

2020 Type and Severity Summary of Identified Cases of Hearing Loss

Data Source: 2020 CDC Early Hearing Detection and Intervention (EHDI) Hearing Screening & Follow-up Survey (HSFS)

Background: CDC's National Center on Birth Defects and Developmental Disabilities promotes the health of babies, children, and adults, with a focus on preventing birth defects and developmental disabilities and optimizing the health outcomes of those with disabilities. As part of these efforts, the Center is actively involved in addressing the early identification of permanent hearing loss among newborns and infants. Hearing loss affects between 1 and 2 per 1,000 infants in the United States and, when left undetected, can delay a child's speech and language, social, and emotional development.¹ To ensure children with permanent hearing loss are identified as soon as possible, states and territories have implemented Early Hearing Detection and Intervention (EHDI) programs. These EHDI programs work to ensure all infants are screened for hearing loss, ideally before 1 month of age; receive diagnostic audiologic evaluation (for those not passing the screening), ideally before 3 months of age; and are enrolled in early intervention (for those identified with permanent hearing loss), ideally before 6 months of age.² The Hearing Screening & Follow-up Survey is a voluntary survey sent out annually by CDC to each state and territorial EHDI program that requests nonestimated hearing screening, diagnostic, and intervention information on infants born in a specified calendar year (e.g., 2020). The survey helps to assess the progress of EHDI efforts to identify infants with permanent hearing loss across the United States.

- This summary highlights type and severity of permanent hearing loss for babies born between January 1, 2020 and December 31, 2020.
- These data are based on the American Speech-Language-Hearing Association (ASHA) classification system for hearing loss. The ASHA categories are as followed:

Degree of Hearing Loss	ASHA Hearing loss range (dB HL)
Normal	-10 to 15
Slight	16 to 25
Mild	26 to 40
Moderate	41 to 55
Moderately severe	56 to 70
Severe	71 to 90
Profound	91+

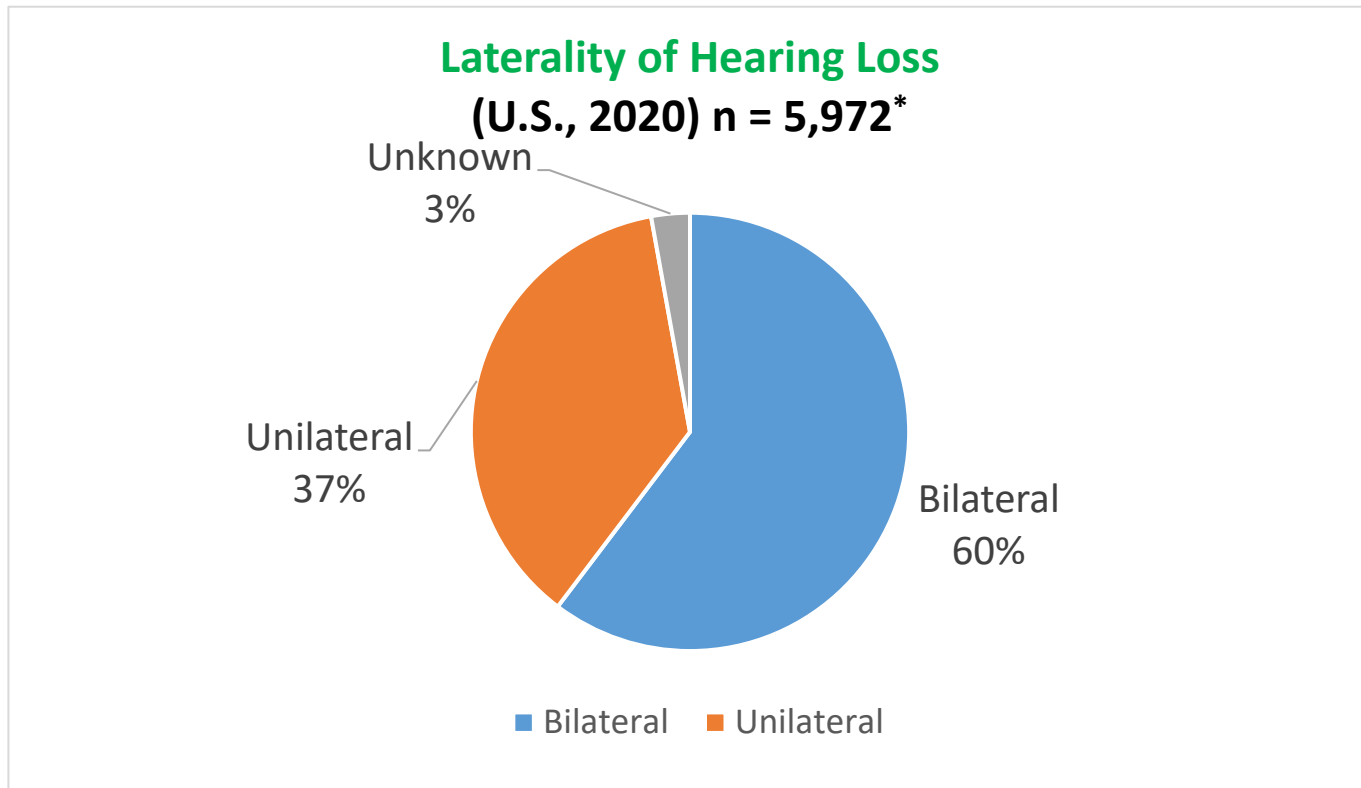
Number of Survey Respondents Who Provided Type and Severity Data: 52^a (47 states, 4 territories, 1 district) AL, AK, AZ, AR, CA, CO, Commonwealth of the Northern Mariana Islands, CT, DE, District of Columbia, FL, GA, Guam, HI, ID, IL, IN, IA, KS, KY, ME, MD, MA, MI, Micronesia, MN, MO, MT, NE, NV, NH, NM, NY, NC, ND, OH, OK, OR, PA, Puerto Rico, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY

¹American Speech-Language-Hearing Association (ASHA). Effects of hearing loss on development. Available at: <https://www.asha.org/public/hearing/effects-of-hearing-loss-on-development>. Accessed April 8, 2021

²Year 2019 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs (2019). *Journal of Early Hearing Detection and Intervention*, 4(2), 1-44. <https://digitalcommons.usu.edu/jehdi/vol4/iss2/1/>

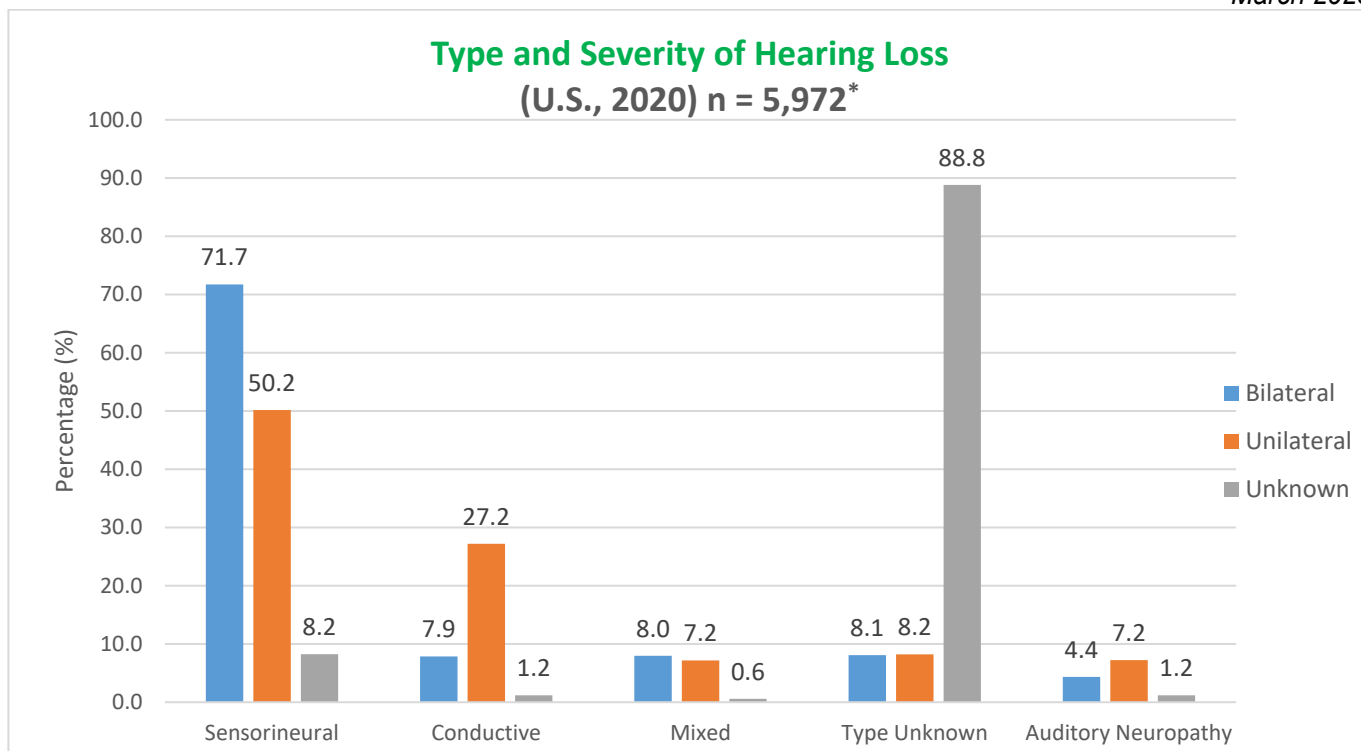
Total Number of Reported Infants with Hearing Loss, 2020 CDC EHHI HSFS									6,142 Children
		BILATERAL (by Ear)				UNILATERAL (by Ear)			LATERALITY UNKNOWN (i.e., Unknown if case is a unilateral or bilateral loss)
		RIGHT EAR	LEFT EAR	UNKNOWN EAR (degree of loss for <u>each</u> ear)		RIGHT EAR	LEFT EAR	UNKNOWN EAR	
Sensorineural	Slight	37	32	1	1	5	11	0	0
	Mild	623	621	0	0	98	116	0	0
	Moderate	702	729	0	0	102	130	0	1
	Moderately Severe	297	288	0	0	55	59	0	1
	Severe	233	240	0	0	72	100	0	3
	Profound	599	607	2	2	163	149	0	2
	Unknown Severity	82	68	0	0	24	16	0	7
Conductive	Slight	2	6	0	0	7	4	0	0
	Mild	63	56	0	0	31	24	0	0
	Moderate	78	81	0	0	93	50	0	1
	Moderately Severe	66	61	0	0	139	79	0	1
	Severe	23	21	0	0	49	21	0	0
	Unknown Severity	56	54	0	0	62	39	0	0
Mixed	Slight	3	1	0	0	0	0	1	0
	Mild	37	36	0	0	8	10	0	0
	Moderate	90	87	0	0	21	17	0	1
	Moderately Severe	68	75	0	0	21	24	0	0
	Severe	51	48	0	0	5	19	0	0
	Profound	19	24	0	0	12	8	0	0
	Unknown Severity	22	15	0	0	11	2	0	0
Type Unknown	Slight	11	15	0	0	7	5	1	0
	Mild	71	76	0	0	20	24	0	12
	Moderate	49	53	0	0	9	19	0	18
	Moderately Severe	40	34	0	0	11	12	0	2
	Severe	34	32	0	0	16	15	0	4
	Profound	28	23	0	0	9	7	0	6
	Unknown Severity	60	59	0	0	16	14	0	109
