

MORTALITY

Large Loss-Of-Life Events Arranged by

DEADLIEST AMERICAN DISASTERS AND LARGE LOSS-OF-LIFE EVENTS

**A Catalog of, and Notes on, Natural and Man-Made Events Causing Ten or More Fatalities
In America/The United States and its Territories Since 1527**

Homepage: <http://www.usdeadlyevents.com/>

(Down to and including 500 deaths -- 756 such entries noted as of

October 8, 2024

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Chronology

Event Typology (e.g. aviation, epidemics, explosions, fires heat, mining, hurricanes, violence).

Breakout of Events by States, District of Columbia and Territories.

Rank-ordering within Types by State.

Spreadsheet.

Contents below are:

Top Ten – (All are Epidemics and Disease)

Top Ten Non-Disease:

“Natural” Top Ten (excluding Disease)

“Natural” Top Ten (excluding Disease and Heat)

“Natural” Top Ten (excluding Disease and Heat)

“Man-Made” Top Ten – non-natural (though “nature” may be contributing factor)

“Technological” Top Ten (thus excluding intentional man-made violence)

Multiple-Death Fires (All Types --Top Ten)¹

All Large Loss-of-Life Events by Mortality (from highest down to 500)

¹ Includes Forest/wildfires, fires from maritime events, structural fires and 911 terrorism event. Have used death toll for all types of death in the 1906 San Francisco earthquake, given uncertainty over range of deaths attributable solely to fire (burns, however, were the leading cause of death -- see 1906 SF Earthquake document.)

Breakout of Events taking 500 or more lives, which have thus far been noted, by Type:

- 620 Diseases (especially infectious / contagious / communicable)**
 - 15 Cholera**
 - 4 COVID (Coronavirus-19)**
 - 6 Croup**
 - 9 Diarrhoea and Gastroenteritis of Infectious Origin**
 - 33 Diphtheria (sometimes includes croup)**
 - 20 Dysentery**
 - 3 Encephalitis, acute infectious**
 - 12 Hepatitis (Viral/Infectious)**
 - 15 HIV/AIDS**
 - 110 Influenza (sometimes including pneumonia)**
 - 14 Malaria**
 - 36 Measles**
 - 17 Meningococcal infections, especially Meningitis (including cerebrospinal)**
 - 46 Polio**
 - 1 Rubella (German measles)**
 - 19 Scarlet Fever**
 - 2 Scurvy**
 - 55 Smallpox**
 - 2 Syphilis (two years noted – 19,006 in 1940; 2,381 in 1967)**
 - 100 Tuberculosis**
 - 27 Typhoid Fever**
 - 5 Typhus (in NYC typhus and typhoid were reported together several years)**
 - 23 Whooping Cough**
 - 46 Yellow Fever**
 - 3 Unknown (1) and Multiple (2)**
- 56 Heat (exposure to excessive natural heat as well as effects of heat and light)**
- 37 Winter Weather (snow storms, blizzards, excessive natural cold, hypothermia)**
- 18 Hurricanes (includes one Northeast maritime gale)**
- 15 Violence**
- 5 Maritime (ship/boat losses on fresh and salt water)**
- 5 Flooding**
- 4 Wildfires/Forest Fires**
- 3 Tornadoes**
- 2 Earthquakes**
- 2 Structural Failures (Dams)**
- 1 Explosion**
- 1 Fire**

Top 100 Deadly Loss-of-Life Events noted below (actual numbers – not population adjusted):

Disease:	100	
Tuberculosis	28	(Sampling)
Influenza/Pneumonia	25	(Sampling)
Diphtheria	10	
Typhoid Fever	7	
HIV/AIDS	6	
Cholera	5	
Coronavirus	4	
Malarial Fever	4	
Croup	3	
Scarlet Fever	3	
Small Pox	3	
Whooping Cough	3	
Yellow Fever	3	
Diarrhea & Dysentery	2	
Measles (1 cross-listed)	2	
Unknown	2	
Meningococcal Meningitis	1	
Syphilis	1	
Other Than Disease		
Hurricanes:	1	

Top Ten – (All are Epidemics and Disease):

1. 1492-1800 – North American Native Population Decline, esp. due to **diseases** ~2,800,000
2. 1918 – **Influenza and Pneumonia** Epidemic --430,000-543,482
1918-1919, **Influenza and Pneumonia** Epidemic 531,851-728,922
3. 2021 -- **COVID-19** (coronavirus) US deaths per 1M pop., ~2.6K per million --437,984
4. 2020 -- Feb 29-Dec 31, **COVID-19/Coronavirus**, US deaths per 1M pop./1,070 --354,215
5. 1920 -- **Influenza and Pneumonia** (1918-1920 subset) --141,609-220,798
6. 2022 -- **COVID-19**/US death rate 6.5; esp. MO/9.9., FL/9.8, OH/9.8, IN/9.6, PA/9.5--217,370
7. 1919 -- **Influenza and Pneumonia** epidemic --101,851-185,440
8. 1957-58, esp. Fall-Spring -- **H2N2 “Asian” Influenza and Pneumonia** Pandemic ~116,000
9. 1917 -- **Influenza**/12,974; **Bronchitis**/12,311; **Pneumonia**/74,874 100,159-115,526
10. 1900 -- **Tuberculosis**, esp. CA, IL, IN, KY, MA, MO, NJ, NY, OH, PA, TN 109,750

Top Ten **Non-Disease**:

1. 1900 -- Sep 9, **Hurricane**, Galveston and southeast coastal area, TX --7,200-12,000
2. 1540 -- Oct 18, Spanish (de Soto) **battle/massacre**, with Atahachi, Mabila, AL 2,500-6,000
3. 1936 -- July-Aug (esp.), **Heat**, esp. MN/772, MO/644, IL/634, MI/617, WI/500 --4,678-5418
4. 1906 -- April 18, **Earthquake, Fires, Landslides**, San Francisco & vic., CA --3,000-5,000
5. 1901 -- June-July, **Heat waves**, except Pacific NW, esp. Northeast, June 27-July 6 --4,012
6. 1838 -- May-Mar 1839, **Cherokee Relocation**, NE AL/NW GA/SE TN/NW NC to OK² ~4,000
7. 1899 -- Aug 8-19, San Ciriaco **Hurricane** esp. Puerto Rico/3433 & NC/73, Aug 17/18 --3,507
8. 1889 -- May 31, South Fork **Dam Fails**, Flash Flood, Fire, Johnstown PA --2,100-3,188
9. 2001 -- Sep 11, **Violence, 9/11 Terrorist Attacks** --~3,064
10. 1928 -- Sep 6-20, Great Okeechobee **Hurricane**/Flood, Southeast FL --1,800-3,000

“Natural” Top Ten (excluding Disease):

1. 1900 -- Sep 9, **Hurricane**, Galveston and southeast coastal area, TX --7,200-12,000
2. 1936 -- July-Aug (esp.), **Heat**, esp. MN/772, MO/644, IL/634, MI/617, WI/500 --4,678-5418
3. 1906 -- April 18, **Earthquake, Fires, Landslides**, San Francisco & vic., CA --3,000-5,000
4. 1901 -- June-July, **Heat waves**, except Pacific NW, esp. Northeast, June 27-July 6 --4,012
5. 1899 -- Aug 8-19, San Ciriaco **Hurricane** esp. Puerto Rico/3433 & NC/73, Aug 17/18- 3,507
6. 1928 -- Sep 6-20, **Great Okeechobee Hurricane**/Flood, Southeast FL --1,800-3,000
7. 2017 -- Sep 20, **Hurricane Maria**, Puerto Rico (2,975), US Virgin Isl. (2), NJ (3) --2,980
8. 1966 -- July, **Heat Wave** and “excess deaths,” esp. IL, NYC, St. Louis, MO ~2,582-2,954
9. 1931 -- June-Sep, **Heat Waves**/excessive heat, West, Midwest, NE, esp. IL, IA, WI --2,768
10. 1871 -- Oct 8-9, **Wildfire/Firestorm**, Peshtigo/NE WI vic.; Birch Creek MI³ --1,228-2,400

² Also referred to as Cherokee Trail of Tears as well as a “forced-march” relocation. Geographic area of coverage comes from sources in Narrative document and map in Thornton (1990) from Morris, Goins and McReynolds ([1965] 1986:20), entitled “The Trail of Tears.” Shows two Cherokee relocation routes from area encompassing north/northwest GA, southwest NC, southeast TN and northeast AL. One route is northwest through TN into KY, westward to southern IL, then down into southeastern MO, into northern Ark. and then westward into OK. Second route was westward through TN and AR to OK.

³ Many sources put fatality high-range at 1,500. Several sources put death toll at 2,200, 2,400, or 2,500.

“Natural” Top Ten (excluding Disease and Heat):

1. 1900 -- Sep 9, **Hurricane**, Galveston and southeast coastal area, TX --7,200-12,000
2. 1906 -- Apr 18, **Earthquake, Fires, Landslides**, San Francisco & vic., CA 3,000-5,000
3. 1899 -- Aug 8-19, San Ciriaco **Hurricane** esp. Puerto Rico/3433 & NC/73, Aug 17/18- 3,507
4. 1928 -- Sep 6-20, **Great Okeechobee Hurricane/Flood**, Southeast FL 1,800-3,000
5. 2017 -- Sep 20, **Hurricane Maria**, Puerto Rico (2,975), US Virgin Isl. (2), NJ (3) --2,980
6. 1871 -- Oct 8-9, **Wildfire/Firestorm**, Peshtigo/NE WI vic.; Birch Creek MI⁴ 1,228-2,400
7. 1893 -- Aug 27-28, **Sea Islands Hurricane**, “Great Storm of 1893,” GA/SC 1,000-2,500
8. 1893 -- Oct 1-2, **Hurricane Cheniere Caminanda**, Gulf Coast esp. LA, MS, AL 1,700-2,000
9. 2005 -- Aug 25-31, **Hurricane Katrina**, FL, LA, esp. NOLA & MS⁵ ≥1,833-1,836
10. 1553 -- **Hurricane**, Lower Coast of TX 1,700

“Man-Made” Top Ten – non-natural (though “nature” may be contributing factor):

1. 1540 -- Oct 18, Spanish (de Soto) **battle/massacre**, with Atahachi, Mabila, AL 2,500-6,000
2. 1838 -- May-Mar 1839, **Cherokee Relocation**, NE AL/NW GA/SE TN/NW NC to OK⁶ ~4,000
3. 1889 -- May 31, South Fork **Dam Fails**, Flash Flood, Fire, Johnstown PA 2,100-3,188
4. 2001 -- Sep 11, **Violence, 9/11 Terrorist Attacks** 3,064
5. 1941 -- Dec 07, **Violence, Attack** by Japanese on Pearl Harbor, HI 2,402
6. 1865 -- Apr 27, Steamer **Sultana** explodes/burns, Miss. Riv., Redman Point, AR-1,547-1,947
7. 2005 -- Aug 29, **Hurricane Katrina Levee/floodwall failures/overtopping**, NOLA⁷ ~1,300
8. 1675 -- Dec 19, English Colonists **Massacre** Narragansetts, Great Swamp, RI --365-1,100
9. 1904 -- June 15, **General Slocum excursion steamer fire**, East River, NYC, NY --957-1,031
10. 1915 -- July 24, crowded **SS Steamer Eastland** rolls-over at dock, Chicago, IL --812-844

“Technological” Top Ten (thus excluding intentional man-made violence):

1. 1889 -- May 31, South Fork **Dam Fails**, Flash Flood, Fire, Johnstown PA 2,100-3,188
2. 1865 -- Apr 27, Steam **Sultana** explodes/burns, Miss. Riv., Redman Point, AR --1,547-1,947
3. 2005 -- Aug 29, **Hurricane Katrina Levee/floodwall failures/overtopping**, NOLA⁸ ~1,300
4. 1904 -- June 15, **General Slocum excursion steamer fire**, East River, NYC, NY --957-1,204
5. 1915 -- July 24, Crowded **SS Steamer Eastland** rolls-over at dock, Chicago, IL --812-844
6. 1903 -- Dec 30, **Fire, Suffocation, Trampling**, Iroquois Theater, Chicago, IL -- 602
7. 1928 -- March 12, **St. Francis Dam failure**, Ventura County, CA --400-600
8. 1947 -- Apr 16-17, **Grandcamp ammonium nitrate explosion**, Texas City, TX --581-600
9. 1854 -- Sep 27, **US Mail Steamer Arctic hit by Vesta**, Fog, Cape Race, NFLD --318-562
10. 1865 -- March 31, **Steam Transport General Lyon** Burns, Cape Hatteras, NC --400-500

⁴ Many sources put fatality high-range at 1,500. Several sources put the high-range at 2,200, 2,400, or 2,500.

⁵ There were 2 deaths in AL and 2 in GA. The numbers reflect those generally reported. We note “≥” (at least) in that there still are over 100 missing and presumed dead, as well as unreported health-related indirect deaths.

⁶ Also referred to as Cherokee Trail of Tears as well as a “forced-march” relocation..

⁷ We show 1,833-1,836 Hurricane Katrina deaths in FL, GA, AL, LA and MS – though the total number of deaths will never be known. Most deaths in AL and MS were from storm-surge. Most deaths in New Orleans were related to failures of or overtopping of man-made structures.

⁸ We show 1,833-1,836 Hurricane Katrina deaths in FL, GA, AL, LA and MS – though the total number of deaths will never be known. Most deaths in AL and MS were from storm-surge. Most deaths in New Orleans related to failures of or overtopping of man-made structures.

