

# National Health and Nutrition Examination Survey

## 2017-March 2020 Data Documentation, Codebook, and Frequencies

### Audiometry (P\_AUQ)

#### Data File: P\_AUQ.xpt

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## Component Description

The NHANES program suspended field operations in March 2020 due to the coronavirus disease 2019 (COVID-19) pandemic. As a result, data collection for the NHANES 2019-2020 cycle was not completed and the collected data are not nationally representative. Therefore, data collected from 2019 to March 2020 were combined with data from the NHANES 2017-2018 cycle to form a nationally representative sample of NHANES 2017-March 2020 pre-pandemic data. These data are available to the public. Please refer to the Analytic Notes section for more details on the use of the data.

Topics included in the Audiometry questionnaire data file (P\_AUQ) are:

- Self-assessed condition of hearing;
- The Gallaudet hearing scale for self-reported hearing loss;
- Impact of hearing ability on daily life;
- Onset and cause of any self-reported hearing trouble;
- History of ear infections; ear tube placed for infection;
- History of speech-language or special education services;
- How recently hearing tests were performed, if ever;
- Hearing aid use and cochlear implant status;
- Use of assistive listening devices;
- 12-month period prevalence of tinnitus: how long bothered by tinnitus, tinnitus present after loud sounds, bothered by tinnitus when falling asleep, self-assessed severity of tinnitus;
- History of exposure to firearms noise, occupational and/or non-occupational loud noise; and use of hearing protection.

## Eligible Sample

All survey participants aged 1 year and older in the NHANES 2017-March 2020 pre-pandemic sample are included in this dataset. The initial question (AUQ054) was for all participants aged 1 years and older. The rest of the questions were for participants aged 6-19 and 70 years and older. Please review the target age group for each variable in the codebook.

## Interview Setting and Mode of Administration

These questions were asked, in the home, by trained interviewers using the Computer-Assisted Personal Interview (CAPI) system. Hand cards showing response categories were also used for some questions. When necessary, household interviewers read the hand cards to survey participants. Participants 16 years of age and older and emancipated minors were interviewed directly. A proxy provided information for survey participants who were under 16 years of age and for participants who could not answer the questions themselves.

The NHANES 2017-2018 and 2019-2020 audiometry questionnaires are available on the NHANES website.

## Quality Assurance & Quality Control

The CAPI system is programmed with built-in consistency checks to reduce data entry errors. CAPI also uses online help screens to assist interviewers in defining key terms used in the questionnaire.

## Data Processing and Editing

Frequency counts were checked, "skip" patterns were verified, and the reasonableness of question responses was reviewed. All information collected in the audiometry questionnaire section is released to the public, except for the other cause of hearing loss specified in a text entry field (AUQ410OS). All other causes were reviewed, and some were assigned to appropriate causes of hearing loss variables (AUQ410a--AUQ410i). As the nature of self-reported data, the responses to some questions reflect the participants' knowledge and may not be reasonable for a few cases.

## Analytic Notes

The COVID-19 pandemic required suspension of NHANES 2019-2020 field operations in March 2020 after data was collected in 18 of the 30 survey locations in the 2019-2020 sample. Because the collected data from 18 locations were not nationally representative, these data were combined with data from the previous cycle (2017-2018) to create a 2017-March 2020 pre-pandemic data file. The resulting sample weights in the demographic file should be used to calculate estimates from the combined cycles. The sample weights are not appropriate for independent analyses of the 2019-2020 data and will not yield nationally representative results for either the 2017-2018 data alone or the 2019-March 2020 data alone. Please refer to the NHANES website for additional information for the NHANES 2017-March 2020 pre-pandemic data, and for the previous 2017-2018 public use data file with specific weights for that 2-year cycle.

The analysis of NHANES 2017–March 2020 pre-pandemic audiometry questionnaire data must be conducted using the appropriate survey design variables, sample weights, and the basic demographic variables. Interview weights should only be used if questionnaire data are analyzed by themselves. However, if AUQ data are merged with the MEC examination data (for example the Audiometry examination or laboratory data), the MEC examination weights should be used for analyses.

When combining AUQ data from different survey cycles, please note that there are target age changes and question changes (add, drop, and modify) between survey cycles. Please see the questionnaire and read the documentation for each survey cycle before analyzing AUQ data from different survey cycles.

