made available by the U.S. Census Bureau.

Colorado consists of 1,249 unique census tracts, which are confined by county boundaries, and typically represent between 1,200 and 8,000 people. Counties with large populations, such as in the state's large metropolitan areas, contain many census tracts; while counties with smaller populations, such as in the state's rural and mountain regions, may have only a couple of census tracts<sup>4</sup>.

Area-based poverty status is measured by calculating the percent of the population living in each census tract that are living at or below the federal poverty level. Whether one is living at or below the federal poverty level is determined using a set of money income thresholds that vary by family size, age and composition<sup>5</sup>.

The map on the following page depicts census tract boundaries for Colorado and its largest metropolitan areas and each census tract's poverty status.

The Vital Statistics Program at the Colorado Department of Public Health and Environment is available to assist with further analyses of these data, as well as to answer questions one might have regarding these novel vital statistics measures. For further information or assistance, please contact the Health Statistics Section at **(303) 692-2160** or by e-mail at [cdphe.healthstatistics@state.co.us](mailto:cdphe.healthstatistics@state.co.us).

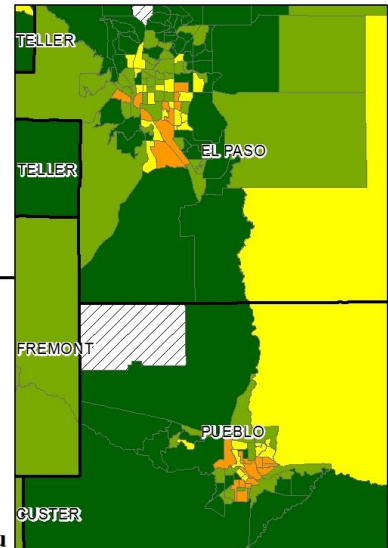
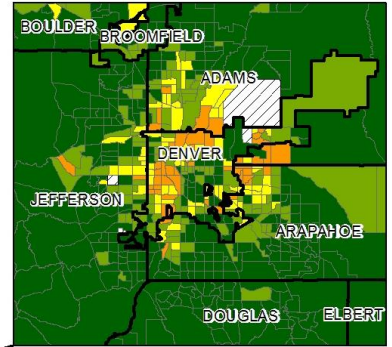
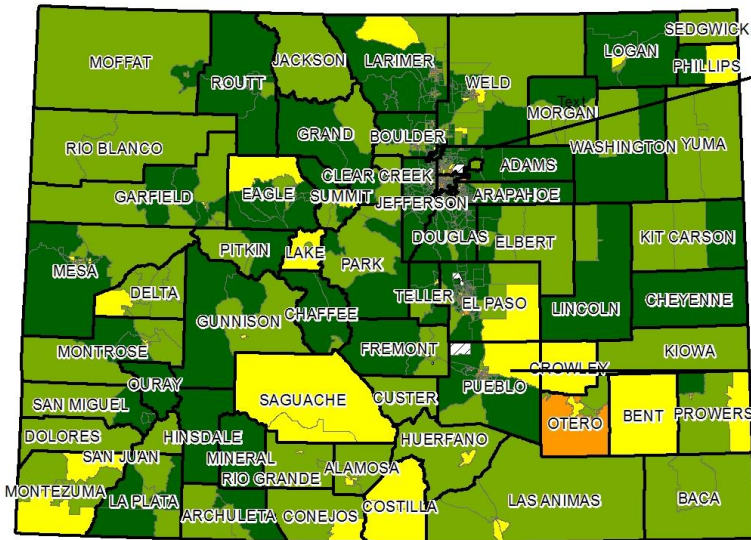
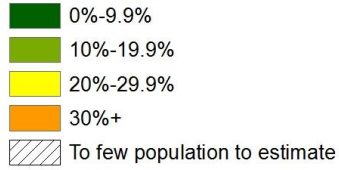
### References:

- <sup>1</sup> Krieger N, Chen JT, Ebel G. *Can we monitor socioeconomic inequalities in health? A survey of U.S. health departments' data collection and reporting practices.* Public Health Reports. 1997 Nov-Dec; 112(6):481-91.
- <sup>2</sup> Subramanian SV, Chen JT, Rehkopf DH, Waterman PD, Krieger N. *Comparing individual- and area-based socioeconomic measures for the surveillance of health disparities: A multilevel analysis of Massachusetts births, 1989-1991.* American Journal of Epidemiology. 2006 Nov 1; 164(9): 823-834.
- <sup>3</sup> Colorado Comprehensive Cancer Program. *Cancer & Poverty in Colorado: 2001-2012.* Denver, CO: Colorado Department of Public Health and Environment. Available from: [https://www.colorado.gov/pacific/sites/default/files/CHED\\_Report\\_Cancer\\_and\\_Poverty\\_2014.pdf](https://www.colorado.gov/pacific/sites/default/files/CHED_Report_Cancer_and_Poverty_2014.pdf)
- <sup>4</sup> *Geographic Terms and Concepts – Census Tract.* United States Census Bureau. Available from: [www.census.gov/geo/reference/gtc/gtc\\_ct.html](http://www.census.gov/geo/reference/gtc/gtc_ct.html)
- <sup>5</sup> *How the Census Bureau Measures Poverty.* United States Census Bureau. Available from: <https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html>



# Area-based poverty status by Colorado census tracts

Percent of population at or below federal poverty level



Source: 2008-2012 5-Year American Community Survey, U.S. Census Bureau