Top Ten Deadly **Disease** events (other than influenza, COVID-19 and tuberculosis):

1. 1861-65--Apr-June, **Dysentery**, Civil War, apparently Union & Confederate forces ~95,000
2. 1775-82 -- **Smallpox** Epidemic North America ~84,000
3. 1861-65--Apr 12-June 30; **Typhoid** **Fever**, Civil War, Confederate/Union forces ~65,000
4. 1849 -- **Cholera**, esp. OH (>7K); NY (>6K); Gold Rushers (~5K); Natives (~6K)⁹ >45K-51,428
5. 1879-80 -- June-May, **Diphtheria**, esp. PA/4.6K; IL/3.7K; NY/2.3K; IA/2.3K, ME/MI/WI 38,143
6. 1900 -- **Typhoid**, esp. AL, AR, GA, IN, KY, MS, MO, NY, NC, OH, PA, TN, TX 35,379
7. 1870 -- **Diarrhoea, Dysentery, Enteritis**, esp. NY/4641, PA/2633, IL/2551, MO/2270 --≥31,153
8. 1829-1833/esp. 1833--**Malaria**? epidemic, West Coast Natives; CA/20K, OR-WA/10K --30,000
9. 1889-90, June-May, **Diphtheria**, 48 States & DC, esp. NY/4K, PA/2.9K, IL/2.6K 27,815
10. 1889-90, June-May, **Typhoid** (Enteric) Fever, esp. PA, 2.8K, NY/1.7K, IL/1.7K, OH/1.6K-27,058

Multiple-Death **Fires** (All Types --Top Ten):¹⁰

1. 1906 -- Apr 18, Earthquake, Fire, Landslides, San Francisco & vicinity, CA¹¹ --3,000-5,000
2. 2001 -- Sep 11, World Trade Center Terrorist Attack and Fires, NYC, NY¹² --2,666
3. 1871 -- Oct 8-9, Wildfire/Firestorm, Peshtigo/NE WI vic.; Birch Creek MI¹³ --1,228-2,400
4. 1865 -- Apr 27, Steamer *Sultana* explodes/burns, MS. Riv., Redman Point, AR¹⁴-1,547-1,947
5. 1904 -- Jun 15, Fire, *General Slocum* Excursion Steamer, East Riv., NYC, NY -- 957-1,200
6. 1903 -- Dec 30, Iroquois Theater Fire, Chicago, IL¹⁵ -- 602
7. 1947 -- Apr 16, Ammonium Nitrate Explos., Fire, *Grandcamp*, Texas City, TX¹⁶ --552-600
8. 1918 -- Oct 12, Forest Fires, Cloquet, Moose Lake, many towns, northeast MN --453-559
9. 1881 -- Sep 1-6, Wildfire, "The Thumb Fire," Lower Michigan --169-500
10. 1942 -- Nov 28, Cocoanut Grove Night Club Fire, Boston, MA¹⁷ -- 492

⁹ There were outbreaks in other States (see narrative document). We note that our sources could not have had access to all cholera deaths in areas of coverage. Collins and Collins write in *History of Kentucky*, there were many more deaths in the smaller towns and the countryside than they were able to chronicle. This must have been true all up and down routes of river and rail traffic as well as in the wagon trains heading west during the Gold Rush. In addition, part of the explanation for the range has to do with what was called a death by cholera or a death caused by cholera-like symptoms, such as diarrhea or dysentery (interestingly co-incident in epidemic form during a cholera outbreak).

¹⁰ Includes Forest/wildfires, fires from maritime events, structural fires and 911 terrorism event. Have used death toll for all types of death in the 1906 San Francisco earthquake, given uncertainty over range of deaths attributable solely to fire (burns, however, were the leading cause of death -- see 1906 SF Earthquake document.)

¹¹ Cross-listed in Earthquake and in Landslides, in that there were a small number of deaths due to slides.

¹² Cross-listed in Violence-Terrorism section.

¹³ Many sources put fatality high-range at 1,500. Several sources put the high-range at 2,200 (Frank, 2003; Gess and Lutz, 2002, inside front cover), 2,400 (Hipke, 2008), or 2,500 (Gess and Lutz, 2002, p. 211).

¹⁴ We are not implying that these deaths were all attributable to fire -- that is unknown. Many died from the explosion, some from scalding from the released boiler steam, some from drowning and others from hypothermia in the water, as examples. We do know that the boat burned to the waterline and many who could not swim stayed on the boat and burned to death, or burned to death when decks collapsed under or over them.

¹⁵ Cross-listed in Violence-Crushing, Trampling, Suffocation.

¹⁶ Cross-listed in Explosions and in Maritime.

¹⁷ Cross-listed in Violence-Crushing, Trampling, Suffocation.

Large Loss-of-Life Events by Mortality (Top Fifty)

1.	1492-1800 – North American Native Population Decline, esp. due to diseases	~2,800,000
2.	1918 -- Influenza and Pneumonia epidemic	430,000-543,482
3.	2021 -- COVID-19 (coronavirus), US deaths per 1M pop., ~2.6K per million	--437,984
4.	2020 -- Feb 29-Dec 31, Coronavirus , U.S. deaths per 1M population, 1,070	--354,215
5.	1920 -- Influenza and Pneumonia (1918-1920 subset)	141,609-220,798
6.	2022 -- COVID-19 /US death rate 6.5; esp. MO/9.9., FL/9.8, OH/9.8, IN/9.6, PA/9.5--217,370	
7.	1919 -- Influenza and Pneumonia epidemic	--101,851-185,440
8.	1931 -- Influenza (31,701) and Pneumonia , all forms (96,974), especially PA	128,675
9.	1957-58, esp. Fall-Spring -- H2N2 “Asian” Influenza and Pneumonia Pandemic	~116,000
10.	1917 -- Influenza /12,974; Bronchitis /12,311; Pneumonia /74,874	100,159-115,526
11.	1900 -- Tuberculosis , esp. CA, IL, IN, KY, MA, MO, NJ, NY, OH, PA, TN	109,750
12.	1920 -- Tuberculosis , esp. Denver, San Antonio, Nashville, New Orleans	99,916
13.	1939 -- Influenza (21,464) & Pneumonia , esp. CA, IL, MI MO, NY, OH, PA, TX	99,097
14.	1861-65--Apr-June, Dysentery , Civil War, apparently Union & Confederate forces	~95,000
15.	1940 -- Influenza and Pneumonia , esp. CA, IL, MO, NY, OH, PA, TN, TX	92,525
16.	1879 -- June-May 1880, Tuberculosis , esp., NY, PA, OH, IL, IN, TN, KY, MA	91,270
17.	1925 -- Tuberculosis , esp. NY/10,282, PA/7,300, CA/5,934, IL/5,537, OH/4,819	89,268
18.	1775-82 -- Smallpox epidemic North America	~84,000
19.	1931 -- Tuberculosis , esp. PA/10,857, NY/8,618, CA/5,308, OH/4,253, TN/2,962	81,395
20.	1907 -- Tuberculosis , esp. CA/Chicago, IN/MA/NY (esp. NYC)/PA (esp. Philly)	76,650
21.	2023 -- COVID (354K deaths/2020; 438K/2021; 217K/2022; 1.19M 2020-2023)	--71,691
22.	1870 -- Tuberculosis (Consumption), nationwide	69,896
23.	1861-65--Apr 12-June 30; Typhoid Fever , Civil War, Confederate/Union forces	~65,000
24.	1939 -- Tuberculosis , nationwide, esp. CA, IL, NY, OH, PA, TN, TX	--61,609
25.	1941 -- Tuberculosis (all forms)	--59,251
26.	1942 -- Tuberculosis ; Census Bureau. <i>Vital Statistics of US 1942 -- II...Mortality.</i>	--57,690
27.	1943 -- Tuberculosis , all forms codes 13-22 (respiratory, code 13 was 52,407)	--57,005
28.	1905 -- Tuberculosis (10 registration states, DC, 134 non-registration cities), esp. NY-56,770	
29.	1940 -- Tuberculosis , nationwide, especially CA, IL, NY, OH, PA and TX	55,576
30.	1944 -- Tuberculosis , nationwide, esp. CA, IL, MI, NJ, NY, OH, PA, TN, TX	54,731
31.	1849 -- Cholera , esp. OH (>7K); NY (>6K); Gold Rushers (~5K); Natives (~6K) ¹⁸ >45K-	51,428
32.	1928-29 -- Winter, Influenza and Pneumonia epidemic	~50,000
33.	1860 -- Tuberculosis (consumption), nationwide	49,082
34.	1946 -- Tuberculosis , respiratory, code 13 (all forms including respiratory, 50,911)	--46,939
35.	1947 -- Tuberculosis , respiratory, code 13 (all forms including respiratory were 48,064)	44,462
36.	1948 -- Tuberculosis , respiratory, code 13 (all forms including respiratory were 43,833)	40,420
37.	1870 -- Pneumonia , esp. AL, GA, IL, IN, KY, MA, MO, NY, OH, PA, TN, TX, VA	40,012
38.	1879 -- June-May 1880, Diphtheria , esp. PA/4.6K; IL/3.7K; NY/2.3K; IA/2.3K, ME/MI/WI--38,143	

¹⁸ There were outbreaks in other States (see narrative document). We note that our sources could not have had access to all cholera deaths in areas of coverage. Collins and Collins write in *History of Kentucky*, there were many more deaths in the smaller towns and the countryside than they were able to chronicle. This must have been true all up and down routes of river and rail traffic as well as in the wagon trains heading west during the Gold Rush. In addition, part of the explanation for the range has to do with what was called a death by cholera or a death caused by cholera-like symptoms, such as diarrhea or dysentery (interestingly co-incident in epidemic form during a cholera outbreak).

Top Fifty (continued) -- all are Diseases:

39. 1949 --	Tuberculosis , respiratory (all forms including respiratory were 39,100)	--35,988
40. 1900 --	Typhoid , esp. AL, AR, GA, IN, KY, MS, MO, NY, NC, OH, PA, TN, TX	35,379
41. 1968-69 --	Sep-March, A2 “Hong Kong” Influenza (and Pneumonia) Epidemic	33,800
42. 1850 --	Tuberculosis (consumption), esp. NY/6,691, PA/3,520, MA/3,426, OH/2,558	--33,516
43. 1931 --	Influenza (additionally pneumonia, all forms was 96,974), esp. PA	--31,701
44. 1951 --	Tuberculosis (respiratory), esp. NY/3.5K, PA/2.5K, CA/2.2K, TX/2K, IL/1.8K	--31,163
45. 1870 --	Diarrhoea, Dysentery, Enteritis , esp. NY/4641, PA/2633, IL/2551, MO/2270	-->31,153
46. 1925 --	Influenza --esp. PA/2,068, OH/2,100, IL/1,558, IN/1,485, MO/1,464	30,538
47. 1829-1833/esp. 1833--	Malaria? epidemic, West Coast Natives; CA/20K, OR-WA/10K	--30,000
48. 1861-65--Apr-June,	Malaria , Civil War, Union/10K & Confederate/20K forces	~30,000
49. 1950 --	Tuberculosis , pulmonary. Code 002, Sixth Rev. of International Lists, 1948	--29,228
50. 1889-90, June-May,	Diphtheria , 48 States & DC, esp. NY/4K, PA/2.9K, IL/2.6K	27,815

Large Loss-of-Life Events by Mortality (Top Fifty-One to Top One Hundred):

51. 1889-90, June-May,	Typhoid (Enteric) Fever, esp. PA, 2.8K, NY/1.7K, IL/1.7K, OH/1.6K	27,058
52. 1860 --	Scarlatina (Scarlet Fever) , 38 Census “Registration” States and DC	26,402
53. 1910 --	Typhoid , avg. death rate 23.5; esp. NC, 57.7, CO/41.9, MD/40.7, MT/39.9	25,000
54. 1879 --	June-May 1880, Typhoid (“Enteric”) Fever, especially IL, IN, MO, OH, TX	23,339
55. 1930 --	Influenza , 48 States and District of Columbia (pneumonia was 88,770)	--23,066
56. 1952 --	Tuberculosis (respiratory), esp. NY/2462, CA/1678, PA/1662, IL/1385, TX/12K	--22,700
57. 2012-2013 (winter) --	Estimated Excess Influenza & Pneumonia Deaths	18,066-22,434
58. 1870 --	Typhoid Fever , nationwide, esp. IL, IN, MA, MO, NY, OH, PA	22,187
59. 1989 --	HIV AIDS , US death rate 8.9, DC/55.7, NY/25.6, NJ/19.6, FL/16.1, CA/15.	22,082
60. 1915 --	Dec-Jan 1916, Influenza & Pneumonia , esp. IL, MD, NY, OH, PA, WI	21,102
61. 1850 --	Dysentery , esp. NY/3691, PA/2683, OH/2568, MA/2437, IN/1270, CT/965	20,556
62. 1870 --	Scarlet Fever , esp. IL, MO, NY, PA, WI	20,339
63. 1879 --	June-May 1880, “ Malarial Fever ,” esp. AL, AR, GA, IL, MS and MO	20,231
64. 1837-38--	Smallpox epidemic , Upper Mid-West Native American Tribes	~20,000
65. 1878 --	June-Dec, Yellow Fever , esp. LA (esp. New Orleans), MS, TN (esp. Memphis)	~20,000
66. 1853 --	May-Dec, Yellow Fever , esp. AL/1293, LA/~15K, MS/1311 TX/871--	18,770-19,533
67. 1900 --	Meningitis , esp. NY/2602, PA/1613, IL/1318, MA/1206, OH/1189, NJ/909	--19,423
68. 1860 --	Typhoid Fever , Census “Registration” States	19,236
69. 1940 --	Syphilis , US death rate 14.4 per 100K pop, esp. FL DC AZ DE MS MD AL	19,006
70. 1916 --	Influenza	18,886
71. 1832 --	June-Dec 16, Cholera Epidemics, esp. DC, LA, MD, NY, PA, VA	--16,781-18,491
72. 1879 --	June-May, 1880 -- Croup , especially Oct-Dec, especially IL, PA and TN	17,966
73. 1953 --	Tuberculosis /respiratory, esp. NY/1983, PA/1428, CA/1383, IL/1235, TX/948	--17,954
74. 1890 --	Jan-March ¹⁹ Influenza (La Grippe/Russian Flu), esp. NY/IL/CT/OH/PA	--16,295-17,807
75. 1866 --	May-Dec, Cholera , esp. Cincinnati/New Orleans/NYC/St. Louis/TN/Philly/Army---	16K-17,742
76. 1912 --	Tuberculosis , Jan 1-Jun 8, CA, IL, IN, MA, MO, NJ, NYC, PA, TX, WI	17,463

¹⁹ Technically, what became the flu epidemic of early 1890 began in late December 1889.