Other related datasets, including Audiometry, Tympanometry, Wideband Absorbance, and Acoustic Reflex examination data for NHANES participants are available in the Audiometry section of the Examination data files.

Please refer to the [NHANES Analytic Guidelines](#) and the on-line [NHANES Tutorial](#) for further details on the use of sample weights and other analytic issues.

## Codebook and Frequencies

### SEQN - Respondent sequence number

<b>Variable Name:</b>	SEQN
<b>SAS Label:</b>	Respondent sequence number
<b>English Text:</b>	Respondent sequence number.
<b>Target:</b>	Both males and females 1 YEARS - 150 YEARS

## AUQ054 - General condition of hearing

**Variable Name:** AUQ054**SAS Label:** General condition of hearing

**English Text:** These next questions are about {your/SP's} hearing. Which statement best describes {your/SP's} hearing (without a hearing aid, personal sound amplifier, or other listening devices)? Would you say {your/his/her} hearing is excellent, good, that {you have/s/he has} a little trouble, moderate trouble, a lot of trouble, or {are you/is s/he} deaf?

**Target:** Both males and females 1 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Excellent	7275	7275	
2	Good	5204	12479	
3	A little trouble	1541	14020	
4	Moderate hearing trouble	661	14681	
5	A lot of trouble	273	14954	
6	Deaf	26	14980	
77	Refused	0	14980	
99	Don't know	6	14986	
.	Missing	0	14986	

## AUQ055 - CHECK ITEM

<b>Variable Name:</b>	AUQ055
<b>English Instructions:</b>	BOX 1A. IF {SP AGE >= 6, AND SP AGE <= 19 OR SP AGE > 69} AND {AUQ054 = 1, 77, 99}, GO TO AUQ420; IF {SP AGE >= 6, AND SP AGE <= 19 OR SP AGE > 69} AND {AUQ054 = 2, 3, 4, 5 OR 6}, CONTINUE. OTHERWISE, END OF SECTION.
<b>Target:</b>	Both males and females 1 YEARS - 150 YEARS

## AUQ060 - Hear a whisper from across a quiet room?

**Variable Name:** AUQ060**SAS Label:** Hear a whisper from across a quiet room?

**English Text:** These next questions refer to hearing without the use of a hearing aid or any other listening devices. If {you have/SP has} one ear that is better than the other, please answer the questions for the hearing in {your/SP's} better ear. Can {you/SP} usually hear and understand what a person says without seeing his or her face if that person whispers to {you/him/her} from across a quiet room?

**Target:** Both males and females 6 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	1817	1817	AUQ395
2	No	923	2740	
7	Refused	1	2741	
9	Don't know	51	2792	
.	Missing	12194	14986	

## AUQ070 - Hear normal voice across a quiet room?

**Variable Name:** AUQ070**SAS Label:** Hear normal voice across a quiet room?**English Text:** Can {you/SP} usually hear and understand what a person says without seeing his or her face if that person talks in a normal voice to {you/him/her} from across a quiet room?**Target:** Both males and females 6 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	626	626	AUQ395
2	No	334	960	
7	Refused	1	961	
9	Don't know	14	975	
.	Missing	14011	14986	

## AUQ080 - Hear a shout from across a quiet room?

**Variable Name:** AUQ080**SAS Label:** Hear a shout from across a quiet room?**English Text:** Can {you/SP} usually hear and understand what a person says without seeing his or her face if that person shouts to {you/him/her} from across a quiet room?**Target:** Both males and females 6 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	270	270	AUQ395
2	No	73	343	
7	Refused	0	343	
9	Don't know	6	349	
.	Missing	14637	14986	

## AUQ090 - Hear if spoken loudly to in better ear?

**Variable Name:** AUQ090**SAS Label:** Hear if spoken loudly to in better ear?**English Text:** Can{you/SP} usually hear and understand what a person says without seeing his or her face if that person speaks loudly into {your/his/her} better ear?**English Instructions:** INTERVIEWER: IF THE INTERVIEWEE HEARS BETTER IN ONE EAR THAN THE OTHER, RECORD THE RESPONSE FOR SPEAKING LOUDLY INTO THE BETTER EAR.**Target:** Both males and females 6 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	49	49	
2	No	25	74	
7	Refused	0	74	
9	Don't know	5	79	
.	Missing	14907	14986	



