Sudden Unexpected Infant Death Fact Sheet

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There were 3,356 sudden unexpected infant deaths in the U.S. in 2020.

This fact sheet focuses on cases of sudden unexpected infant death (SUID) in 2020 and trends for the period from 2011 to 2020. For the purposes of this fact sheet, "infants" refers to children <1 year of age.

Definitions

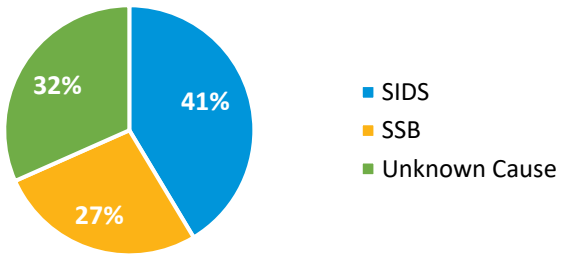
- SUID is a term used to describe the sudden and unexpected death of an infant in which the cause was not obvious before investigation.[1]
- The three common types of SUID include:[1]
    - Sudden infant death syndrome (SIDS)
    - Suffocation/strangulation in bed (SSB)*
    - Other deaths from unknown causes (Unknown cause)

Deaths

- In 2020, there were 3,356 cases of SUID, at a rate of 89.9 deaths per 100,000 live births. Of those deaths, 41 percent were due to SIDS, 27 percent were due to SSB, and 32 percent were due to unknown cause (Figure 1).†[2]

Figure 1. Sudden Unexpected Infant Deaths By Cause, 2020

(N=3,356)

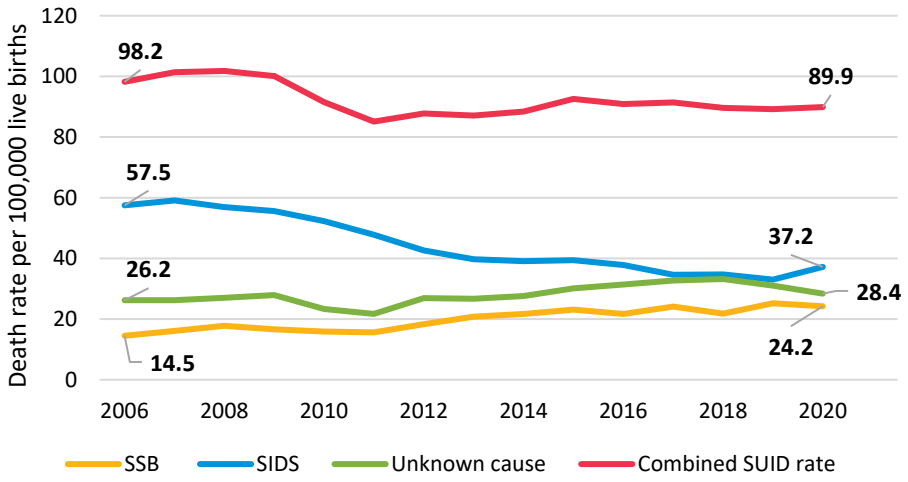


* Suffocation and strangulation in bed occurs when a baby's breathing is limited or constricted by bedding or other objects in their environment, or when a baby gets trapped between two objects, such as a mattress and wall.

† Cause of death were defined using the following underlying cause of death ICD-9 and ICD-10 codes: ASSB (E913.0; W75), SIDS (798.0; R95), and unknown cause, (799.9; R99). The SUID rate was calculated by combining ASSB, SIDS and unknown cause deaths.

- The rate of SUID in the U.S. decreased by 8 percent from 2006 to 2020 (Figure 2). There were a total of 54,862 deaths due to SUID during that period.[2]
- From 2006 to 2020, the SIDS rate decreased by 35 percent, while the SSB rate and unknown cause rates increased by 67 percent and 8 percent, respectively.[2] These shifts are likely due, at least in part, to the fact that SUID has been reported less often as SIDS and more often as SSB or unknown cause alone in recent years.[3,4] This shift in classification is likely due to variability in cause-of-death determination practices and increased use of standard protocols used in infant death investigations.[4]

Figure 2. Trends in SUID by Cause, 2006–2020



- SIDS was the 3rd leading cause of death overall among infants in 2020.[5]
- In 2020, 76 percent of unintentional injury deaths among infants were the result of SSB, making SSB the leading cause of unintentional injury death among that age group.[5]