77. 1944 -- **Influenza**, especially Jan-Apr & Dec, Nationwide, especially OH, PA, TX 17,320
 78. 1916 -- **Diphtheria** 17,000

Large Loss-of-Life Events by Mortality (Top Fifty-One to Top One Hundred):

79. 1900 -- **Influenza**, esp. MA/1130, TN/1019, PA/978, NC/799, AL/778, VA/754, GA/667 16,645
 80. 1988 -- **HIV AIDS**, US death rate 6.8, DC/39.0, NY/22.2, NJ/14.9, FL/11.7, CA/11.1 16,602
 81. 1900 -- **Diphtheria**, esp. PA/2805, NY/2673, IL/1504, MA/1072, OH/698, NJ/678 16,475
 82. 1880 -- **Scarlet Fever**, especially children, nationwide, especially IN, NY and PA 16,388
83. 2010 -- **HIV/AIDS**, U.S., nationally 15,525
 84. 2010-11 (Winter)--Estimated Excess **Influenza & Pneumonia** Deaths (95%CI)-12,111-15,372
 85. 1860 -- **Croup** (contagious upper airway viral infection), nationwide 15,188
 86. 1954 -- **Tuberculosis** (respiratory), esp. NY/1667, CA/1108, PA/1100, IL/939, TX/843 --15,146
87. 1900 -- **Malarial Fever**, esp. AR/1730, TX/1331, LA/1030, AL/1005, GA/1001 14,874
 88. 1850 -- **Cholera**, esp. Sac. & SF, CA, IL, IN, KY, LA, MO, OH, TN, WI²⁰ --14,158-14,637
 89. 1894 -- **Diphtheria**, NY/6.6K, esp. NYC/2785, MA/1.5K, Chicago, 1.4K, Philly, NJ 14,606
 90. 1887 -- **Diphtheria**, esp. NY/6490 (NYC/4509), Chicago/1405, St. Louis/1112, Philly 14,507
 91. 1861-65--Apr-June, **Tuberculosis**, Civil War, Union/6,946 deaths, Confederate/? ~14,000
92. 1889-90, June-May -- **Croup**, 48 States & DC, esp. NY/1.5K, PA/1.4K, IL/957, MO 13,862
 93. 1955 -- **Tuberculosis** (respiratory), esp. NY/1642, PA/1239, CA/1076, IL/797, TX/736--13,676
 94. 1987 -- **HIV Infection/AIDS**, death rate 5.55, esp. DC/28.1, NY/19.1, NJ/13.7, CA/9.5 13,468
 95. 1920 -- **Diphtheria**, esp. Detroit, Fall River, MA, Bridgeport, CT, St. Louis 13,395
 96. 1941 -- **Influenza**, with respiratory complications specified; *Vital Statistics 1941* 13,188
 97. 1835 -- Nov-Spring 1838, **Smallpox**, Sitka, Gulf of AK, Kodiak, Aleutian Isl. natives, AK 13,105
 98. 1850 -- **Typhoid Fever**, 31 States, Washington, DC, four Territories 13,099
99. 1900 -- **Measles**, esp. TX/1,412, AR/1,274, NY/1,174, MS/950, PA/815 & TN/974 12,866
 100. 1907 -- **Typhoid**, esp. PA/3,538, NY/1702 IN/948 MI/594 CA/545 OH/523 MD/520-12,670
101. 1900 -- **Croup** (Upper airway viral infection), esp. PA/1064, TN/958, KY/768 GA/686 12,484
 102. 1891 -- March-May, **Influenza & Pneumonia**, esp. Chicago/6,800, NY/5,572 12,472
103. 2009 -- Apr 12-Apr 10, 2010, **H1N1 "Swine Flu" Pandemic** (U.S.) 12,469
 104. 1957 -- **Tuberculosis** (respiratory), esp. NY/1493, PA/959, CA/833, TX/733, IL/673-12,384
 105. 1958 -- **Tuberculosis**, esp. NY/1,380, PA/1013, CA/872, IL/725, TX/721, OH/550 12,361
 106. 1986 -- **HIV AIDS**, New York City (2,650), U.S. 12,053
 107. 1900 -- Sep 9, **Hurricane**, Galveston and southeast coastal area, TX 7,200-12,000
108. 1900 -- **Dysentery**, esp. AL/861 TX/794 GA/781 NY/676 TN/663 SC/578 AR/541 11,710
 109. 1738-39 -- **Smallpox**, Catawba (NC/SC) and Cherokee Natives (NC) --7,700-11,700
 110. 1959 -- **Tuberculosis**, esp. NY/1,316, PA/981, CA/815, IL/643, TX,633, OH/527 --11,456

²⁰ This reflects zero Plains Native American deaths, whereas the range of cholera deaths amongst Plains natives in 1849 was 5,600-6,500. We believe that there must have significant loss of life, but have just not located sources.

111. 2018 -- **Influenza**, ICD-10 codes J09-11.8, death rate 3.4 per 100K pop., esp. WV/6.6 --11,164
 112. 1879 -- June-May 1880, **Whooping Cough**, nationwide, esp. IN, GA, NC, TX, AL 11,064

Large Loss-of-Life Events by Mortality (continued):

113. 1920 -- **Whooping Cough**, esp. Atlanta, Nashville, Kansas City, KS, Omaha 10,968
 114. 1911 -- **Tuberculosis**, Aug-Dec, NYC, NY, IL, CA, IN, MA, NJ, PA, TX 10,926
 115. 1942 -- **Influenza**. Census Bureau. *Vital Statistics US 1942 -- Part II...Mortality* --10,902
 116. 1881 -- **Diphtheria**, esp. NY/3.7K (NYC/2249, Brooklyn/1143), MI/2K, MA/1K, NJ/972 10,886
 117. 1960 -- **Tuberculosis**, death rate 6.1 per 100K; esp. AZ/12.1, DC/11.8, KY/10.7 --10,866
 118. 1885 -- **Diphtheria & Croup**, localities in 16 states; esp. NY/4508, MI/1552, NJ/1496 10,788
 119. 1850 -- **Croup** (contagious upper airway viral infection), nationwide 10,706
 120. 1870 -- **Croup** (contagious upper airway viral infection) nationwide 10,692
 121. 1914 -- **Influenza and Pneumonia**, The Year, NYC, NY 10,500
 122. 1854 -- **Cholera**, esp. NYC/2.5K, St. Louis/1.5K, Chicago, Detroit, Boston--10,275-10,467
 123. 1907 -- **Diphtheria and Croup**, Nationwide, esp. NY and PA (esp. Philadelphia) 10,154
 124. 1907 -- **Influenza**, Census "Registration States and Localities" ≥10,066
 125. 1867 -- Jul-Dec, **Yellow Fever**, esp. New Orleans, Galveston/Houston; also AL/FL/MS/TN 10,012
 126. 1659 -- **Measles** Epidemic, Native Americans, FL 10,000
 127. 1798 -- **Yellow Fever** epidemic, East Coast Port Cities, esp. Philly and NYC 10,000
 128. 1837 -- **Smallpox** epidemic, California Native Americans²¹ 2,000-10,000
 129. 1848 -- Sep-early '49, **Measles/Whooping Cough/Dysentery/Influenza** Epidemics, HI 10,000
 130. 1849-50 -- **Scurvy**,²² California Gold Rush Immigrants ~10,000
 131. 1988 -- **Heat Wave**, Summer, Central/eastern U.S ~5,000-10,000
 132. 1980 -- June-Sep, **Heat**, esp. Midwest & So. Plains, esp. MO/TN/AR/TX >2,000~10,000
133. 1900 -- **Whooping Cough**, esp. NY/988, PA/702, TX/576, IL/497, AL/494, TN/425--9,958
 134. 1961 -- **Tuberculosis**, US death rate 5.4 per 100K; esp. DC/12. KY/10, AR/10.6, AZ/9.4 --9,938
 135. 1872 -- **Smallpox**, esp. Philly/2591, NYC/1666, St. Louis/1.6K, Baltimore/1217, Boston/1K-->9,742
 136. 1861 -- May 1-June 30, 1866, **smallpox**, Union soldiers and Confederate prisoners²³--9,682
 137. 1850 -- **scarlet fever**, esp. PA/1,974, OH/1,301, NY/1,028, MA/571, MD/561, VA/523 --9,584
 138. 1962 -- **tuberculosis**, death rate 5.1 per 100K; esp. DC/11.9, KY/9.8, AZ&AR/9.7 --9,508
 139. 1953 -- **influenza**, esp. TX/716 OH/532 MO/484 PA/460 GA/427 TN/414 AL/393 --9,500
 140. 1853 -- **smallpox**, esp. natives, HI, Nevada City vic., CA, OR/WA; also NYC--7,450-9,450
 141. 1963 -- **tuberculosis**, US death rate 4.9; esp. DC/12.3, AZ/9.7, WV/8.6, KY/8.7 WV/8.6 --9,311
 142. 1889-90, June-May, **measles**, esp. NY/757, PA/676, KY/513, MO/513 OH/714 AL --9,256
 143. 1870 -- **Measles**, nationwide --9,237
 144. 1897 -- **typhoid** (enteric) fever, esp. NY/1.5K, OH/1.2K, MA/1.1K, IN/655, PA -->9,192
 145. 1919 -- **diphtheria**, 31 reporting states, DC & PR, esp. CT, DC, IL/MI/NJ/NY/OH --9,160
 146. 1918 -- **typhoid fever**, 33 Registration States, DC and Puerto Rico, esp. TX/1,057 --9,100
 147. 1801-02 -- **smallpox**, Natives, esp. Chinook, Omaha, Osage, esp. Central, Northwest->9,090

²¹ As noted in the narrative description section, Shelburne Friend Cook in his *The Conflict Between the California Indian and White Civilization*, Part 4, 1976, p. 213, writes that the accounts he has before him giving estimates of 100,000, and 200,000 to 300,000, are "obviously wild guesses." His own guestimate (p. 214) is 2,000. We simply recognize the range. In another book in 1978 he writes that "the mortality may have reached 10,000."

²² Severe vitamin C deficiency which can lead to death. GARD (Genetic and Rare Diseases Information Center).

²³ There is overlap with our 1863 entry (1,078 deaths) which includes Fort Delaware, Camp Chase, MD, and VA.

148. 1870 -- **whooping or “hooping” cough**, nationwide, esp. NY, IL, IN, OH, PA --9,008

Large Loss-of-Life Events by Mortality (continued):

149. 1875 -- **Tuberculosis**/consumption; data on Chicago/880, MI/1419, NYC/4172, Philly/2359--8,830
150. 1946 -- **Influenza**, infectious and parasitic diseases International List code 33 --8,783
151. 1900 -- **Smallpox**, esp. MS/782, LA/708, NM/287, VA/263, AL/224 AR/195 TX/146 8,484
152. 1860 -- **Whooping Cough**, nationwide, especially, NY, NC, OH, PA, and VA --8,408
153. 1964 -- **Tuberculosis**, US death rate 4.3; esp. DC/12, AZ/9, AL/7.4, WV/7.2, TN/7.0--8,303
154. 1925 -- **Typhoid & paratyphoid Fever**, 48 States, esp. KY/668, TN/653, LA/649 --8,287
155. 1880 -- **Measles**, nationwide, especially GA, IL, IN, KS and MO --8,254
156. 2013 -- **Viral Hepatitis**, ICD-10 code B-15-B19, esp. OR/6.0 death rate, DC/5.9 --8,157
157. 1913 -- **Measles**, US “registration area” (65.1%), esp. PA/1,578, NY/1,120, OH/679 --8,108
158. 2014 -- **Viral Hepatitis**, ICD-10 code B-15-B19, esp. DC, OR (5.3 death rate per 100,000)--8,081
159. 2012 -- **Viral Hepatitis**, ICD-10 code B-15-B19, esp. NM/99, AZ/291, CA/1,387 --8,062
160. 1925 -- **Diphtheria**, esp. NY/1,006, PA/973, IL/409, OH/392, MI/360, NJ/337 --8,058
161. 1965 -- **Tuberculosis**, US death rate 4.1 per 100K; DC/12.7, AL/7.5, AZ/7.5, NM/6.6 --7,934
162. 1960 -- **Influenza**,²⁴ US death rate 4.4 per 100K; esp. AL/11.5, SC/11.2, MS/10.9 --7,872
163. 1976 -- **Influenza**, ICD-8 codes 470-474, death rate 3.6 per 100K, esp. NE/12.9 --7,877
164. 2011 -- **Viral Hepatitis**, ICD-10 code B-15-19 (death rate 2.5 per 100K), esp. DC (7.1) --7,850
165. 1920 -- **Measles** --7,712
166. 1947 -- **Influenza**, infectious and parasitic diseases code 33 --7,664
167. 1966 -- **Tuberculosis**, esp. NY/844, PA/589, CA/537, IL/410, TX/404, OH/340 --7,625
168. 2010 -- **Viral Hepatitis**, ICD-10 code B-15-19 (death rate 2.4 per 100K), esp. OK (4.9)--7,564
169. 1879 -- June-May 1880, **Meningitis**, especially KY, NY, PA, MO and TN --7,481
170. 1957 -- **Influenza**, especially PA/476, NY/471, TX/459, OH/437. GA/341, NC/318 --7,463
171. 2015 -- **Viral Hepatitis**, ICD-10 code B15-B19, esp. DC (death rate 6.4 per 100,000) --7,461
172. 1963 -- **Influenza**,²⁵ US death rate 3.8; SC/11.9, KY/11.6, WV/11., MS/10.9 TN/9.3--7,083
173. 1968 -- **Influenza**, ICD-8 codes 470-474/death rate 3.5 per 100K, esp. VE/15.0, NE/9.1 --7,062
174. 1882 -- **Smallpox**, esp. Chicago/1292, Cincinnati/1249, PA/1111, Baltimore/551 --≥7,056
175. 1916 -- **Polio**, esp. July-Sep, esp. NYC/NY (3,331), NJ (1,180), PA (414) --6,745->7,000
176. 1925 -- **Whooping Cough**, esp. PA/648, NY/523, CA/481, OH/374, IL/315, MA/279--6,948
177. 1985 -- **HIV AIDS**, New York City (1,663), U.S. --6,903
178. 1967 -- **Tuberculosis** --6,901
179. 1920 -- **Typhoid Fever** --6,805
180. 1873 -- Feb-Sep, **Cholera**, esp. TN/>2K esp. Nashville/~1K, KY/~1K, St. Louis--5814-6519
181. 2017 -- **influenza**; death rate 2.0 per 100K pop.; esp. ME/5.2, MT/5.1, OR/4.9 WA/4.2--6,515
182. 1858 -- Jun-Dec, **Yellow Fever**, esp. Charleston SC; Galveston & Indianola; New Orleans/4855-6,490
183. 2016 -- **Viral Hepatitis**, ICD-10 code B15-B19, esp. DC (death rate 4.8 per 100K; US 2.0) --6,421
184. 1812 -- Oct-Jun 1813 (esp.), Peripneumony/**Lung Fever** (pneumonia), VT, esp. Burlington-4350-6,400
185. 1833 -- May-Aug (esp.), **Cholera**, esp. KY/~2000, NOLA/1000, WV/OH/IN/TN/IL -6308-6,353
186. 1900 -- **Scarlet Fever**, esp. PA/894, NY/812, TX/707, IL/643, MA/384, OH/334 --6,333

²⁴ Distinct from the 58,931 pneumonia deaths (codes 490493) noted in the Table 1-V, p. 1-42.

²⁵ Distinct from the 63,678 pneumonia deaths noted in the next column in Table 1-12.