## AUQ395 - CHECK ITEM

<b>Variable Name:</b>	AUQ395
<b>English Instructions:</b>	BOX 2A. IF AUQ054 = {3, 4, 5 OR 6} CONTINUE. OTHERWISE, GO TO AUQ420.
<b>Target:</b>	Both males and females 6 YEARS - 19 YEARS
<b>Target:</b>	Both males and females 70 YEARS - 150 YEARS

## AUQ400 - When began to have hearing loss?

**Variable Name:** AUQ400

**SAS Label:** When began to have hearing loss?

**English Text:** How old {were you/was SP} when {you/he/she} began to have any hearing loss?

**English Instructions:** READ CATEGORIES IF NECESSARY

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Before age 1 year old	26	26	
2	Between 2 and 5 years old	52	78	
3	Between 6 and 19 years old	139	217	
4	Between 20 and 39 years old	75	292	
5	Between 40 and 59 years old	130	422	
6	Between 60 and 69 years old	204	626	
7	70 years and older	358	984	
8	No hearing loss	18	1002	
77	Refused	0	1002	
99	Don't know	26	1028	
.	Missing	13958	14986	

## AUQ410a - Cause of hearing loss-Genetic/Hereditary

**Variable Name:** AUQ410a

**SAS Label:** Cause of hearing loss-Genetic/Hereditary

**English Text:** What are the main causes of {your/SP's} hearing loss?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD AUQ1

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Genetic/Hereditary causes	101	101	
77	Refused	1	102	
99	Don't know	48	150	
.	Missing	14836	14986	

## AUQ410b - Cause of hearing loss-Ear infections

**Variable Name:** AUQ410b

**SAS Label:** Cause of hearing loss-Ear infections

**English Text:** What are the main causes of {your/SP's} hearing loss?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD  
AUQ1

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
2	Ear infections (including fluid in ears)	156	156	
.	Missing	14830	14986	

## AUQ410c - Cause of hearing loss-Ear diseases

**Variable Name:** AUQ410c

**SAS Label:** Cause of hearing loss-Ear diseases

**English Text:** What are the main causes of {your/SP's} hearing loss?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD AUQ1

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
3	Ear diseases (Otosclerosis, Menieres, Tumor)	26	26	
.	Missing	14960	14986	

## AUQ410d - Cause of hearing loss-Illness/Infections

**Variable Name:** AUQ410d

**SAS Label:** Cause of hearing loss-Illness/Infections

**English Text:** What are the main causes of {your/SP's} hearing loss?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD AUQ1

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
4	Illness/Infections (Measles, Meningitis, Mumps)	34	34	
.	Missing	14952	14986	

## AUQ410e - Cause of hearing loss-Drugs/Medications

**Variable Name:** AUQ410e

**SAS Label:** Cause of hearing loss-Drugs/Medications

**English Text:** What are the main causes of {your/SP's} hearing loss?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD AUQ1

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
5	Drugs/Medications	9	9	
.	Missing	14977	14986	

## AUQ410f - Cause of hearing loss-Head/Neck injury

**Variable Name:** AUQ410f

**SAS Label:** Cause of hearing loss-Head/Neck injury

**English Text:** What are the main causes of {your/SP's} hearing loss?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD AUQ1

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
6	Head or neck injury/trauma	29	29	
.	Missing	14957	14986	



## AUQ410g - Cause of hearing loss-Loud brief noise

**Variable Name:** AUQ410g

**SAS Label:** Cause of hearing loss-Loud brief noise

**English Text:** What are the main causes of {your/SP's} hearing loss?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD  
AUQ1

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
7	Loud brief explosive noise/sounds	152	152	
.	Missing	14834	14986	

## AUQ410h - Cause of hearing loss-Long-term noise

**Variable Name:** AUQ410h

**SAS Label:** Cause of hearing loss-Long-term noise

**English Text:** What are the main causes of {your/SP's} hearing loss?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD  
AUQ1

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
8	Noise exposure, long-term (machinery, etc.)	297	297	
.	Missing	14689	14986	

## AUQ410i - Cause of hearing loss-Aging

**Variable Name:** AUQ410i

**SAS Label:** Cause of hearing loss-Aging

**English Text:** What are the main causes of {your/SP's} hearing loss?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD AUQ1

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
9	Aging, getting older	532	532	
.	Missing	14454	14986	

