

# National Center for Health Statistics

# Weekly Updates by Select Demographic and Geographic Characteristics

Provisional Death Counts for Coronavirus Disease 2019 (COVID-19)

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**Technical Notes** 

Updated: September 23, 2020

*i* Note: Provisional death counts are based on death certificate data received and coded by the National Center for Health Statistics as of September 23, 2020. Death counts are delayed and may differ from other published sources (see Technical Notes). Counts will be updated every Wednesday by 5pm. Additional information will be added to this site as available.

# **List of Topics**

- 1. Age and sex
- 2. Race and Hispanic origin
- 3. Place of death
- 4. Comorbidities
- 5. Excess deaths
- 6. State and county data files

For the Index of Provisional COVID-19 Mortality Surveillance and Ad-hoc Data Files, click here.

## Age and sex

 Table 1 has counts of death involving COVID-19 and select causes of death by sex and age group for the United

 States. For data on sex and age at the state level, Click here to download. For data on sex and age by week,

🕼 Click here to download

NOTICE TO USERS: The data file for deaths by sex and age at the state level has been updated on September 2, 2020 to include the following age groups in addition to the age groups that are routinely included: 0-17, 18-29, 30-49, and 50-64. The new age groups are consistent with categories used across CDC COVID-19 surveillance pages. When analyzing the file, the user should make sure to select only the desired age groups. Summing across all age categories provided will result in double counting deaths from certain age groups.

Data on deaths involving COVID-19 among ages 0–18 are available here: Click here to download

# ✓ Table 1. Deaths involving coronavirus disease 2019 (COVID-19), pneumonia, and influenza reported to NCHS by sex and age group. United States. Week ending 2/1/2020 to 9/19/2020

#### Updated September 23, 2020

Sex	Age group	All Deaths involving COVID-19 (U07.1) <sup>1</sup>	Deaths from All 🖨 Causes	Deaths involving Pneumonia, with or without COVID-19, excluding Influenza deaths (J12.0–J18.9) <sup>2</sup>	Deaths involving COVID-19 and Pneumonia, excluding Influenza (U07.1 and J12.0-J18.9) <sup>2</sup>	All Deaths involving Influenza, with or without COVID-19 or Pneumonia (J09–J11) <sup>3</sup>	Deaths involving Pneumonia, Influenza, or COVID-19 (U07.1 or J09–J18.9) <sup>4</sup>	Population <sup>5</sup> 🜲
Total								
	All ages	188,470	2,022,937	192,312	84,930	6,699	301,553	327,167,434
	Under 1 year	20	11,313	105	3	16	138	3,848,208
	1–4 years	15	2,158	73	2	42	128	15,962,067
	5–14 years	31	3,356	102	8	52	177	41,075,169
	15–24 years	353	21,615	438	128	53	712	42,970,800
	25–34 years	1,457	44,521	1,610	651	151	2,553	45,697,774
	35–44 years	3,809	62,852	3,643	1,693	250	5,979	41,277,888
	45–54 years	10,057	115,528	9,425	4,698	577	15,256	41,631,699
	55–64 years	23,991	264,573	25,205	11,661	1,240	38,556	42,272,636
	65–74 years	40,613	401,024	42,712	19,609	1,453	64,930	30,492,316

	years	49,871	489,060	52,492	23,175	1,478	80,458	15,394,374
	85 years and over	58,253	606,937	56,507	23,302	1,387	92,666	6,544,503
Males								
	All ages	101,819	1,055,478	105,296	47,857	3,452	162,096	161,128,679
	Under 1 year	13	6,246	65	2	8	84	1,968,505
	1–4 years	7	1,256	36	1	25	67	8,163,697
	5–14 years	22	1,984	53	7	23	91	20,974,830
	15–24 years	218	16,029	273	80	27	435	21,976,455
	25–34 years	969	31,445	998	422	76	1,612	23,210,709
	35–44 years	2,601	41,436	2,312	1,158	133	3,865	20,587,600
	45–54 years	6,861	72,586	5,904	3,217	342	9,818	20,541,202
	55–64 years	15,570	163,021	15,357	7,507	705	23,976	20,398,863
	65–74 years	24,966	233,035	25,664	12,137	812	39,150	14,246,085
	75–84 years	27,407	254,170	29,385	13,075	735	44,334	6,735,040
	85 years and over	23,185	234,270	25,249	10,251	566	38,664	2,325,693
Female	25							
	All ages	86,647	967,377	87,010	37,069	3,246	139,450	166,038,755
	Under 1 year	7	5,047	40	1	8	54	1,879,703
	1–4 years	8	902	37	1	17	61	7,798,370
	5–14 years	9	1,372	49	1	29	86	20,100,339
	15–24 years	135	5,585	165	48	26	277	20,994,345
	25–34 years	488	13,074	612	229	75	941	22,487,065
	35–44 years	1,208	21,411	1,331	535	117	2,114	20,690,288
	45–54 years	3,195	42,939	3,520	1,480	235	5,437	21,090,497
	55–64 years	8,421	101,545	9,847	4,154	534	14,578	21,873,773