187. 1870 -- **Diphtheria**, nationwide --6,303
 188. 1968 -- **Tuberculosis**, US death rate 3.2 per 100K, esp. DC/10.9 AZ/6.2 AL/6. WV/6. --6,292
 189. 2016 -- **HIV AIDS**, US death rate 1.9, DC/12.0, FL/4.2, LA/3.9 GA/3.4 MD/3.2 --6,160
 190. 1540 -- Oct 18, Spanish (de Soto) **Battle/massacre**, with Atahachi, Mabila, AL 2,500-6,000

Large Loss-of-Life Events by Mortality (continued):

191. 1969 -- **Influenza**, ICD-8 codes 470-474/death rate 2.96 per 100K, esp. KS/7., SC/6., MT/6. --5,971
 192. 2020 -- **Influenza** (distinct from 47,601 pneumonia deaths); death rate 1.8 per 100K --5,943
 193. 1855 -- **Yellow Fever epidemic**, Montgomery AL, New Orleans, MS, Memphis, VA 5,938
 194. 2019 -- **Influenza**, esp. CA/560 TX/396 NY/336 lives lost; VT/4.3 OR/3.7 NE/3.3 death rate-5,902
 195. 1891 -- **Typhoid Fever**, esp. Chicago/2K, NY/1926, Philadelphia/683, NJ/695, DC --5,840
 196. 1931 -- **Diphtheria**, especially children, especially AR, IL, KY and PA --5,738
 197. 2017 -- **HIV**, US death rate 1.75 per 100K, esp. DC/9.8, MS/3.8, FL/3.6, LA/3.5 --5,698
 198. 1952 -- **Influenza**, esp. TX/433 PA/377 OH/335 AL/283 NC/248 VA/239 MO/226 --5,649
 199. 1864 -- Feb 24-Apr 17, 1865, **Diarrhea & Dysentery**, Union POW's, Andersonville, GA-5,605
 200. 1969 -- **Tuberculosis**, US death rate 2.76 per 100K, esp. DC/9.6, AZ/6.0, AL/5.9 --5,567
 201. 2018 -- **HIV**; US death rate 1.66 per 100K, esp. DC/9.25, MS/4.15, LA/3.4 FL/3.3 --5,425
 202. 1936 -- July-Aug (esp.), **Heat**, esp. MN/772, MO/644, IL/634 MI/617 WI/500--4,678-5418
 203. 1850 -- **Whooping Cough**, esp. NY/649, OH/450, GA/385, AL/305, PA/288, SC/269 --5,280
 204. 1881 -- **Smallpox**, esp. Philly/1336, Chicago/1180, NYC/503, Pittsburgh/448, HI/282 --5,275
 205. 2015 -- **Influenza** (ICD-10 codes J09, J10.0, J10.1, J10.8, J11.0, J11.1, J11.8) --5,251
 206. 1970 -- **Tuberculosis**, US death rate 2.56 per 100K, esp. DC/6.8 AL/5.0 WV/4.5 KY/4.3 --5,217
 207. 2020 -- **HIV**, US death rate 1.55, esp. DC/9.4, FL/3.1, MS/3.34, GA/3.1, MD/2.96 --5,155
 208. 1973 -- **Influenza**, ICD-8 codes 470-74/death rate 2.4 per 100K, esp. ID/7.4 WY/7.4 WA/7.2 --5,131
 209. 1905 -- **Cerebrospinal Meningitis** Epidemic, esp. NYC/1511-2025; also CT/NH/NJ/MA-5,114
 210. 1906 -- **Measles**, nationwide, especially children --5,087
 211. 1948 -- **Influenza**, 1948 ICD infectious and parasitic diseases code 33 --5,068
 212. 2019 -- **HIV/AIDS**, US death rate 1.54 per 100K pop.; DC/10.0, FL/3.2, MD, 3.0 --5,044
 213. 1735-41 -- **Diphtheria** ("Throat Distemper")²⁶ (esp. 1735-37), esp. CT/ME/MA/NH-5,000
 214. 1793 -- **Yellow Fever epidemic**, Aug-Nov, Philadelphia, PA --4,041-5,000
 215. 1906 -- Apr 18, **Earthquake, Fires, Landslides**, San Francisco & vic., CA --3,000-5,000
216. 1972 -- **Influenza**, ICD-8 codes 470-474/death rate 2.38 per 100K, esp. SD/8.9 ME/8.7 --4,986
 217. 2021 -- **HIV**, US death rate 1.50, esp. DC/7.45, FL/2.89, GA/2.76, MS/2.71, LA/2.7--4,977
 218. 1907 -- **Whooping Cough**), Census Registration States and localities --4,856
 219. 2011-2012 (Winter) -- Estimated Excess **Influenza & Pneumonia** Deaths -- 3,691-4,747
 220. 1852 -- **Cholera**, esp. NY/1.3K, IL/1.2-1.3K, New Orleans/1K-1.3K, MO/~1K --4,381-4,736
 221. 1921 -- **Measles**, especially children, nationwide --4,667
 222. 1898 -- June-Dec, esp., **Typhoid**, esp. Spanish War Army Camps, esp. Southeast -->4,627
 223. 1931 -- **Whooping Cough**, esp. children, esp., by death rate, NM/11.7, ID/11.4 --4,619
 224. 2014 -- **Influenza** (ICD-10 codes J09, J10, J11), especially CA (457), TX (418) --4,605
 225. 1949 -- **Influenza** (codes 480-483); pneumonia (codes 490-493) was 40,038 --4,602
 226. 1870 -- **Smallpox**, Nationwide --4,597

²⁶ Referred to as throat distemper, and other names at the time, descriptions point to what was later named diphtheria. Scarlet fever occurred as well, with deaths, but sources indicate the major epidemic was diphtheria.

227. 1871 -- **smallpox**, esp. Philadelphia/1,879, Cincinnati/1,179, NYC/805, Chicago/MI/NJ--4,505
 228. 1971 -- **Tuberculosis**, US death rate 2.18 per 100K, esp. DC/5.8 AL/4.1 TN/3.5 AZ/3 --4,501
 229. 1914 -- **Measles**; US state and local “registration area” (66.8% of pop.), esp. DE/AL--4,461
 230. 1958 -- **Influenza**, esp. TX/415, AL/275, OH/260, TN/230, GA/206, MS/199, PA/199--4,442
 231. 1972 -- **Tuberculosis**, US death rate 2.09 per 100K, esp. DC/4.8 DE/4.2 AL/3.9 NM/3.9 --4,376
 232. 1912 -- **Pneumonia**, Mar 24-Jun 8, Chicago, IL, NYC, NY --4,342
 233. 1854 -- Jun-Dec, **Yellow Fever**, esp. Jacksonville, Charleston, Galveston, NOLA, Savannah--4,313
 234. 1907 -- **Scarlet Fever**, Nationwide --4,309
 235. 1907 -- **Measles**, especially children, nationwide --4,302
 236. 1975 -- **Influenza**, ICD-8 codes 470-474, death rate 1.986 pre 100K, esp. KS/6.317 --4,277
 237. 1912 -- **Measles**, US “registration area” (~65% population), NYC (671) --4,240
 238. 1978 -- **Influenza**, ICD-8 codes 470-474, US death rate 1.8 per 100K, esp. ME/5.0, KS/4.7 --4,052
 239. 1901 -- June-July, **Heat waves**, except Pacific NW, esp. Northeast, June 27-July 6 --4,012
 240. 1920 -- **Scarlet Fever**, esp. Akron, OH, Wilmington, DE, Springfield, MA --4,004
 241. 1815-16, Winter -- **Smallpox epidemic**, Comanche Nation²⁷ -->4,000
 242. 1838 -- May-Mar 1839, **Cherokee Relocation**, NE AL/NW GA/SE TN/NW NC to OK²⁸ ~4,000

Large Loss-of-Life Events by Mortality (continued):

243. 1874 -- **Scarlet Fever**, esp. NYC/879, Cincinnati/687, Brooklyn/479, Philly/461, VT--3,996
 244. 1860 -- **Measles**, especially NY, OH, MO and PA --3,809-3,900
 245. 1973 -- **Tuberculosis**, US death rate 1.84 per 100K, esp. DC/5.0 TN/2.9 AL/2.8 WV/2.8 --3,875
 246. 1941 -- **Whooping Cough**, Census Bureau. *Vital Statistics, Part I, Mortality*, p. 350--3,785
 247. 1906 -- **Tuberculosis**, The Year, Philadelphia, PA --3,742
 248. 1970 -- **influenza**, ICD-8 codes 470-474/death rate 1.82 per 100K, esp. VT/7.6, ME/5.6, MS/5.2 --3,707
 249. 2013 -- **Influenza**, ICD-10 codes J09-11, esp. SD (3.6) MT (3.5) ME (3.2) death rates --3,697
 250. 1864 -- Feb-April 1865, **Scurvy**, Union POW’s, Camp Sumter, Andersonville, GA --3,614
 251. 1873 -- July-Dec, **Yellow Fever**, esp. Memphis, AL, Pensacola, Louisville, LA, TX-3542-3584
 252. 1984 -- **HIV AIDS**, New York City (952) --3,578
 253. 1931 -- **Measles**, especially children, especially IL and PA --3,576
 254. 1920 -- **Dysentery**, 33 registration states --3,574
 255. 1930 -- **Malaria**, nationwide, esp. AL, AR, FL, GA, LA, MS, OK, SC, TN, TX --3,572
 256. 1974 -- **Tuberculosis**, US death rate 1.65 per 100K, esp. DC/5.1, KY/2.8, TN/2.6 --3,513
 257. 1899 -- Aug 8-19, San Ciriaco **Hurricane** esp. Puerto Rico/3433 & NC/73, Aug 17/18-3,507
 258. 1841 -- **Yellow Fever**, esp. FL & LA, esp. New Orleans, also Vicksburg, Charleston-3,498
 259. 1909 -- **Tuberculosis**, Philadelphia, PA --3,496
 260. 1908 -- **Tuberculosis**, Philadelphia, PA --3,490
 261. 1962 -- **Influenza**,²⁹ US death rate 1.8 per 100K; esp. NE/5, TN/5, MS/4.2, SC/4 --3,431
 262. 1847 -- **Yellow Fever**, esp. NOLA, also Galveston/Mobile/Pensacola/Vicksburg³⁰ -->3,400

²⁷ We note “greater than” 4,000 in that 4,000 is the estimated Comanche loss, whereas it has been written that the Kiowa, for example, lost to smallpox numbers in a ratio comparable to the Comanche.

²⁸ Also referred to as Cherokee Trail of Tears as well as a “forced-march” relocation. Geographic area of coverage comes from sources in Narrative document and map in Thornton (1990) from Morris, Goins and McReynolds ([1965] 1986:20), entitled “The Trail of Tears.” Shows two Cherokee relocation routes from area encompassing north/northwest GA, southwest NC, southeast TN and northeast AL. One route is northwest through TN into KY, westward to southern IL, then down into southeastern MO, into northern Ark. and then westward into OK. Second route was westward through TN and AR to OK.

²⁹ Distinct from the 56,564 pneumonia deaths noted in the next column in Table 1-12, p. 1-20..

263. 1943 -- **Whooping Cough**, especially children, nationwide --3,368
 264. 1975 -- **Tuberculosis**, US death rate 1.55 per 100K, esp. DC/3.8, KY/2.74, TN/2.72--3,333
 265. 1851 -- June-Aug esp., **Cholera**, esp. St. Louis, IL, New OrL., Cincinnati, SD Sioux--3314-3,322
 266. 1952 -- **Polio**, esp. IL/258, TX/≥240, MI/218, CA/217, MN/200, IA/163 KY/132, NE/115 --3,300
 267. 1904 -- **Cerebrospinal Meningitis**, esp. NYC/1,083-1,403, Hartford, CT/108, NJ/245 --3,284
 268. 1906 -- **Epidemic Cerebro-spinal Meningitis**, esp. NY/1,117 (NYC/600), PA/385 --3,258
 269. 1925 -- **Dysentery**, esp. KY/297, WV/213, LA/211, SC/211, TN/207, VA/196 --3,257
 270. 1934 -- Summer, esp. mid-July-mid-Aug **Heat**, esp. Midwest, esp. MO, IL, KS, OH--3,250
 271. 1910 -- **Tuberculosis**, the Year, Philadelphia, PA --3,190
 272. 1889 -- May 31, South Fork **Dam Failure**, Flash Flood, Fire, Johnstown PA --2,209-3,188
 273. 1896 -- **Measles**, esp. NYC/714, Brooklyn/333, Philadelphia/191, Cincinnati/100, CT--3,178
 274. 1920 -- **Malaria**, esp. MS/683, LA/586, SC/487FL/344, NC/210 and TN/183³¹ --3,136
 275. 1976 -- **Tuberculosis**, US death rate 1.44 per 100K, esp. DC/4.0, NM/2.8, AL/2.6 --3,130
 276. 2001 -- Sep 11, **Violence, 9/11 Terrorist Attacks** --3,064
 277. 1939 -- **Whooping Cough**, nationally, esp. AL, GA, IL, MS, NY, NC, PA, TX, VA--3,026
 278. 1819 -- **Yellow Fever**, esp. Charleston, Mobile, Natchez; most esp. New Orleans-2871-3019
 279. 1981 -- **Influenza**, US death rate 1.31 per 100K, esp. SD/4.2, IA/3.5, UT/3.3, VT/3.3 --3,006
 280. 1804 -- **Epidemic, Possibly Cholera** (or Typhoid or Plague) Natives, Oahu, HI >3,000
 281. 1928 -- Sep 6-20, Great Okeechobee **Hurricane/Flood**, Southeast FL --1,800-3,000

Large Loss-of-Life Events by Mortality (continued):

282. 1850 -- **Measles**, especially NY/505, OH/363, PA/316, VA/222, MO/189, IN/163 --2,988
 283. 2017 -- Sep 20, **Hurricane Maria**, Puerto Rico (2,975), US Virgin Isl. (2), NJ (3) --2,980
 284. 1977 -- **Tuberculosis**, US death rate 1.35 per 100K, esp. DC/4.24, TN/2.8, KY/2.2 --2,968
 285. 1966 -- July, **Heat Wave** and “excess deaths,” esp. IL, NYC, St. Louis, MO ~2,582-2,954
 286. 1940 -- **Whooping Cough**, nationwide, especially TX and KY --2,926
 287. 1978 -- **Tuberculosis**, ICD-8 codes 010-019, esp. NY/283, CA/217, PA/185, IL/165 --2,914
 288. 2016 -- **Influenza** (ICD-10 codes J09, J10.0, J10.1, J10.8, J11.0, J11.1, J11.8) --2,905
 289. 1883 -- **Smallpox**, esp. New Orleans/834 Baltimore/633 Cincinnati/189 Chattanooga/103 --2,868
 290. 1950 -- **Influenza**; separate from influenza with pneumonia/3,492 and pneumonia/40,523 --2,857
 291. 1959 -- **Influenza**,³² esp. TX/191, TN/133, OH/126, NY/126 IN/119 MI/108 GA/104 CA--2,845
 292. 1931 -- “Epidemic **Cerebrospinal Meningitis**,”³³ U.S., especially IL, NY and PA --2,832
 293. 1966 -- **influenza** (pneumonia deaths were 63,615), esp. CA/636, WA/154, OR/134 --2,830
 294. 1944 -- **Cerebrospinal Meningitis**, nationwide, esp. CA, IL, MI, NJ, NY, OH, PA --2,812
 295. 1875 -- **Smallpox**, esp. New York City (1,899), Cincinnati (745), Philadelphia (54) --2,770
 296. 1931 -- June-Sep, **Heat Waves/excessive heat**, West, Midwest, NE, esp. IL, IA, WI --2,768
 297. 1839 -- Jun-Oct, **Yellow Fever**, SC, FL, GA, TX, esp. Mobile, Natchez, New Orleans ~2,764

³⁰ Was in at least 10 Louisiana locations other than New Orleans; also in six known locations other than Vicksburg in Mississippi; was in Memphis, TN, and Brazos, Houston and Matamoros, Texas. Mostly late Summer and Fall.

³¹ Based on death certificate data from 34 “registration states” as well as 17 cites in non-registration states of AL, GA, ND, OK, TX and WV, with an estimated population of 87,45,921 or 82.3% of total estimated U.S. and Hawaii territory population. AK was not a State. Other non-reporting states were AZ, AR, ID, IA, MN, NM, SD, and WY.

³² Distinct from the 52,195 pneumonia deaths (codes 490-493) noted in the Table 78, p. 406.