Risk Factors

- **Sex:** In 2020, the SUID rate was 1.3 times higher among male infants compared to female infants (100.3 vs. 79.0 per 100,000 live births, respectively).[2] Male infants accounted for 57 percent of SUID cases in 2020.
    - The SUID rate per 100,000 live births was higher among males infants compared to female infants for each SUID type (41.2 vs. 33.0 for SIDS, 27.3 vs. 21.1 per for SSB, and 31.8 vs. 24.9 for unknown cause).[2]
- **Race/Ethnicity:** SUID rates per 100,000 live births among American Indian/Alaska Native (194.2) and non-Hispanic Black/African American infants (216.7) are more than twice the rate among non-Hispanic White infants (72.1), more than three times the rate among Hispanic infants (57.2)

and more than 7 times the rate among Asian/Pacific Islander infants (27.2) (Figure 3) (based on 2-year combined rates from 2019 to 2020).[2]

- **SIDS:** The SIDS rate per 100,000 live births are highest among non-Hispanic Black/African American infants (85.2) and lowest among Asian/Pacific Islander infants (11.2) (Figure 4) (based on 2-year combined rates from 2019 to 2020).[2]
- **SSB:** The SSB infant death rate per 100,000 live births is highest among American Indian/Alaska Native infants (57.8) and lowest among Asian/Pacific Islander infants (7.9) (Figure 5) (based on 2-year combined rates from 2019 to 2020).[2]
- **Unknown Cause:** The unknown cause infant death rate per 100,000 live births is highest among non-Hispanic Black/African American infants (74.3) and lowest among Hispanic infants (21.6) (Figure 6) (based on 2-year combined rates from 2019 to 2020).[2]

Figure 3. SUID by Race/Ethnicity, 2019–2020

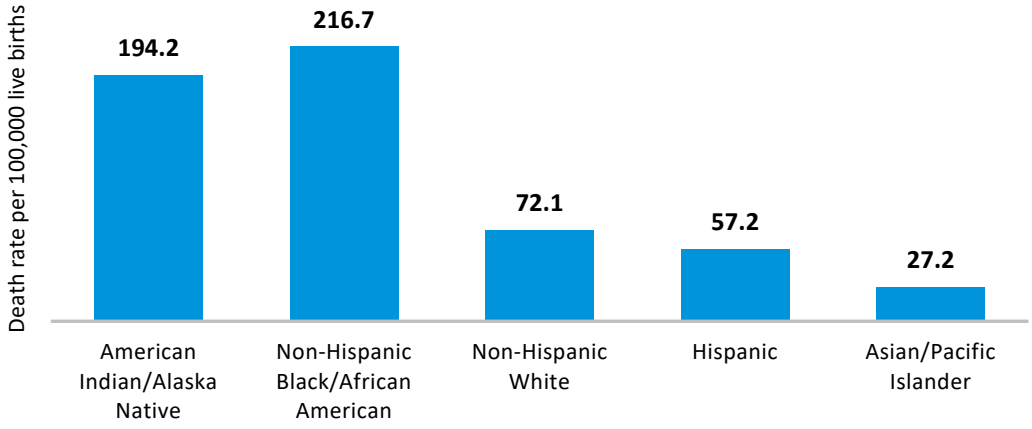
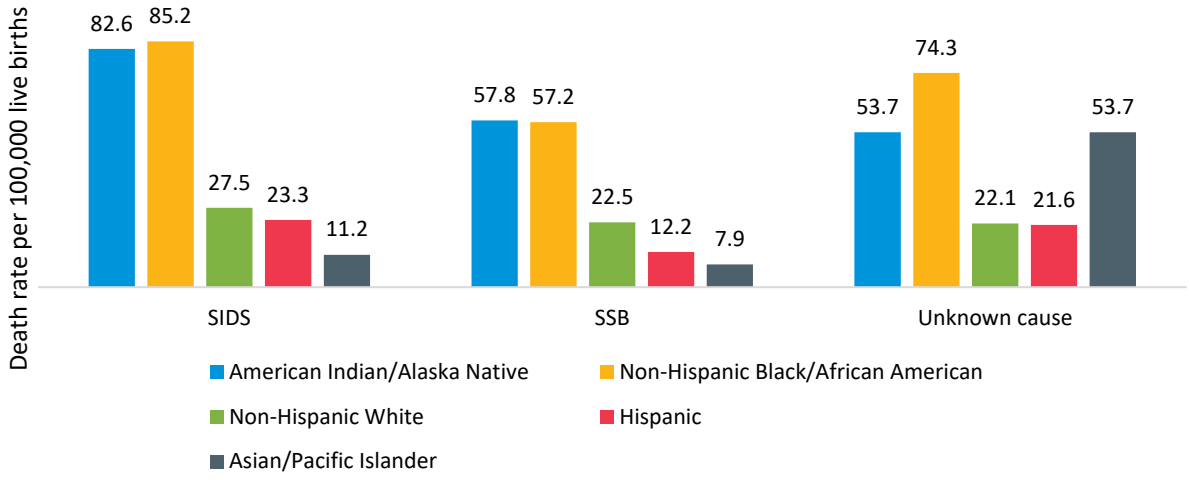