65–74 years	15,646	167,977	17,047	7,471	641	25,779	16,246,231
75–84 years	22,463	234,876	23,105	10,099	743	36,122	8,659,334
85 years and over	35,067	372,649	31,257	13,050	821	54,001	4,218,810

NOTE: Number of deaths reported in this table are the total number of deaths received and coded as of the date of analysis and do not represent all deaths that occurred in that period. Counts of death occurring before or after the reporting period are not included in the table.

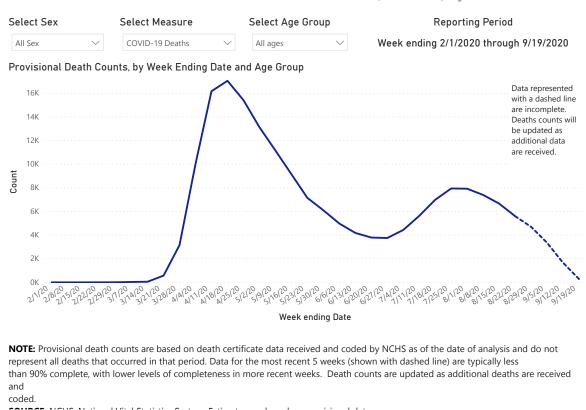
\*Data during this period are incomplete because of the lag in time between when the death occurred and when the death certificate is completed, submitted to NCHS and processed for reporting purposes. This delay can range from 1 week to 8 weeks or more, depending on the jurisdiction and cause of death.

<sup>1</sup>Deaths with confirmed or presumed COVID-19, coded to ICD-10 code U07.1

<sup>2</sup>Counts of deaths involving pneumonia include pneumonia deaths that also involve COVID-19 and exclude pneumonia deaths involving influenza. <sup>3</sup>Counts of deaths involving influenza include deaths with pneumonia or COVID-19 also listed as a cause of death.

<sup>4</sup>Deaths with confirmed or presumed COVID-19, pneumonia, or influenza, coded to ICD–10 codes U07.1 or J09–18.9.

<sup>5</sup>Population is based on 2018 postcensal estimates from the U.S. Census Bureau



#### Provisional Death Counts for Coronavirus Disease 2019 (COVID-19) By Week of Death

**Microsoft Power BI** 

Data by race and Hispanic origin are available at the national, state, and county level. Data by race and Hispanic origin is also available by age at the national and state level. Click here to visit the NCHS Health Disparities: Race and Hispanic origin page.

# Place of death

Table 2 presents death counts of COVID-19 and other select causes of death by the place of death. For data on place of death at the state level, Click here to download.

For data on place of death by age group, state, and HHS Region, Click here to download.

# ✓ Table 2. Deaths involving coronavirus disease 2019 (COVID-19), pneumonia, and influenza reported to NCHS by place of death, United States. Week ending 2/1/2020 to 9/19/2020.\*

#### Updated September 23, 2020

Place of death	All Deaths involving COVID- 🔶 19 (U07.1) <sup>1</sup>	Deaths from All Causes	Deaths involving Pneumonia, with or without COVID-19, excluding Influenza deaths (J12.0–J18.9) <sup>2</sup>	Deaths involving COVID-19 and Pneumonia, excluding Influenza (U07.1 and J12.0– J18.9) <sup>2</sup>	All Deaths involving Influenza, with or without COVID-19 or Pneumonia (J09–J11) <sup>3</sup>
Total	188,470	2,022,937	192,312	84,930	6,699
Healthcare setting, inpatient	122,607	590,922	137,251	67,648	4,057
Healthcare setting, outpatient or emergency room	6,636	119,959	6,357	2,185	240
Healthcare setting, dead on arrival	181	5,785	137	44	11
Decedent's home	10,116	683,183	13,068	2,084	1,445
Hospice facility	5,526	126,874	9,143	2,524	317
Nursing home/long term care facility	40,084	356,445	23,149	9,561	530
Other	3,252	137,462	3,129	859	99
Place of death unknown	68	2,307	78	25	0

NOTE: Number of deaths reported in this table are the total number of deaths received and coded as of the date of analysis and do not represent all deaths that occurred in that period. Counts of deaths occurring before or after the reporting period are not included in the table.