³³ “Epidemic Cerebrospinal Meningitis,” is the name used for this malady in U.S. Census, *Mortality Statistics 1931*.

298. 1925 -- **Scarlet Fever**, esp. PA/343, IL/279, OH/252, MI/216, NY/191, MO/169 --2,762
 299. 2009 -- **Diarrhoea and Gastroenteritis of Infections Origin** (ICD-10 code A09) --2,756
 300. 1955 -- **Influenza**, esp. OH/187 AL/183 GA/181 TX/169 PA/154 TN/136 MS/106 --2,755
 301. 2011 -- **Diarrhoea & Gastroenteritis of Infections Origin** (ICD-10 code A09), esp. NJ --2,743
 302. 1822 -- **Yellow Fev.**, esp. late Sum-Fall, esp. NOLA/Marietta OH/NYC/Pensacola³⁴-1519-2,741
 303. 2010 -- **Diarrhoea and Gastroenteritis of Infections Origin** (ICD-10 code A09) --2,741
 304. 1949 -- July-Nov esp., Polio, esp., NY/320, IL246, MI/210, TX/183 NJ/180 CA/236--2,720
 305. 1871 -- Scarlet Fever, esp. NYC/791, Baltimore/625, MI/696, MN/335, Philly/262 --2,709
 306. 1980 -- **Influenza**, US death rate 1.19 per 100K, esp. ND/4.3, MA/3.4, ME/3.3, MT/3 --2,702

Large Loss-of-Life Events by Mortality (continued):

307. 1954 -- **Influenza**, esp. TX/228 AL/180 GA/162 PA/154 OH/143 TN/120 M0/104 --2,696
 308. 2009-2010 (Winter) -- **Influenza** deaths (out of 1,595,870 US deaths) --2,691
 309. 2013 -- **Diarrhoea and gastroenteritis of infections origin** (ICD-10 code A09) --2,669
 310. 1931 -- **Scarlet Fever**, especially children, especially IL --2,651
 311. 2012 -- **Diarrhoea and Gastroenteritis of Infections Origin** (ICD-10 code A09) --2,610

 312. 1931 -- **Malaria**, esp. AL, AR, FL, GA, LA, MS, MO, SC, TN --2,536
 313. 1942 -- **Whooping Cough**. Census Bureau. *Vital Statistics ...1942...Mortality* --2,536
 314. 1865 -- **Smallpox**, esp. NYC/≤664, Philly/524, SC/GA/FL Sea Islands/~800³⁵ -2,500-2,510
 315. 1797 -- **Yellow Fever epidemic**, New Design, MO, NYC, Philly, Providence, RI --2,502
 316. 1876 -- **Smallpox**, 10 data-points, esp. Cincinnati/~930, SF CA/482, Philly/407, NYC/315~2500
 317. 1893 -- Aug 27-28, **Hurricane**, Sea Islands “Great Storm of 1893,” GA/SC --1,000-2,500
 318. 1900 -- June-Dec, **Measles** and **Influenza**, Native Alaskans, esp. west AK ~2,000-2,500

 319. 1863 -- **Smallpox**, esp. DC/700, Camp Chase OH, Fort Delaware DE, Baltimore/IL/PA-2.3K--2,490
 320. 2015 -- **Diarrhoea and Gastroenteritis of Infections Origin** (ICD-10 code A09) --2,456
 321. 1910 -- Sum-Fall esp., **Polio**, esp. IA/161, MA/122, MN/97, NY/170, PA/269 --1459-2,449
 322. 1864 -- **Yellow Fever**, esp. New Bern NC/1,359, Charleston, SC/700, Galveston, NOLA--2,414
 323. 2014 -- **Diarrhoea and Gastroenteritis of Infections Origin** (ICD-10 code A09) --2,405
 324. 1925 -- **Measles**, 40 Registration states, esp. PA/503, MA/349, NY/323, IL/217, NJ/124 --2,404
 325. 1941 -- Dec 07, **Violence, Attack** by Japanese on Pearl Harbor, HI --2,402
 326. 1871 -- Oct 8-9, **Wildfire/Firestorm**, Peshtigo/NE WI vic.; Birch Creek MI --1,228-2,400

 327. 1967 -- **Syphilis** --2,381
 328. 2016 -- **Diarrhoea and Gastroenteritis of Infections Origin** (ICD-10 code A09) --2,361
 329. 1850 -- **Smallpox**, esp. OH/551, NY/276, MA/232, PA/208, KY/150, MD/144, IN/140- 2,352
 330. 1956 -- **Influenza**, esp. PA/139, TX/153, OH/134, AL/130, GA/109, MS/100, TN/96 --2,323
 331. 1880 -- **Diphtheria**, NY, esp. children, esp. NYC & Brooklyn; elsewhere NY--1,805-2,303

 332. 1965 -- **Influenza**,³⁶ death rate 1.2 per 100K, esp. ME/5.0, KS/4.0, NE/3.6, VE/3.3 --2,295
 333. 1941 -- **Measles**, esp. children, esp. VA (170), GA (160), KY (158), SC (138), TN (133) --2,279
 334. 1864 -- **Typhoid**, Chicago/192, Philadelphia/648; **Typhus**/Typhoid, NYC/1,425 --2,265

³⁴ Also includes 101 fatalities on the U.S. Frigate *Macedonian*, sailing in the Caribbean late Spring to mid Summer.

³⁵ This does not take into account hundreds of smallpox fatalities in military ranks and especially military prisons.

³⁶ Distinct from the 61,903 pneumonia deaths noted in the nest USPHS 1965 Mortality Data column in Table 1-14.

335. 1873 -- **Smallpox**, esp. Boston/668, Baltimore/631, Chicago/515, NYC/117, Charleston/106--2,201
 336. 1974 -- **Influenza**, ICD-8 codes 470-474, death rate 1.30 per 100K, esp. KS/3.48 --2,201
 337. 1893 -- Dec-Jan 1894, epidemic **Influenza**, NY --2,200

Large Loss-of-Life Events by Mortality (continued):

338. 1911 -- **Heat waves**/excessive heat deaths, esp. June 4-23, July 1-13, esp. MW, NE ~2,190
 339. 2022 -- excessive **natural heat**, esp. AZ (1,030) esp. Maricopa County/425, TX/203--2,159
 340. 2023 -- excessive **natural heat**, esp. AZ (867), TX (440), NV (208), LA/82, FL/81 --2,155
 341. 1867 -- June-Dec, **Cholera**, esp. St. Louis, New Orleans, KS/OK/Chicago, US Army-2,145
 342. 1931 -- **Polio**, esp. July-Oct (Aug peak), esp. NY, NJ, MI, MA, IL, CT, PA --2,139-2,144
 343. 1961 -- **influenza**,³⁷ US death rate 1.2 per 100K; esp. AK/3.3, KS/ME/NE at 2.7 --2,137
 344. 1925 -- **Malaria**, esp. MS/426, FL/338, AL/306, LA/256, MO/189, SC/183, TN/155--2,132
 345. 1902 -- **Smallpox**, esp. NJ/432, NYC/310, MA/283, Cleveland/233, Philly PA/231 --2,111
 346. 1964-65 -- **Rubella (German measles)**, last major US epidemic, especially newborn--2,100

 347. 1990 -- **Influenza**, US death rate 0.84 per 100K; esp. NE//3.5; IA/3.1; ID/2.3; SD/2.3 --2,098
 348. 1985 -- **Influenza**, death rate 0.86 per 100K, esp. NE/4.1, MT/2.8, IA/2.6, KS/2.4, WY/2.2 --2,054
 349. 1863 -- Sep-June 1865, **Diarrhea & Dysentery**, Confederate POWs, Point Lookout MD-2,050
 350. 1865 -- **Typhus/Typhoid** NYC/1,075; Typhoid/Chicago/190 and Philadelphia/773 --2,038
 351. 1896 -- Aug 1-14~, **Heat**, esp., NY/891, IL/277, PA/226, NJ/168, MO/81, WI/77 --2,038
 352. 1927 -- **Polio** (Acute), especially late Summer and Fall, especially children --2,013
 353. 1834 -- ~July-Nov, **Cholera**, esp. Baltimore, Cleveland, Detroit, Goliad TX, NYC-->2,010
 354. 1979 -- **Tuberculosis**, US death rate 0.89 per 100K, esp. DC/2.7, KY/1.7, MS/1.6 --2,007
 355. 1634-35, **Smallpox epidemic**, Five Nations, especially Mohawks, Upper NY³⁸ -->2,000
 356. 1709-10, **Smallpox epidemic**, Native Americans, lower CA -->2,000
 357. 1893 -- Oct 1-2, **Hurricane**, Cheniere Caminanda, Gulf Coast esp. LA, MS, AL 1700-2000

 358. 1616 -- **Unknown Epidemic**, Natives, especially ~coasts of MA, ME, RI --thousands

 359. 1939 -- **Diphtheria**, esp. Jan-Mar, Sep-Dec, Nationwide, esp. GA, IL, NC, TX, VA --1,997
 360. 1980 -- **Tuberculosis**, US death rate 0.87 per 100K, esp. DC/4.21, SC, 1.79, AL/1.74 --1,978
 361. 1989 -- **Tuberculosis**, US death rate 0.80 per 100K, esp. DC/2.55; NY/1.63; LA/1.34 --1,970
 362. 1947 -- **Whooping Cough**, Int. List No. 9 --1,954
 363. 1865 -- Apr 27, Steam **Sultana** explodes/burns, Miss. Riv., Redman Point, AR-1,547-1,947
 364. 1988 -- **Influenza**, US death rate 0.79 per 100K; esp. ID/3.7, IA/2.5, MT/2.6, SD/3.3 --1,943
 365. 1981 -- **Tuberculosis**, US death rate 0.84 per 100K, esp. AL/1.96, DC/1.57, FL/1.43 --1,937
 366. 1837 -- Aug-Nov, **Yellow Fever** epidemics, Mobile AL; New Orleans LA; Natchez MS--1550-1930
 367. 1944 -- **Measles**, especially Jan-June, Nationwide, esp. CA, GA, OH, PA, TX --1,923
 368. 2021 -- **excessive natural heat**, esp. AZ/854, WA/170, NV/166, CA/140, OR/133 --1,923
 369. 1988 -- **Tuberculosis**, US death rate 0.78 per 100K, esp. DC/2.05, NY/1.61, HI/1.48 --1,921
 370. 1943 -- dysentery, Bureau of Census. *Vital Statistics...1943...II...Mortality*, p.192 --1,909
 371. 1950 -- **Polio**, esp. Jul-Nov (1,611 deaths), esp. CA, IL, MI, NY, OH, PA, TX --1,904
 372. 1980 -- June-Sep, **Heat**, esp. Midwest & So. Plains, esp. MO/TN/AR/TX/MS³⁹--1,863-1,904

³⁷ Distinct from the 53,038 pneumonia deaths noted in the next column in Table 1-P, p. 1-32.

³⁸ We are assuming that if thousands died, then at least 2,000 must have died.

Large Loss-of-Life Events by Mortality (continued):

373.	1948 --	Polio , especially CA, MN, NC, OH, SD, TX and WI	--1,895
374.	1944 --	Whooping Cough , Nationwide, especially NC, VA, TX, SC, KY, MS	--1,878
375.	1942 --	Dysentery . Census Bureau. <i>Vital Statistics...US 1942 -- Part II...Mortality</i>	--1,877
376.	1855 --	May-Aug, Cholera , IL//KS/KY/MO/OH/WI, esp. New Orleans/883	--1,797-1,869
377.	1946 --	Especially July-Nov, Polio , nationwide, esp. IL, MN and TX	--1,845
378.	1986 --	Influenza , US death rate 0.76 per 100K, esp. VT/3.9 ME/3.59 MN/3.2 ND/2.84	--1,838
379.	2005 --	Aug 25-31, Hurricane Katrina , FL, LA, esp. NOLA & MS ⁴⁰	--≥1,833-1,836
380.	1868 --	June-Dec, Smallpox , esp. San Francisco/960, Cincinnati/649, Chicago/150--≥1,825	
381.	2005 --	Influenza , ICD-10 codes J09-11; US death rate 0.613 per 100K; esp. SD (4.513)	--1,812
382.	1990 --	Tuberculosis , US death rate 0.73 per 100K, esp. DC/1.97; NY/1.63; MS/1.48	--1,810
383.	1982 --	Tuberculosis , US death rate 0.78 per 100K, esp. DC/2.83, AL/1.63, TN/1.4	--1,807
384.	1800 --	Yellow Fever , esp. Baltimore, Charleston SC, Norfolk, Philly, Providence RI	--1,806
385.	2003 --	Influenza , ICD-10 codes J09-11; US death rate 0.618 per 100K; esp. ND (2.661)	--1,792
386.	1986 --	Tuberculosis , US death rate 0.74 per 100K, esp. DC/1.72, DE/1.43, NY/1.34	--1,782
387.	1983 --	Tuberculosis , US death rate 0.76 per 100K, esp. DC/3.63, AL/1.6, LA/1.2	--1,779
388.	2008 --	Influenza , ICD-10 codes J09-11; US death rate 0.57 per 100K; esp. SD (2.13)	--1,772
389.	1870 --	Typhus , nationwide, especially IL, IN, NY, and PA	--1,770
390.	2000 --	Influenza , ICD-10 codes J09-11.8; US death rate 0.63 per 100K; esp. SD (3.05)	--1,765
391.	1939 --	Malaria , esp. May-Nov, especially AL, AR, FL, GA, LA, MS, SC, TX	--1,761
392.	1987 --	Tuberculosis , US death rate 0.72 per 100K, esp. DC/2.82, AL/1.54, NY/1.5	--1,755
393.	1894 --	Smallpox , esp. Chicago/1033, WI/325, esp. Milwaukee/244; NY/147	--1,752
394.	1945 --	Whooping Cough , communicable disease No. 9 International List	--1,752
395.	1985 --	Tuberculosis , US death rate 0.74 per 100K, esp. DC/3.46, GA/1.34, AL/1.23	--1,752
396.	1984 --	Tuberculosis , US death rate 0.73 per 100K, esp. DC/3.62, AL/1.57, NY/1.21	--1,729
397.	1945 --	cerebrospinal (meningococcus) meningitis (code 6 communicable disease)	--1,728
398.	1998 --	Influenza , ICD-9 code 487.0; US death rate 0.62 per 100K; esp. MT (6.72)	--1,724
399.	1911 --	Typhoid Fever , PA	--1,716
400.	1991 --	Tuberculosis , US death rate 0.68 per 100K, esp. DC/2.32. NY/1.62; AR/1.17	--1,713
401.	1992 --	Tuberculosis , US death rate 0.66 per 100K, esp. NY, 1.38; MS, 1.33	--1,705
402.	1553 --	Hurricane , lower coast of TX	--1,700
403.	1964 --	influenza , ⁴¹ US death rate 0.9 per 100K, esp. MT/4.0 WA/3.8 NE/3.6 ND/3.1	--1,687
404.	1862 --	Yellow Fever , esp. Wilmington NC/>653; TX coast/≥328; Key West--1,131-1,679	
405.	1999 --	Influenza , ICD-10 codes J09-11.8; US death rate 0.597 per 100K; esp. SD/4.913	--1,665
406.	1993 --	Tuberculosis (US death rate 0.63 per 100K), esp. DC/2.51 and NY/1.16	--1,631

³⁹ Our range is based on a State by State tally using best available sources which actually counted deaths. There are “estimates” for 1980 of 2,000-10,000 deaths, for which we find no explanation of how the estimates were made. We suspect they were based on looking at spikes in deaths during high heat, and attributing a percentage of the spikes to heat, at least as a contributing or aggravating factor. No doubt it is true that spikes in deaths during high heat can be associated with the heat. However, we seek to provide tallies based on counting, as opposed to estimating.