Figure 4. SUID by Cause and Race/Ethnicity, 2019–2020



- **Month and Weekday:** Although there was a relatively even distribution of SUID cases by month in 2020, slightly fewer cases occurred in April and June (Figure 5).[2] When analyzing SUID cases by day of week in 2020, slightly more cases occurred on Saturdays and Sundays (Figure 6).[2]

Figure 5. SUID Cases by Month, 2020[2]

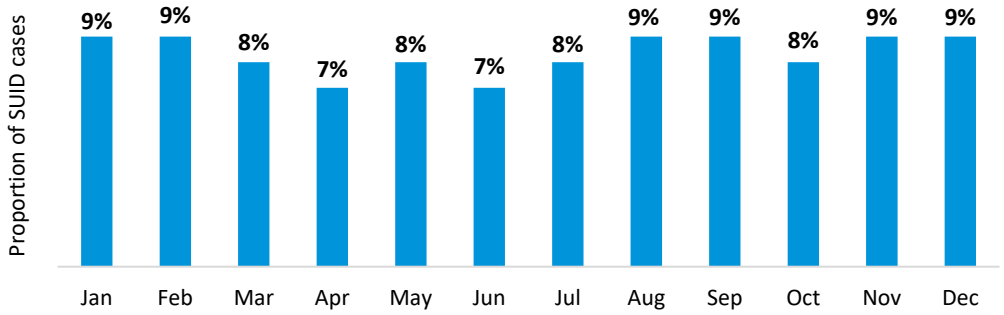
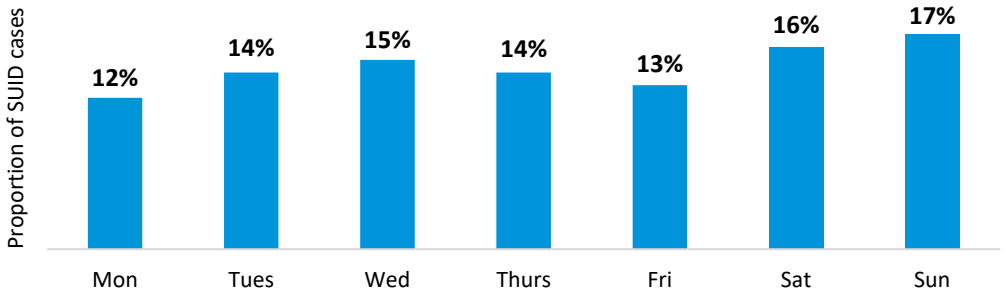


Figure 6. SUID Cases by Weekday, 2020[2]



- **Urbanization:** In 2020, the SUID rate was 1.4 times higher among infants in non-metro areas than among infants in metro areas (122.2 and 84.9 per 100,000 live births, respectively).[2]

- **State:** SUID rates for 2016 to 2020 were lowest in Massachusetts, California, and New Hampshire (46.6, 49.8, and 52.2 per 100,000 live births, respectively) and highest in Mississippi, Alabama, and Arkansas (191.7, 178.3, and 160.5 per 100,000 live births, respectively) (states with unstable or suppressed rates excluded from ranking) (Table 1).[2]
    - **SIDS** rates for 2016 to 2020 were lowest in North Carolina, Minnesota, and New York (6.2, 10.8, and 11.1 per 100,000 live births, respectively) and highest in Arkansas, Georgia, and Oklahoma (124.3, 82.5 and 77.5 per 100,000 live births, respectively).
    - **SSB** rates for 2016 to 2020 were lowest in California, New Jersey, and Maryland (7.2, 7.5, and 7.6 per 100,000 live births, respectively) and highest in Louisiana, Washington D.C., and Wyoming (95.8, 64.7, and 63.6 per 100,000 live births, respectively).
    - **Unknown Cause** death rates for 2016 to 2020 were lowest in Washington, Louisiana, and Maryland (6.2, 7.0, and 11.2 per 100,000 live births, respectively) and highest in Mississippi, Alabama, and Montana (126.0, 92.3, 91.2, and 91.1 per 100,000 live births, respectively).