\*Data during this period are incomplete because of the lag in time between when the death occurred and when the death certificate is completed, submitted to NCHS and processed for reporting purposes. This delay can range from 1 week to 8 weeks or more, depending on the jurisdiction and cause of death.

<sup>1</sup>Deaths with confirmed or presumed COVID-19, coded to ICD-10 code U07.1.

<sup>2</sup>Counts of deaths involving pneumonia include pneumonia deaths that also involve COVID-19 and exclude pneumonia deaths involving influenza. <sup>3</sup>Counts of deaths involving influenza include deaths with pneumonia or COVID-19 also listed as a cause of death.

# Comorbidities

Table 3 shows the types of health conditions and contributing causes mentioned in conjunction with deaths involving coronavirus disease 2019 (COVID-19). For 6% of the deaths, COVID-19 was the only cause mentioned. For deaths with conditions or causes in addition to COVID-19, on average, there were 2.6 additional conditions or causes per death. The number of deaths with each condition or cause is shown for all deaths and by age groups. For data on comorbidities,

Click here to download

# ✓ Table 3. Conditions contributing to deaths involving coronavirus disease 2019 (COVID-19), by age group, United States. Week ending 2/1/2020 to 9/19/2020.\*

#### Updated September 23, 2020

				Num	ber of Condi	tions				
		Age Group								
ICD-10 codes	All ages	0–24 years	25– 34 🔷 years	35- 44 <b>♦</b> years	45- 54 years	55- 64 ∳ years	65- 74 years	75- 84 years	85 years and over	
U071	186,101	414	1,440	3,769	9,935	23,689	40,058	49,235	57,554	
	-	-	-	-	-	-	-	-		
J09–J18	80,088	143	660	1,707	4,738	11,361	18,384	21,316	21,777	
J40-J47	16,064	30	72	164	464	1,735	3,829	5,085	4,684	
J80	24,603	71	272	707	2,039	4,348	6,515	5,945	4,704	
J96	64,194	126	466	1,215	3,586	8,602	14,979	17,686	17,532	
R09.2	3,788	9	30	73	181	426	779	1,009	1,281	
J00–J06, J20–J39, J60–J70, J81–J86, J90–J95, J97–J99, U04	6,730	24	59	144	356	881	1,438	1,809	2,019	
	-	-	-	-	-	-	-	-		
110-115	40,817	19	118	533	1,769	4,947	9,014	11,251	13,165	
120-125	21,108	2	28	110	503	1,928	4,369	6,405	7,762	
146	23,011	58	212	543	1,523	3,389	5,241	5,772	6,273	
144, 145, 147–149	11,657	11	27	69	271	862	2,114	3,453	4,850	
150	12,248	6	45	93	320	1,048	2,129	3,398	5,209	
	codes           LU071           J09-J18           J40-J47           J80           J96           R09.2           J00-J06, J20-J39, J30           J00-J06, J20-J39, J30           J00-J06, J20-J39, J30           J00-J06, J20-J30, J31           J10-J15           J10-J15           J10-J125           J14, I45, I47-J40	codes       ages *         U071       186,101         J09-J18       80,088         J40-J47       16,064         J80       24,603         J96       64,194         J09-J06       23,788         J00-J06,120-J39       6,730         J00-J06,120-J39       21,108         J10-I15       40,817         I10-I15       21,108         I46       23,011         I44,145,147-H39       11,657	codes         ages         years           U071         186,101         414           U071         186,101         414           J09-J18         80,088         143           J09-J18         80,088         143           J40-J47         16,064         300           J80         24,603         71           J96         64,194         126           M09.2         3,788         9           J00-J06,J20-J39, U04         6,730         24           I10-115         40,817         19           I10-115         40,817         19           I20-125         21,108         2           I44, I45, I47-I49         11,657         11	All       All       0-24       34       4         ages       years       