⁴⁰ There were 2 deaths in AL and 2 in GA. The numbers reflect those generally reported. We note “≥” (at least) in that there still are over 100 missing and presumed dead, as well as unreported health-related indirect deaths.

⁴¹ Distinct from the 51,764 pneumonia deaths noted in the next column in Table 1-14.

407. 1995 -- June-Aug, esp. July 12-17, **Heat**, esp. IL/>700 WI/154 PA/146 MO/58 1,563-1,601
408. 1921 -- **Polio** (acute), esp. late Summer-Fall, esp. children, esp. NY, IL, WA, MI --1,597
409. 1989 -- **Influenza**, US death rate 0.64 per 100K; esp. IA/2.38, MT/2.1, ND/2.17, OR/2.0 --1,593
410. 1925 -- **Excessive Heat**, esp. NY (439), PA (299), NJ (112), CA (69), MA (65) --1,587
411. 2009 -- **Influenza (avian)**, ICD-10 code J09 (US death rate 0.5 per 100K) esp. MT (1.3) --1,557
412. 1951 -- **Polio**, especially July-Nov, especially CA, IL, TX --1,551-1,555
413. 1847 -- **Typhoid** and **Typhus**, New York City (1,396), Typhus, New Orleans (154) --1,550
414. 2011 -- **Influenza**, ICD-10 codes J09-11 (US death rate 0.5), esp. SD (2.3 per 100K) --1,532
415. 1848 -- **Typhus** and **Typhoid**, New Orleans, LA/372, NYC/953, South Philly/205 --1,530
416. 1925 -- **Polio**, esp. late Sum.-Fall, esp. children, esp. NY/208, CA/149, MN/140 --1,519
417. 1971 -- **Influenza**, ICD-8 codes 470-474/death rate 0.73 per 100K, esp. ME/2.9, NE & WA/1.9-1,504
418. 1689-1690 -- **Smallpox epidemics**, New England and NY, settlers and natives- \geq 820-1,500
419. 1983 -- **HIV AIDS**, New York City (425), U.S. --1,500

Large Loss-of-Life Events by Mortality (continued):

420. 1877 -- **Smallpox**, 7 data pts., esp. New Orleans/1.1K; Philadelphia/155; Cincinnati/56 --1,496
421. 1914 -- **Diphtheria and Croup**, the Year, NYC, NY --1,489
422. 1843 -- July-Nov, **Yellow Fever**, esp. Mobile AL (240-750), New Orleans (487-700)--758-1,481
423. 1994 -- **Tuberculosis**, ICD-9 code 010-018, death rate 0.56 per 100K, esp. DC, 1.86 --1,478
424. 1967 -- **Influenza** --1,475
425. 1937 -- **Polio** (Acute), especially late Summer and Fall, especially children --1,461
426. 1953 -- **Polio** (acute), especially CA, IL, MI, and NY --1,450
427. 1940 -- **Malaria**, especially AL, AR, GA, MS, SC and TX --1,442
428. 1949 -- **Dysentery**, infectious, all forms (codes 045-048) --1,440
429. 1983 -- **Influenza**, US death rate 0.61 per 100K, esp. ME/3.9, MT/3.2, MN/2.7 --1,431
430. 1803 -- July 18-Oct, **Yellow Fever**, Charleston SC, New York, VA, Philadelphia --1,403
431. 1952 -- **Heat**, excessive natural, Sixth Revision of International Lists, 1948, code E931 --1,401
432. 1864 -- July-June 1865, **Diarrhea and Dysentery**, Confederate POWs. Elmira, NY --1,394
433. 1954 -- **Polio**, acute; esp. TX/138 & CA/119; 33 other states double digit deaths --1,389
434. 1928 -- **Polio** acute, especially late Summer and Fall, especially children --1,381
435. 1944 -- **Polio**, especially July-Nov (1,070 deaths), esp. NY, OH and PA --1,381
436. 1930 -- **Polio**, especially late summer through fall --1,370
437. 1799 -- **Yellow Fever**, Charleston, SC, NYC, Philadelphia, USS *General Greene* --1,356
438. 1851 -- **Typhus/Typhoid**, NYC/1,103, New Orleans/Typhus/228, Chicago/Typhoid/10 --1,341
439. 1995 -- **Tuberculosis**, ICD-9 code 010-018, death rate 0.5 per 100K, esp. DC, 1.89 --1,336
440. 1820 -- May-Dec, **Yellow Fever**, Savannah GA/New Orleans/NYC/Philadelphia --1,335
441. 1913 -- **Diphtheria and Croup**, the Year, NYC, NY --1,333
442. 1972 -- **Excessive heat**; heat as contributing factor, esp. July 12-25 NYC/891, MD/269 --1,324
443. 1912 -- **Typhoid Fever**, Pennsylvania --1,310
444. 1946 -- **Measles**, International List infectious and parasitic diseases code 35 --1,310
445. 1863 -- **Diphtheria**, Vermont -->1,300
446. 1977 -- **Influenza**, ICD-8 codes 470-474, US death rate 0.59 per 100K, esp. AL/1.98 --1,304
447. 1942 -- **Measles**. Census Bureau. *Vital Statistics of US 1942 -- Part II...Mortality* --1,302
448. 1943 -- **Measles**, especially children --1,301

449. 1862 -- Feb-Jun '65 (41 mo.), **pneumonia/pleurisy**, Confederate POWs, Camp Douglas IL- 1,296
450. 1876 -- **Yellow Fever**, Savannah (also Brunswick), GA; also New Orleans & Baltimore --1,293
451. 1941 -- **Diphtheria**, Census Bureau. *Vital Statistics, Part I, Mortality*, p. 150 --1,293
452. 1880 -- **Smallpox**, esp. TX/517, Philadelphia/429, Camden NJ/47 Chicago/43, NY --1,281
453. 1911 -- **Diphtheria**, especially NYC, Chicago, Philadelphia, MA --1,281
454. 1915 -- **Diphtheria and Croup**, The Year, NYC, NY --1,278
455. 1942 -- **Diphtheria** --1,273
456. 1860 -- **Smallpox epidemics**, especially MA and NY 1,263-1,271
457. 1900 -- July-Aug (esp.) **Heat**, esp. NY/361, NJ/119, Chicago/102, St. Louis/90, PA/90-1,266
458. 1946 -- **Diphtheria**, infectious diseases International List No. 10 --1,259
459. 1946 -- **Cerebrospinal (meningococcus) meningitis** infections (Int. List No. 6) --1,257
460. 1946 -- **Whooping Cough**, International List No. 9 --1,241
461. 1817 -- June-Dec, **Yellow Fever**, esp. Charleston SC, Natchez MS, New Orleans-1208-1,233
462. 1994 -- **Influenza**, US death rate 0.47 per 100K; esp. SD/2.6; MT/1.7; IA/ 1.5; NE/1.22--1,229
463. 1913 -- **Heat**, esp. June 25-July 1, esp. PA/237, OH/178, MO/114, IL/92, NY/80 --1,226
464. 1996 -- **Tuberculosis**, ICD-9 code 010-018, death rate 0.45 per 100K, esp. DC, 1.92 --1,202

Large Loss-of-Life Events by Mortality (continued):

465. 1943 -- **Diphtheria**, infectious diseases International List No. 10 --1,196
466. 1945 -- Jan-Dec, **Polio**, especially July-Nov (Sept. peak) --1,186
467. 2020 -- excessive **heat**, natural sources; esp. AZ/522, CA/137, Clark Co., NV/124 --1,184
468. 1917 -- **Polio**, Census area (27 States/DC/43 cities), esp. Chicago/177 OH/128 VA/69, VT≥1,182
469. 2021 -- exposure to excessive **natural cold**/ICD-10 code X31, esp. AK/NM/IA/CO --1,179
470. 1941 -- **Malaria**. Census Bureau. *Vital Statistics, Part I, Mortality*, p. 150 --1,178
471. 1997 -- **Tuberculosis**, ICD-9 code 010-018, death rate 0.43 per 100K, esp. HI, 0.99 --1,166
472. 1848 -- Dec, **Cholera**, New Orleans, also MS Riv., Paducah KY, NYC, Port Lavaca TX--1,159
473. 1943 -- **Polio**, especially late Summer and Fall, especially children --1,151
474. 1829 -- **Yellow Fever**, esp. FL, Mobile AL/130; Natchez MS/90; New Orleans LA/900-1,146
475. 1948 -- **Whooping Cough** --1,146
476. 1991 -- **Influenza**, US death rate 0.45 per 100K; esp. NE/2.38, ND/1.73, IA/1.54 --1,137
477. 1905 -- May 21-Nov, **Yellow Fever**, esp. LA (esp. New Orleans/455), Pensacola, MS-1,131
478. 1919 -- Sep 10-14, **Hurricane**, Florida Keys, Gulf & Corpus Christi area, TX 500-1,131
479. 1912 -- **Diphtheria**, NYC, NY --1,125
480. 1950 -- **Whooping Cough**, code 056 of 6th rev. of international lists, 1948 (US PHS)--1,118
481. 2019 -- Exposure to excessive natural **cold/hypothermia**, esp. MI/70 NY/65 PA/61 --1,115
482. 1998 -- **Tuberculosis**, ICD-9 code 010-018, death rate 0.40 per 100K, esp. LA, 0.72 --1,112
483. 2012 -- **Influenza**, ICD-10 codes J09-11; US death rate 0.4; SD, 2.5 per 100K --1,106
484. 2006 -- **excessive natural heat**, esp. CA/194, AZ/169, NY/148, TX/106, IL/51, PA/50--1,104
485. 1675 -- Dec 19, English Colonists **Massacre** Narragansetts, Great Swamp, RI --365-1,100
486. 2004 -- **Influenza**, ICD-10 codes J09-11; US death rate 0.376 per 100K; esp. ME (1.827) --1,100
487. 1984 -- **Influenza**, US death rate 0.46 per 100K, esp. MT, 2.3, OR/1.7, WA/1.4, AR/1.3 --1,096
488. 1925 -- **Meningococcus meningitis**, esp. NY/148, PA/79, IL/56, OH/53, MA/51 --1,095
489. 1872 -- **Cerebral Spinal Meningitis**, MA (esp. Boston), NYC, PA (esp. Philly) --1,090
490. 1901 -- **Smallpox**, esp. NY/436 (Bronx/312), PA/202 (Philly/178), NJ/139 (Newark/71)--1,085

491. 1912 -- **Polio**, acute anterior, code 63; Census “registration area” was 63.2% of pop.--1,081
492. 1772 -- **Measles** epidemics, Charleston, SC (800-900), Philadelphia, PA (180) --980-1,080
493. 1924 -- **Polio** (acute), especially late summer and fall, especially children --1,079
494. 1948 -- **Dysentery**, infectious and parasitic diseases ICD code 27 --1,078
495. 1939 -- June-Sep, **Heat**, esp. Sep 15-23, Los Angeles (546), TX (42), MO (37)⁴²--527-1,073
496. 2011 -- excessive **natural heat**, esp. TX/183, AZ/177, PA/57, MO/52 IL/50 NY/45 --1,060
497. 1911 -- **Polio**, US registration area (63.1%), esp. OH/137, NY/101, PA/93, IN/69, KY/61--1,060
498. 1852 -- **Smallpox**, Nevada City, CA natives, NYC (407-516), Philadelphia/427--943-1,052
499. 1999 -- **excessive natural heat**, esp. IL/153, PA/97, MO/92, TX/63, AZ/58, NY/56 --1,050
500. 1993 -- **Influenza**, US death rate 0.40 per 100K; esp. ID 2.62; VE 2.42; MT 1.54; OR 1.37 --1,044
501. 1955 -- **Polio** (acute); all States, esp. MA/168 (Boston ~200), WI/166, NY/77, TX/76--1,043
502. 1935 -- **Polio** (acute), especially late Summer-and Fall, especially children --1,040
503. 1870 -- May-Dec, **Yellow Fever**, esp. New Orleans/587 Mobile/173 Brunswick GA--1,038
504. 1904 -- June 15, Fire, **General Slocum** excursion steamer, East River, NYC, NY-957-1,031
505. 2018 -- exposure to excessive natural **cold/hypothermia**, esp. MN/36 CO/34 IN/35 --1,028
506. 1899 -- **Typhoid fever** epidemics/outbreaks, Greensboro, NC; PA, esp. Philadelphia-1,026
507. 1940 -- **Polio**, Nationwide, especially IL, IN, IA, KS, MI, OH and WV --1,026
508. 1941 -- **Typhoid Fever**, Census Bureau. *Vital Statistics, Part I, Mortality*, p. 150 --1,022
509. 2018 -- **excessive natural heat**, esp. AZ/252, Clark Co., NV/163, CA/106, TX/89 --1,012
510. 1992 -- **Influenza**, US death rate 0.39 per 100K; esp. ME/1.94; MT/1.21; WV/1.27 --1,006
511. 1633-34 -- **Smallpox epidemic**, New England Natives, Plymouth Colonists, MA >1,000
512. 1663 -- **Smallpox**, Fort Orange, NY and Northern “NY” Native American Tribes --1,000
513. 1677-78 -- **Smallpox epidemic**, Massachusetts Bay Colony --1,000
514. 1818 -- Sep 12-14, **Hurricane**, Galveston, TX <1,000
515. 1833 -- Early Aug-early Nov, **Yellow Fever epidemic**, New Orleans, LA --1,000
516. 1861-62 -- winter-spring, **Flooding**, CA, OR, WA, British Columbia ~1,000
517. 1918 -- Oct 12-15, **Forest Fire**, Cloquet-Moose Lake, MN/WI 400-1,000
518. 1927 -- Apr-May, rain, MS River **Flood**/levee breaks, MS, AR, LA, KY, MO --246-1,000

Large Loss-of-Life Events by Mortality (continued):

519. 1721-22, Apr-Apr, **Smallpox**, Massachusetts Colony, esp. Boston & Charlestown--944-991
520. 1731 -- **Smallpox epidemics**, New York City (548-700) and Philadelphia (288) --836-988
521. 1796 -- **Yellow Fever**, esp. Charleston, SC/300, New Orleans/250-400; Wilmington, NC/150--836-986
522. 1954 -- **Heat** (esp. July), esp. MO/235, OK/178, KS/139, TX/95, IL/50, GA/39 --978-984
523. 1961 -- **Hepatitis**, infectious -- 976
524. 1848 -- **Yellow Fever**, Mobile AL~76, New Orleans/850-872, NY Marine Hosp./12 --937-960
525. 1951 -- **whooping cough**/pertussis, esp. TX/110, GA/86, MS/72 NC/52 VA/48 AL/45--960
526. 1864 -- Feb-Jun 1865 (17 mo.), **pneumonia/pleurisy**, Confederate POWs, Camp Chase OH--954
527. 1946 -- **Dysentery**, infectious and parasitic diseases International List code 27 -- 952
528. 1949 -- **Measles** (code 085); PHS, *Vital Statistics... [US] 1949, Part II...Mortality* -- 949
529. 1955 -- Aug 31–Sep 9, **Heatwave**/excessive **deaths**, greater Los Angeles, CA⁴³ --115-946

⁴² Low-end of range is from Census Bureau and reflects death certificates listing heat as primary cause of death. High-end of range reflects results of Dept. of Public Health funded study of late Sep heat wave deaths in So. CA, in which 546 excess deaths above the norm were reported during 9-day “hot spell.”