Auditory Neuropathy	Slight	2	1	0	0	0	0	0	0
	Mild	4	5	0	0	0	0	0	0
	Moderate	6	4	0	0	0	0	0	1
	Moderately Severe	4	4	0	0	2	1	0	0
	Severe	7	7	0	0	5	7	0	0
	Profound	28	28	0	0	20	19	0	1
	Unknown Severity	104	108	0	0	42	59	3	0
Totals by Ear		3,599	3,599	3	3	1,135	1,060	5	170
Totals by Child		3,599		3		1,135	1,060	5	170
Laterality Totals (by Child)		3,602 Bilateral Cases				2,200 Unilateral Cases			
Total all Types and Severity (by Child)									5,972
Cases Resolved (i.e., hearing loss to no hearing loss)									170
Overall Total (by Child)									6,142

Summary of Type and Severity of Identified Cases of Hearing Loss in 2020



*In 2020, 6,142 cases of permanent hearing loss were reported among 52 states and territories. However, 170 cases were reported later as being resolved (i.e., hearing loss to no hearing loss).

	<i>Numerator</i>	<i>Denominator</i>	<i>Percentage</i>
<i>Bilateral</i>	3,602	5,972	60%
<i>Unilateral</i>	2,200	5,972	37%
<i>Unknown</i>	170	5,972	3%



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	<i>Numerator</i>	<i>Denominator</i>	<i>Percentage</i>
<i>Sensorineural</i>			
<i>Bilateral</i>	2,582	3,602	71.7%
<i>Unilateral</i>	1,100	2,200	50.0%
<i>Unknown</i>	14	170	8.2%
<i>Conductive</i>			
<i>Bilateral</i>	284	3,602	7.9%
<i>Unilateral</i>	598	2,200	27.2%
<i>Unknown</i>	2	170	1.2%
<i>Mixed</i>			
<i>Bilateral</i>	288	3,602	8.0%
<i>Unilateral</i>	159	2,200	7.2%
<i>Unknown</i>	1	170	0.6%
<i>Type Unknown</i>			
<i>Bilateral</i>	293	3,602	8.1%
<i>Unilateral</i>	185	2,200	8.4%
<i>Unknown</i>	151	170	88.8%
<i>Auditory Neuropathy</i>			
<i>Bilateral</i>	156	3,602	4.3%
<i>Unilateral</i>	158	2,200	7.2%
<i>Unknown</i>	2	170	1.2%