Table 1. Number and Rate per 100,000 Live Births for SUID, SIDS, SSB and Unknown Cause Deaths by State, Infants, 2016–2020								
State	Combined SUID		SIDS		SSB		Unknown Cause	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
AK	59	112.6	39	74.4	11	*	–	–
AL	510	178.3	179	62.6	67	23.4	264	92.3
AR	297	160.5	230	124.3	43	23.2	24	13.0
AZ	327	77.8	70	16.7	63	15.0	194	46.2
CA	1,183	49.8	532	22.4	170	7.2	481	20.3
CO	208	63.2	53	16.1	99	30.1	56	17.0
CT	105	59.8	49	27.9	23	13.1	33	18.8
DC	54	112.8	–	–	31	64.7	19	*
DE	54	100.9	21	39.2	–	–	24	44.8
FL	1,005	90.2	325	29.2	409	36.7	271	24.3
GA	811	126.7	528	82.5	169	26.4	114	17.8
HI	66	76.2	23	26.6	10	*	33	38.1
IA	180	94.1	94	49.1	34	17.8	52	27.2
ID	86	76.9	44	39.3	20	17.9	22	19.7
IL	652	88.3	95	12.9	236	32.0	321	43.5
IN	469	115.1	251	61.6	168	41.2	50	12.3
KS	217	118.4	66	36.0	64	34.9	87	47.5
KY	354	131.8	166	61.8	71	26.4	117	43.5
LA	468	156.1	160	53.4	287	95.8	21	7.0
MA	185	46.6	89	25.2	–	–	69	19.5
MD	308	86.7	240	67.6	27	7.6	41	11.5
ME	50	80.7	–	–	38	61.3	–	–
MI	579	104.8	186	33.7	296	53.6	97	17.5
MN	183	53.5	37	10.8	82	24.0	64	18.7
MO	372	102.6	86	23.7	210	57.9	76	21.0
MS	347	191.7	86	47.5	33	18.2	228	126.0
MT	76	126.0	–	–	12	*	55	91.2

Table continued on next page.

State	Combined SUID		SIDS		SSB		Unknown Cause	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
NC	664	111.2	37	6.2	83	13.9	544	91.1
ND	50	92.2	37	68.2	–	–	–	–
NE	116	89.9	71	55.0	27	20.9	18	*
NH	32	52.2	12	*	–	–	15	*
NJ	308	61.2	177	35.2	38	7.5	93	18.5
NM	102	85.4	–	–	26	21.8	73	61.1
NV	212	117.4	20	11.1	74	41.0	118	65.3
NY	668	58.5	127	11.1	139	12.2	402	35.2
OH	748	110.9	342	50.7	270	40.0	136	20.2
OK	372	147.8	195	77.5	113	44.9	64	25.4
OR	180	80.3	112	50.0	55	24.5	13	*
PA	593	86.9	262	38.4	87	12.8	244	35.8
RI	45	84.5	33	62.0	–	–	–	–
SC	314	110.5	100	35.2	136	47.8	78	27.4
SD	90	149.1	26	43.1	38	62.9	26	43.1
TN	584	145.8	163	40.7	164	40.9	257	64.2
TX	1,671	85.5	692	35.4	274	14.0	705	36.1
UT	132	53.1	81	32.6	12	*	39	15.7
VA	517	103.9	334	67.2	71	14.3	112	22.5
VT	13	*	–	–	–	–	–	–
WA	309	69.1	218	48.8	61	13.6	30	6.7
WI	303	94.0	59	18.3	92	28.5	152	47.1
WV	142	154.9	43	46.9	19	*	80	87.3
WY	37	106.9	14	*	22	63.6	–	–
U.S.	**17,387**	**90.2**	**6,834**	**35.5**	**4,507**	**23.4**	**6,046**	**31.4**

– Death rates and counts are suppressed when the data meet CDC WONDER's criteria for confidentiality constraints.

* Death rates are flagged as unreliable when calculated with a numerator of 20 or less.

For more information or questions on the information contained in this factsheet, please contact the SKW Research Department via email at: mchandler@safekids.org

References

1. Centers for Disease Control and Prevention. About SUID and SIDS. https://www.cdc.gov/sids/about/index.htm. Published 2020. Accessed February 24, 2022.

2. Centers for Disease Control and Prevention. CDC Wide-ranging ONline Data for Epidemiologic Research (CDC WONDER) Underlying Cause of Death. ICD-10 codes selected were R95, R99 and W75. https://wonder.cdc.gov/controller/datarequest/D76. Published 2020. Accessed February 23, 2022.

3. Lambert ABE, Parks SE, Shapiro-Mendoza CK. National and state trends in sudden unexpected infant death: 1990-2015. *Pediatrics*. 2018. doi:10.1542/peds.2017-3519

4. Centers for Disease Control and Prevention. Sudden Unexpected Infant Death and Sudden Infant Death Syndrome - Data and Statistics. https://www.cdc.gov/sids/data.htm. Published 2022. Accessed February 23, 2022.

5. CDC National Center for Injury Prevention and Control. Leading Causes of Death Reports, 1981 - 2020. https://wisqars.cdc.gov/fatal-leading. Published 2022. Accessed March 17, 2022.