⁴³ The figure 115 refers to reporting by LA Coroner’s Office of deaths directly attributable to the heat. The larger number is undoubtedly a compilation of the daily “above-the-norm” deaths (compared to the previous year) reported

530. 1887 -- **Yellow Fever**, esp. Fernandina and Tampa, FL and New Orleans, LA -- 941
 531. 1760 -- **Smallpox epidemic**, Charleston SC (also undocumented Native deaths) --730-940
 532. 1952 -- **Dysentery**, infectious, all forms (codes 045-048), esp. TX/249 MS/71 KY/61 GA/46--939
 533. 2005 -- **excessive natural heat**, esp. AZ/244, NYC/~140, TX/111 CA/64, MD/47, NV/43--939
 534. 1960 -- **Hepatitis**, infectious -- 938
 535. 1876 -- **Smallpox epidemic**, Cincinnati, OH -- 934
 536. 1999 -- **Tuberculosis**, ICD-10 code A16-19, death rate 0.333 per 100K, esp. NM, 0.608 -- 930
 537. 2014 -- Exposure to excessive natural **cold/hypothermia** esp. PA IL NY OH MT NM-- 930
 538. 1988 -- **Heat**, Summer (esp.); esp. IL/341, MI/121, IN/~44, MO/~44, CA/37 --913-921
 539. 2020 -- Exposure to excessive **natural cold**; ICD-10⁴⁴ code X31, esp. AK/NM/CO/MN--919
 540. 1947 -- **cerebrospinal (meningococcus) meningitis infections** (Int. List No. 6) -- 917
 541. 1949 -- **Meningococcal infections** (code 057) ; *Vital Statistics...[US] 1949, Part II* -- 917
 542. 1849 -- Aug-Dec, **Yellow Fever**, Charleston SC, Mobile AL, New Orleans -- 912
 543. 2019 -- Exposure to **excessive natural heat**, esp. AZ/283, TX/101, NV/88 --911-915
 544. 1851 -- **Smallpox**, esp., NYC/562-586, Philadelphia/316; Augusta GA/7, Chicago/5 --895-909
 545. 1875 -- **Croup and Diphtheria**, MI (374) and Hudson County, NJ (533) -- 907
 546. 1756 -- **Smallpox epidemic**, Philadelphia --800-900

Large Loss-of-Life Events by Mortality (continued):

547. 1916 -- June 18-Aug 22, **Heat Waves**, esp. Chicago, Detroit, Milwaukee, St. Louis -- ~895
 548. 1948 -- **Measles**, 1948 ICD infectious and parasitic diseases code 35 -- 888
 549. 1953 -- **Dysentery**, infectious, all forms (codes 045-048), esp. TX/268, MS/52, GA/41-- 886
 550. 2012 -- **excessive heat**, esp. AZ/209, CA/66, TX/62, IL/54, MO/54, MD/46, VA/24 -- 879
 551. 1966 -- **Meningococcal infections**, esp. CA/109, TX/59, OH/50, NY/40, NC/38 -- 876
 552. 2010 -- **excessive natural heat**, esp. AZ/228, TX/64, CA/46, NV/46, TN/45, PA/37 -- 874
 553. 1948 -- **Cerebrospinal (meningococcus) meningitis infections** (code 6, ICD 1, 1948)--873
 554. 1947 -- **Dysentery**, infectious and parasitic diseases Int. List code 27 -- 869
 555. 1913 -- **Polio**, acute, esp. June-Sep (Sep peak), US “registration area” (65.1% pop.) -- 864
 556. 1850 -- Jan-Oct, **Yellow Fever**, esp. Jefferson/Orleans Parishes/New Orleans, LA & SC⁴⁵-- 862
 557. 1942 -- **Malaria**. Census Bureau. *Vital Statistics...1942 -- Part II...Mortality* -- 861
 558. 1934 -- **Polio** (acute), especially late Summer and Fall, especially children -- 852
 559. 1926 -- **Polio** (acute), especially late Summer and Fall, especially children -- 851
 560. 1809 -- **Yellow Fever**, esp. Brooklyn/NYC (42); New Orleans (civilian/military; ~800) -- 850
 561. 1923 -- **Polio** (acute), especially late Summer and Fall, especially children -- 850
 562. 2006 -- **Influenza**, ICD-10 codes J09-11; US death rate 0.285 per 100K; esp. VE (1.605) -- 849
 563. 1796 -- **Scarlet Fever** epidemic (especially children), Marblehead, MA and esp. VT--681-846
 564. 1915 -- July 24, crowded SS steamer **Eastland rolls-over** at dock, Chicago, IL --812-844
 565. 1967 -- **Infectious Hepatitis** -- 844
 566. 1947 -- **Encephalitis**, acute infectious, Int. List infectious diseases code 37 -- 830
 567. 1932 -- **Polio** (acute), especially late summer and fall, especially children -- 828
 568. 1837 -- **Scarlet Fever**, Boston, MA, New York City, NY, Philadelphia, PA -- 823
 569. 2017 -- exposure to **excessive natural heat**, esp. AZ/264, NV/235, CA/93, TX/40 -- ≥817

by the Coroner. At the beginning of the heatwave it was dozens higher than the previous year. At the end it was hundreds. Some source (which the four sources we cite copy) has apparently compiled those figures to obtain 946.

⁴⁴ Tenth revision of International Classification of Diseases.

⁴⁵ Seventh Census data supplemented by addition of at least 97 yellow fever deaths in New Orleans Aug-Sep.

570. 2015 -- Exposure to excessive natural **cold/hypothermia**, esp. PA NY OH AK NM -- 815
 571. 1929 -- **Polio** (acute), especially late summer and fall, especially children -- 812
 572. 1805 -- **Yellow Fever**, esp. NYC/270-340, Philly/300-400, Providence, RI/10, SC/≤59--750-809
 573. 1941 -- **Polio**, especially late summer and fall, especially children -- 807
 574. 2017 -- Exposure to excessive natural **cold/hypothermia**, esp. AK WA MN CA MI -- 804
 575. 1599 -- Jan 21, Spanish (Oñate) **Massacre** Acoma Natives, punitive expedition, NM-300-800
 576. 1795 -- July 19–Oct 12, **Yellow Fever** epidemic, NY City, also Providence RI ~745-800
 577. 1833 -- **Malaria** Epidemic, ConCow Maidu Villages, Butte County, CA vicinity -- ~800
 578. 1926 -- Sep 16–21, **Great Miami Hurricane**, Cat 4, FL, MS, AL⁴⁶ -- ~800

Large Loss-Of-Life Events By Mortality (continued):

579. 1947 -- **Diphtheria**, infectious diseases Int. List No. 10 -- 799
 580. 1933 -- **Polio** (acute), especially late Summer and Fall, especially children -- 797
 581. 1925 -- Mar 18, **Tornadoes**, esp. Tri-State Tornado (IL/IN/MO) 695; AL/KY/TN --740-792
 582. 1922 -- **Polio** (acute), especially late Summer and Fall, especially children -- 790
 583. 1944 -- Dec 18, **three ships capsized, Navy Task Force 38**, typhoon off Philippines-- ~790
 584. 1879 -- June-Dec, **Yellow Fever**, Forest City, AR, Louisiana, MS, Memphis, TN--682-786
 585. 2016 -- exposure to **excessive natural heat**, esp. AZ (219), NV (89), CA (70), TX/86-- 786
 586. 1864 -- **Cerebrospinal Meningitis** epidemic, Carbondale & Philadelphia PA -- 784
 587. 2002 -- **Tuberculosis**, ICD-10 code A16-19, death rate .273 per 100K, esp. AR, .443-- 784
 588. 1936 -- **Polio** (acute), especially late Summer and Fall, especially children -- 780
 589. 1862 -- Aug 17-23 especially, **Dakota “insurrection,”** southcentral MN; also IA --750-779
 590. 2000 -- **Tuberculosis**, ICD-10 code A16-19; death rate 0.276 per 100K, esp. LA, 0.559 -- 776
 591. 1864 -- July-June 1865 (12 mo.), **pneumonia/pleurisy**, Confederate POWs, Elmira NY-773
 592. 1939 -- **Polio**, especially late Summer through Fall, especially children -- 773
 593. 1920 -- **Polio** (33 “registration states), especially young children -- 769
 594. 2001 -- **Tuberculosis**, ICD-10 code A16-19, death rate 0.268 per 100K, esp. DC, 1.741 -- 764
 595. 1861 -- **Smallpox epidemic**, Philadelphia, PA -- 758
 596. 1854 -- **smallpox**, esp. Charleston SC/59, Chicago/12, Jacksonville FL/~15, NYC/624, Philly/40-- 750
 597. 1919 -- **Polio** (Acute). Especially late Summer and Fall, especially children -- 747
 598. 1824 -- **Smallpox epidemics**, NYC, NY, Philadelphia, PA, Sandusky, OH --740-745
 599. 1852 -- **Yellow Fever epidemics**, Charleston SC, New Orleans, Savannah GA -- 745
 600. 1996 -- **Influenza**, ICD-9 code 487; US death rate 0.276 per 100K; esp. SD (1.616) -- 745
 601. 2000 -- exposure to excessive natural **cold/hypothermia**; ICD-10 code X31, esp. PA/48-742
 602. 1911 -- **Scarlet Fever**, NYC, NY -- 741
 603. 1911 -- Oct-June 8, 1912, **Cerebrospinal Meningitis** Epidemic, esp. TX , OK, MO -- 740
 604. 2016 -- Exposure to excessive natural **cold/hypothermia**, esp. AK CA MI MT OH SD-- 731
 605. 1949 -- **Whooping Cough**, Public Health Service. *Vital Statistics...[US] 1949, Part II--727*
 606. 1982 -- **Influenza**, US death rate 0.31 per 100K, esp. NE/1.78, SD/1.74, ND/1.34 -- 727
 607. 2002 -- **Influenza**, ICD-10 codes J09-11; US death rate 0.253 per 100K; esp. SD (2.237)-- 727
 608. 2013 -- Exposure to excessive natural **cold/hypothermia**, esp. IL NY PA MN AZ WI--725
 609. 1914 -- **Polio** (acute anterior), esp. late sum.-fall, esp. children, esp. NY/88, PA/65, VT/54--720
 610. 1997 -- **Influenza**, ICD-9 code 487.0; US death rate 0.26 per 100K; esp. KS (0.99) -- 720
 611. 1941 -- **Cerebrospinal Meningitis** -- 713

⁴⁶ Includes missing, presumed dead – see Narrative Information and footnotes below.

612. 1864 -- **Smallpox**, Fort Alton IL, Chicago/283, Philly/260, Northern VA/112, SC, DC-- 712
 613. 1938 -- Sep 21, Long Island, NY & New England **Hurricane**, esp. RI, MA, CT --682-712
 614. 2003 -- **Tuberculosis**, ICD-10 code A16-19, death rate 0.25 per 100K, esp. LA, 0.49 -- 711
 615. 2007 -- Exposure to excessive natural **cold/hypothermia**; ICD-10 X31 code; esp. NY/53-711
 616. 2010 -- Exposure to excessive natural **cold/hypothermia**; ICD-10 code X31 -- 710
 617. 1925 -- **Smallpox**, esp. MN/196, WI/134, CA/59, NJ/48, OH/47, IA/42, PA/29, IL/23-- 709
 618. 1637 -- May 27, **Massacre**, Eng. Colonists Attack Pequot village, Mystic Riv. CT--400-700
 619. 1644 -- Feb, Dutch / Eng. **Massacre**, Siwanoy, Petuquapaen, ~Cos Cob, CT⁴⁷ --500-700
 620. 1881 -- Aug 27, **Hurricane**, Cat 2, Savannah (Georgia-South Carolina) -- 700
 621. 2005 -- exposure to excessive natural **cold/hypothermia**; ICD-10 code X31; esp. MI/40-- 700

Large-Loss-of-Life Events by Mortality (continued):

622. 1862 -- Feb-June 1865, **Diarrhea & Dysentery**, Confederate POWs, Camp Douglas, IL- 698
 623. 1881 -- **Typhoid Fever**, Birmingham AL, Washington DC, Minneapolis, NYC -- 692
 624. 1848 -- **Smallpox**, esp. New York City, NY/585 and Philadelphia, PA/100 -- 691
 625. 1915 -- **Polio**, esp. late summer-fall, US registration area (67-1% pop.) esp. children-- 691
 626. 1951 -- **Measles**, esp. TX/102, KY/43, OH/39, CA/37, IL/31, MO/30, PA/26, OK/25-- 688
 627. 1881 -- July 6-16 esp., **heat**/sunstroke, esp. OH/585 (Cincinnati/456), also Pittsburgh -- ≥687
 628. 1996 -- Exposure to excessive natural **cold/hypothermia**; ICD9 code E901; esp. PA/43--685
 629. 2004 -- Exposure to excessive natural **cold/hypothermia**; ICD-10 code X31; esp. PA/45--676
 630. 2011 -- Exposure to excessive natural **cold/hypothermia**; 0.2 death rate; esp. AK, SD-- 672
 631. 1912 -- **Measles**, New York City, NY -- 671
 632. 1913 -- March 23-27, Ohio Valley **Flooding**, dam/levee failures, esp. OH, IN --593-670
 633. 1917 -- Summer to Fall (esp.), **Excessive Heat**, New York City (530), State of NY -- 665
 634. 1911 -- **Measles**, New York City, NY -- 659
 635. 2004 -- **Tuberculosis**, ICD-10 code A16-19, death rate 0.22 per 100K, esp. KY, 0.36 -- 657
 636. 1809 -- May-Feb 1810 -- **Disease/Illness**, U.S. Army, MS -- 656
 637. 1954 -- **Dysentery**, infectious, all forms (codes 045-048), esp. TX/172 and MS/61 -- 655
 638. 1941 -- **Excessive heat**, International List #191, Census Bureau. *Vital Statistics* -- 654
 639. 1978 -- Exposure to excessive natural **cold/hypothermia** (ICD-8 E901), esp. OH/39 -- 652
 640. 2006 -- **Tuberculosis**, ICD-10 code A16-19, death rate 0.22 per 100K, esp. AR/.35, LA/.33-- 652
 641. 2013 -- **Excessive natural heat**, esp. AZ/151, NV/80, CA/67, TX/53, NY/42, IL/23 -- 651
 642. 1862 -- Aug 17-Sep, **Violence, Sioux "Insurrection,"** Litchfield, elsewhere, MN--300-650
 643. 2005 -- **Tuberculosis**, ICD-10 code A16-19, death rate 0.22 per 100K, esp. LA, 0.39 -- 648
 644. 1943 -- **Malaria**, Bureau of Census. *Vital Statistics...1943, Part II...Mortality*. P. 192-- 646
 645. 2002 -- Exposure to excessive natural **cold/hypothermia**; ICD-10 code X31; esp. PA/47-- 646
 646. 1863 -- Aug-Jun 1865, **Diarrhea & Dysentery**, Confederate POWs, Fort Delaware, DE-644
 647. 1946 -- **Encephalitis**, acute infectious, International List infectious diseases code 37-- 642
 648. 1993 -- Exposure to excessive natural **cold/hypothermia**; ICD9 E901 code, esp. MI/42-- 641
 649. 2008 -- exposure to excessive natural **cold/hypothermia**; ICD-10 code X31, esp. MI/45-- 641
 650. 1967 -- **Meningococcal infections** -- 635
 651. 1948 -- **Diphtheria**, infectious diseases code 10 -- 634
 652. 1977 -- **cold/hypothermia**, exposure to excessive natural (ICD-8 E901); esp. OH/43-- 634
 653. 1994 -- Exposure to excessive natural **cold/hypothermia**; ICD9 code E901, esp. NY/38--633

⁴⁷ Some place massacre in Westchester Co., NY (Dinan. "Historians Sift Clues..." *Greenwich Time*, 3-5-2006.)