34       years       4         U071       186,101       414       1,440         U071       186,101       414       1,440         J09-J18       80,088       143       660         J109-J18       80,088       143       660         J80       24,603       71       272         J80       24,603       71       272         J96       64,194       126       466         R09.2       3,788       9       30         J00-906, J20-J39, J004       6,730       24       59         J100-115       40,817       19       118         I10-115       40,817       19       118         I20-125       21,108       2       28         I46       23,011       58       212         I44, I45, I47-149       11,657       11       27	ICD-10 codesAll ages0-24 years34 years44 yearsU071186,1014141,4403,769U071186,1014141,4403,769J09-J1880,0881436601,707J09-J1880,0881436601,707J40-J4716,0643072164J9664,1941264661,215R09.23,78893073J00-J06, J20-J39, J00-J05, J97-J99, U046,7302459J100-J05, J20-J39, J90-J95, J97-J99, U046,7302459J100-J1540,81719118533J100-J1521,1082228110I10-I1521,10858212543I44, I45, I47-I4911,657112769	ICCD-10 CodesAll ages $0-24$ years $25-34$ years $35-44$ years $45-54$ yearsU071186,1014141,4403,7699,935U071186,1014141,4403,7699,935J09-J1880,0881436601,7074,738J09-J1880,0881436601,7074,738J40-J4716,0643072164464J8024,603712727072,039J9564,1941264661,2153,586R09.23,78893073181J00-J05,J20-J35, J00-J50,J01,81-J86, U046,7302459144J00-J05,J20-J35, J00-J50,J01,81-J86, U046,73024531,769J10-11540,817191185331,769I10-11540,817191185131,503I20-12521,1082228110503I4423,011582125431,523I4423,011516215431,523	ICD-10 codesAll ages $0-24$ years $25-$ $34$ years $35-$ $44$ years $55-$ $54$ years $55-$ 	ICD-10 codesAll ages $0-24$ years $25-34$ years $35-4$ years $45-64$ years $55-64$ 64 wears $65-64$ 74 wears $65-64$ 64 wears	ICD-10 CodesJalle ages $0 - 24$ years $25 - 34$ years $35 - 44$ years $45 - 56 - 64$ years $55 - 64$ years $75 - 84$ years $75 - 84$ yearsU071186,1014.141.4403.7699.93523.68940.05849.235 $100 - 17$ 186,1014.141.4403.7699.93523.68940.05849.235 $100 - 17$ $36.088$ 1.43 $660$ 1.7074.73811.36118.34421.316 $100 - 147$ 16.0643.09721.644.641.7353.8295.085 $190$ 24.603712727072.0394.3486.5155.944 $190$ 24.603712727072.0394.3486.5155.945 $190$ 24.603712727072.0394.3486.5155.945 $190$ 24.603712727072.0394.3486.5155.945 $190$ 24.603712727072.0394.3486.1515.945 $190$ 5.9799.01412.613.5668.811.4381.809 $100$ 6.7302.45.91.443.568.811.4381.809 $100$ 5.7302.45.91.443.568.811.4381.809 $100$ 5.7302.45.91.453.694.9479.0141.215 $100$ 4.0411.91.85.3	

Cerebrovascular

diseases	160–169	9,034	7	28	96	324	1,021	2,059	2,640	2,858
Other diseases of the circulatory system	100-109, 126-143, 151, 152, 170-199	10,404	48	115	247	590	1,379	2,325	2,584	3,116
Sepsis	A40-A41	16,997	42	157	419	1,284	2,944	4,695	4,276	3,180
Malignant neoplasms	C00-C97	8,583	31	40	104	322	1,174	2,248	2,563	2,101
Diabetes	E10-E14	30,517	50	202	706	2,082	5,057	8,232	8,151	6,036
Obesity	E65-E68	6,863	95	332	749	1,214	1,716	1,658	852	246
Alzheimer disease	G30	6,626	0	0	0	2	54	439	1,955	4,176
Vascular and unspecified dementia	F01, F03	21,111	0	0	2	24	315	1,991	6,257	12,522
Renal failure	N17-N19	16,405	22	134	348	1,068	2,490	4,236	4,301	3,804
Intentional and unintentional injury, poisoning and other adverse events	S00-T98, V01- X59, X60-X84, X85-Y09, Y10- Y36, Y40-Y89, U01-U03	6,171	53	167	215	385	746	1,197	1,470	1,938
All other conditions and causes (residual)	A00-A39, A42- B99, D00-E07, E15-E64, E70- E90, F00, F02, F04-G26, G31- H95, K00-K93, L00-M99, N00- N16, N20-N99, O00-O99, P00- P96, Q00-Q99, R00-R08, R09.0, R09.1, R09.3, R09.8, R10-R99	92,502	317	840	1,891	5,088	12,518	21,698	24,251	25,891