654. 1987 -- **Influenza**, death rate 0.26 per 100K; esp. NE/1.02 (16), SD/1.29 (9), VE/1.11 (6) -- 632
655. 1915 -- **Measles**, New York City, NY -- 630
656. 2002 -- **excessive natural heat**, esp. AZ/130, TX/62, PA/56, IL/54, MD/50, CA/44 -- 626
657. 1794 -- **Yellow Fever** epidemics, Baltimore, MD, and New Haven, CT -- 624
658. 1952 -- **Measles**, 24 states double digits, esp. PA/49, NY/48, AL&TN/40 IN&KY/30 IL/25-- 621
659. 2003 -- Exposure to excessive natural **cold/hypothermia**; ICD code X31, esp. PA/46-- 620
660. 1982 -- **HIV AIDS**, U.S. -- 618
661. 1897 -- July 1-11, **heat**, esp. upper midwest/NE, esp. Chicago/Cincinnati/St. Louis --608-616
662. 2009 -- Exposure to excessive natural **cold/hypothermia** (ICD-10 code X31) -- 616
663. 1912 -- **Scarlet Fever**, New York City, NY -- 615
664. 1955 -- excessive natural **heat** (US Public Health Service code E931) -- 615
665. 2021 -- **Influenza** (distinct from 41,309 pneumonia deaths); death rate 0.18, esp. TN/0.60--608
666. 1995 -- **Influenza**, ICD-9 code 487.0; US death rate 0.23 per 100K; esp. WV, 1.32 -- 606
667. 1979 -- **Influenza**, US death rate 0.27 per 100K, esp. ID/1.18, NE/1.15, KS/.98, WA/.85--604
668. 1903 -- Dec 30, **fire, suffocation, trampling**, Iroquois Theater, Chicago, IL -- 602
669. 2021 -- **tuberculosis**, ICD-10 codes A16-A19, esp. CA/106, TX/58, FL/36, NY/36 VA/22--602
670. 1835 -- Apr-Aug, **Cholera**, esp. Madison, IN; KY, esp. Russellville; New Orleans, TN--590-601
671. 1559 -- Sep 19-20, **hurricane**, Spanish ships and colonists, west coast of FL --?-600
672. 1759 -- **Smallpox** epidemic, Philadelphia --500-600
673. 1853 -- Burnt Ranch **massacre**, Settlers kill Tolowa, Yontocket, Smith Riv., No. CA --450-600
674. 1873 -- Aug 14-27, "Nova Scotia" **Hurricane**, off East Coast -- >600
675. 1928 -- Mar 12, **St. Francis dam failure**, Ventura County, CA --400-600
676. 1947 -- Apr 16-17, **Grandcamp ammonium nitrate explosion**, Texas City, TX --581-600
677. 2020 -- **Tuberculosis**, ICD-10 codes A16-A19; esp. CA/119, TX/66, NY/36, FL/30-- 600

Large-Loss-of-Life Events by Mortality (continued):

678. 1853 -- **Cholera**, New Orleans (554-585); Choctaw on Arkansas River, OK/14 --568-599
679. 2001 -- Exposure to excessive natural **cold/hypothermia**; ICD-10 code X31; esp. MI/29-- 599
680. 1999 -- exposure to excessive natural **cold/hypothermia**; esp. NY/36, PA/36 -- 598
681. 1983 -- July-Aug esp., **heat** (esp. July 15-30) esp. MO/70 KY/57 IL/53 GA/35 TX/35-595-597
682. 1990 -- Exposure to excessive **natural cold/hypothermia**; ICD9 code E901; esp. IL/45--596
683. 1863 -- Nov 23-Mar 27 1865 (16 mo.), **Dysentery**,⁴⁸ Union POWs, Prison Hosp., Danville VA-592
684. 1844 -- **Yellow Fever** epidemic, Galveston, TX; Mobile, AL; New Orleans, LA -- 590
685. 1991 -- Exposure to excessive natural **cold/hypothermia**; ICD9 E901 code, esp. IL/63-- 588
686. 2008 -- **Tuberculosis**, ICD-10 code A16-19, death rate 0.19; esp. MS (above avg. rate) -- 585
687. 2005 -- June-Aug esp., **heat**, esp. AZ/244 TX/112 MD/47 PA/26 MO/25 NV/17 -- 584
688. 2007 -- **excessive natural heat**, esp. AZ/134, CA/74, TX/43, MO/39, TN/34, SC/26-- 582
689. 1823 -- July-Nov 1, **yellow fever** epidemic, Natchez & vicinity, MS, New Orleans -- 581
690. 1873 -- **Scarlet Fever**, especially children, MI -- 580
691. 1944 -- **Malaria**, infectious and parasitic diseases International List code 28 -- 580
692. 1947 -- **Polio** -- 580
693. 1953 -- **Heat**, esp. Aug 22-Sep 5, esp. MO/71, NY/43, TX/41, PA/40 -- 576
694. 1949 -- **Diphtheria**, code 055 -- 574
695. 1702 -- summer to late fall, **yellow fever** epidemic, New York City, NY --500-570

⁴⁸ "Diarrhoea and Dysentery."

696. 1948 -- **Encephalitis**, acute infectious (viral), 1948 ICD infectious diseases code 37 -- 570
697. 1752 -- early in year through at least Sum., **smallpox** epidemic, Boston, MA --535-569
698. 1909 -- **Polio** (acute), especially MA (74), MN (30), NE (135), and ND (19) -- 569
699. 2010 -- **Tuberculosis**, esp. AL, CA, KY, TX (above avg. death rate) -- 569
700. 2015 -- exposure to **excessive natural heat**, esp. AZ/139; NV/69, TX/64, CA/51 -- 567
701. 1956 -- **Polio**, especially late summer and fall, especially children -- 566
702. 1872 -- **scarlet fever**, especially children, MI -- 565
703. 1854 -- Sep 27, **US Mail steamer Arctic** hit by *Vesta*, Fog, Cape Race, NFLD --318-562
704. 1802 -- **Yellow Fever** epidemics, Wilmington DE, MD, MA, Philadelphia, NH, SC -- 561
705. 1942 -- **Polio**, especially late summer and fall, especially children -- 561
706. 1949 -- **Hepatitis**, infectious (code 092); PHS. *Vital Statistics... 1949...Mortality* -- 560
707. 1918 -- Oct 12, **forest fires**, Cloquet, Moose Lake, many towns, northeast MN --453-559
708. 1992 -- Exposure to excessive natural **cold/hypothermia** (ICD9 code E901), esp. PA/37--558
709. 2009 -- **Excessive natural heat**, esp. AZ/156, TX/79, CA/63, FL/39, IL/21 -- 555
710. 2013 -- **Tuberculosis**, ICD-10 Code A16-A19, especially CA (133) and TX (61) -- 555
711. 2007 -- **Tuberculosis**, death rate 0.184 per 100K, esp. TN/.389 above avg. -- 554
712. 1995 -- Exposure to excessive natural **cold/hypothermia** (ICD9 code E901); esp. IL/41--553
713. 1868 -- July 6-18, **excessive heat/sunstroke**, esp. NY/313, St. Louis/45, OH/42 -- 552
714. 1950 -- **Hepatitis**, infectious, code 092, 6th rev. of International Lists/1948, US PHS-- 552
715. 1958 -- **Measles**, esp. TX/50, OH/36, IL/34, NY/NC/PA/28 each, KY, 23, IN/20 -- 552
716. 1957 -- June 26-28, **Hurricane Audrey**, SW LA/526; also TX, IL, IN, NY, Can. --545-550

Large-Loss-of-Life Events by Mortality -- ≥ 500 (continued):

717. 1888 -- July-Dec, **Yellow Fever** epidemic, FL esp. Jacksonville/430; Decatur AL/35-- 546
718. 2018 -- **Tuberculosis**, ICD-10 codes A16-A19, esp. CA/100, TX/50, NY/39, FL/38 -- 542
719. 1947 -- **Heat**, excessive, International list code 191 -- 540
720. 2011 -- **Tuberculosis**, ICD-10 Code A16-A19, esp. CA (108), NY, SC (above avg. DR)-- 539
721. 2001 -- **excessive natural heat**, esp. AZ/74, TX/59, MO/41, IL/38, FL/30, CA/29, PA/28--538
722. 1875 -- **Scarlet Fever**, Michigan and Hudson County, NJ -- 537
723. 1936 -- Jan-Feb, **Arctic cold waves, snow, blizzards, snowslides**, flooding⁴⁹ --484-536
724. 1945 -- **Typhoid Fever** (471), Int. List No. 1; paratyphoid fever (63), Int. List No. 2-- 534
725. 1699 -- **Yellow Fever** epidemics, Charleston, SC (170-311); Philadelphia (220) --390-531
726. 1956 -- **Measles**, 21 states double digits, esp. IL/41 TX/31 OH/30 NC/29 PA/28 MI/26-- 530
727. 2009 -- **Tuberculosis**, ICD-10 code A16-19, esp. CA, LA, OK, TX (above avg. death rate)-- 529
728. 2019 -- **Tuberculosis**, ICD-10 codes A16-A19, esp. CA/112, TX/54, NY/37, FL/35 -- 526
729. 1954 -- **Measles**, 21 states double digits, esp. NY/36, TX/36, NC/35, PA/34, KY/27 -- 524
730. 1989 -- Exposure to excessive natural **cold/hypothermia**; ICD9 code E901.0; esp. IL/45--524
731. 1897 -- Sep-Dec, **Yellow Fever**, esp. Mobile/48, New Orleans/298, MS, Memphis -- ~520
732. 1903 -- June-Aug (esp. July 1-11), **Heat**, esp. NY/144, NJ/60, IN/17, Chicago/15, CT/18 -- 520
733. 1985 -- Exposure to excessive natural cold/hypothermia; ICD9 E901.0; esp. IL/39 -- 519
734. 2006 -- Exposure to excessive natural **cold/hypothermia**; ICD-10 code X31; esp. MI/37--519
735. 2017 -- **Tuberculosis**, IDC-10 code A16-19, esp. CA/108 TX/49 NY/31 PA/22 NJ/21-- 515
736. 1915 -- Aug 16-17/19-20, **Hurricane**/trop. storm, Gulf, SE TX coast, remnant, MO--453-510
737. 1983 -- Exposure to excessive natural **cold/hypothermia**; ICD9 E901.0; esp. GA/36-- 510

⁴⁹ In our data documents and spreadsheet there are two entries -- one for January and one for February.

738. 2012 -- **Tuberculosis**, ICD-10 Code A16-A19, especially CA (101) and TX (63) -- 510
739. 1920 -- **Smallpox**, 34 registration states, esp. LA/167, MS/45, MO/28, NC/28⁵⁰ -- 508
740. 1913 -- **Scarlet Fever**, NYC, NY -- 507
741. 1730 -- **Smallpox** epidemic, Massachusetts Bay Colony, especially Boston -- ≥502
742. 2008 -- **Excessive natural heat**, esp. AZ/112, TX/66, CA/51, PA/36, NV/35, NC/25-- 502
743. 1997 -- Exposure to excessive natural **cold/hypothermia**; ICD9 code E901; esp. IL/36-- 501
744. 2012 -- Exposure to excessive natural **cold/hypothermia**; esp. CA/32 NY/31 IL/25 -- 501
745. 1644 -- Apr 18 (or Mar 18), **Powhatans attack** English colonists along James River VA--400-500
746. 1690 -- spring-fall, **Smallpox**, Iroquois Native Americans, esp. upper NY ~300-500
747. 1793 -- **Influenza** epidemic, VA, 5 counties, 4 weeks -- 500
748. 1804 -- GA, SC, NC **Hurricane**, September 7-9 -- 500
749. 1811 -- **Yellow Fever** epidemic, New Orleans, LA -- >500
750. 1811-12 -- Dec 16-May, **earthquakes**, New Madrid, KY, TN, NE AR, MO --100-500
1842 -- June 16, **tornado**, Adams County, MS [**do not believe this happened**] -- 500
751. 1864 --July 30, **Rebels kill wounded/surrendered/trapped black soldiers**, Petersburg, VA~500
752. 1864 -- Sep, general **massacre** of Yana Natives, Northern CA -->335-500
753. 1865 -- Mar 31, steam transport **General Lyon** burns, Cape Hatteras, NC --400-500
754. 1881 -- Sep 1-6, **wildfire**, “The Thumb Fire,” Lower Michigan --169-500
755. 1888 -- Jan 11-12, Schoolchildren’s **Blizzard**, IA/KS/ND/MN/MT/NE/SD/TX --315-500
756. 1898 -- Nov 26-27, **Portland Gale**, **SS Portland sinks** (Cape Ann MA), New Eng.⁵¹-400-500
757. 2010 -- **Influenza**, ICD-10 codes J09-J11; US death rate 0.2 per 100K; esp. AK, KS (.4)⁵²-- 500

⁵⁰ Based on death certificate data from 34 “registration states” as well as 17 cites in non-registration states of AL, GA, ND, OK, TX and WV, with an estimated population of 87,45,921 or 82.3% of total estimated U.S. and Hawaii territory population. AK was not a State. Other non-reporting states were AZ, AR, ID, IA, MN, NM, SD, and WY.

⁵¹ There were deaths from and sinkings of multiple vessels. The loss of life on the Portland estimated at 127-192.

⁵² The ICD-10 Code for Influenza and Pneumonia (J09-J18), for 2010, shows 50,097 deaths (death rate of 16.2).