NOTE: Number of conditions reported in this table are tabulated from deaths received and coded as of the date of analysis and do not represent all deaths that occurred in that period. Data for this table are derived from a cut of the NVSS database taken at a particular time, separate from other surveillance tables on this page which are tabulated on the date of update. As a result, the total number of COVID-19 deaths in this table may not match other surveillance tables on this page.

\*Data during the period are incomplete because of the lag in time between when the death occurred and when the death certificate is completed, submitted to NCHS and processed for reporting purposes. This delay can range from 1 week to 8 weeks or more.

<sup>1</sup>Conditions contributing to the death were identified using the International Classification of Diseases, Tenth Revision (ICDndash;10). Deaths involving more than one condition (e.g., deaths involving both diabetes and respiratory arrest) were counted in both totals. To avoid counting the same death multiple times, the numbers for different conditions should not be summated.

<sup>2</sup>Deaths with confirmed or presumed COVID-19, coded to ICD-10 code U07.1

#### **Excess deaths**

See the NCHS Excess Deaths Data Visualization.

This data visualization presents data on weekly counts of all-cause mortality by jurisdiction of occurrence. Counts of deaths in the most recent weeks are compared with historical trends to determine whether the number of deaths in recent weeks is significantly higher than expected.

# State and County Data Files

Weekly Counts of Deaths by State and Select Causes

- Final data for 2014–2018 C Weekly counts of leading causes of death based on final underlying cause mortality data for years 2014–2018.
- Provisional data for 2019–2020 C Weekly counts of leading causes of death based on provisional underlying cause mortality data for 2019–2020, updated weekly.

Provisional COVID-19 Death Counts in the United States by County 🚳

• This file includes deaths involving COVID-19 (coded to ICD-10 code U07.1) and total deaths per county. Counties included in this table had 10 or more COVID-19 deaths at the time of analysis.

# Understanding the Numbers: Provisional Death Counts and COVID-19

*Provisional death counts deliver the most complete and accurate picture of lives lost to COVID-19. They are based on death certificates, which are the most reliable source of data and contain information not available anywhere else, including comorbid conditions, race and ethnicity, and place of death.* 

## How it Works

The National Center for Health Statistics (NCHS) uses incoming data from death certificates to produce provisional COVID-19 death counts. These include deaths occurring within the 50 states and the District of Columbia.

NCHS also provides summaries that examine deaths in specific categories and in greater geographic detail, such as deaths by county and by race and Hispanic origin.

**COVID-19 deaths are identified using a new ICD–10 code.** When COVID-19 is reported as a cause of death – or when it is listed as a "probable" or "presumed" cause — the death is coded as **U07.1**. This can include cases with or without laboratory confirmation.

# Why These Numbers are Different

Provisional death counts may not match counts from other sources, such as media reports or numbers from county health departments. Counts by NCHS often track 1–2 weeks behind other data.

- **Death certificates take time to be completed.** There are many steps to filling out and submitting a death certificate. Waiting for test results can create additional delays.
- States report at different rates. Currently, 63% of all U.S. deaths are reported within 10 days of the date of death, but there is significant variation between states.
- It takes extra time to code COVID-19 deaths. While 80% of deaths are electronically processed and coded by NCHS within minutes, most deaths from COVID-19 must be coded by a person, which takes an average of 7 days.
- Other reporting systems use different definitions or methods for counting deaths.

# Things to know about the data

**Provisional counts are not final and are subject to change.** Counts from previous weeks are continually revised as more records are received and processed.

**Provisional data are not yet complete.** Counts will not include all deaths that occurred during a given time period, especially for more recent periods. However, we can estimate how complete our numbers are by looking at the average number of deaths reported in previous years.

**Death counts should not be compared across states.** Some states report deaths on a daily basis, while other states report deaths weekly or monthly. State vital record reporting may also be affected or delayed by COVID-19 related response activities.

For more detailed technical information, visit the Provisional Death Counts for Coronavirus Disease 2019 (COVID-19) Technical Notes page.

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