## AUQ410j - Cause of hearing loss-Others

**Variable Name:** AUQ410j

**SAS Label:** Cause of hearing loss-Others

**English Text:** What are the main causes of {your/SP's} hearing loss?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD AUQ1

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
10	Other causes	41	41	
.	Missing	14945	14986	

## AUQ156 - Ever used assistive listening devices?

**Variable Name:** AUQ156**SAS Label:** Ever used assistive listening devices?**English Text:** Because of hearing loss, {have you/has SP} ever used any of the following to improve {your/his/her} communication: FM systems, closed-captioned television, instant or text messages, live video streaming, amplified telephone, relay services, or a sign-language interpreter?**Target:** Both males and females 6 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	217	217	
2	No	811	1028	
7	Refused	1	1029	
9	Don't know	0	1029	
.	Missing	13957	14986	

## AUQ420 - Ever had ear infections or earaches?

**Variable Name:** AUQ420**SAS Label:** Ever had ear infections or earaches?**English Text:** {Have you/Has SP} ever had ear infections or earaches?**Target:** Both males and females 6 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	2813	2813	
2	No	2818	5631	AUQ144
7	Refused	0	5631	AUQ144
9	Don't know	28	5659	AUQ144
.	Missing	9327	14986	

## AUQ430 - Ever had 3 or more ear infections?

**Variable Name:** AUQ430

**SAS Label:** Ever had 3 or more ear infections?

**English Text:** {Have you/Has SP} ever had 3 or more ear infections or earaches?

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	1287	1287	
2	No	1483	2770	
7	Refused	0	2770	
9	Don't know	43	2813	
.	Missing	12173	14986	

## AUQ139 - Ever had tube placed in ear?

**Variable Name:** AUQ139**SAS Label:** Ever had tube placed in ear?**English Text:** {Have you/Has SP} ever had a tube placed in {your/his/her} ear to drain the fluid from {your/his/her} ear or to treat ear infections?**Target:** Both males and females 6 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	377	377	
2	No	2410	2787	
7	Refused	1	2788	
9	Don't know	25	2813	
.	Missing	12173	14986	



## AUQ144 - Last time hearing tested by specialist?

**Variable Name:** AUQ144**SAS Label:** Last time hearing tested by specialist?

**English Text:** A hearing test by a specialist is one that is done in a sound proof booth or room, or with headphones. Hearing specialists include audiologists, ear nose and throat doctors, and trained technicians or occupational nurses. When was the last time {you /SP} had {your/his/her} hearing tested by a hearing specialist?

**English Instructions:** READ CATEGORIES IF NECESSARY**Target:** Both males and females 6 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Less than a year ago	1451	1451	
2	1 year to 4 years ago	1541	2992	
3	5 to 9 years ago	622	3614	
4	Ten or more years ago	560	4174	
5	Never	1276	5450	
7	Refused	4	5454	
9	Don't know	205	5659	
.	Missing	9327	14986	

## AUQ147 - Now use hearing aid/ amplifier/ implant

**Variable Name:** AUQ147**SAS Label:** Now use hearing aid/ amplifier/ implant**English Text:** {Do you/Does SP} now wear or use a hearing aid, a personal sound amplifier, or cochlear implant?**Target:** Both males and females 6 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	321	321	
2	No	5338	5659	AUQ630
7	Refused	0	5659	AUQ630
9	Don't know	0	5659	AUQ630
.	Missing	9327	14986	

## AUQ149a - Now use a hearing aid

**Variable Name:** AUQ149a

**SAS Label:** Now use a hearing aid

**English Text:** Which was it?

**English Instructions:** CODE ALL THAT APPLY IF ANY OR ALL RESPONSE OPTIONS 1, 2, OR 3 ARE SELECTED, GO TO AUQ153.

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	A hearing aid	310	310	
7	Refused	0	310	AUQ435
9	Don't know	0	310	AUQ435
.	Missing	14676	14986	

## AUQ149b - Now use a personal sound amplifier

**Variable Name:** AUQ149b

**SAS Label:** Now use a personal sound amplifier

**English Text:** Which was it?

**English Instructions:** CODE ALL THAT APPLY CAPI INSTRUCTION: IF ANY OR ALL RESPONSE OPTIONS 1, 2, OR 3 ARE SELECTED, GO TO AUQ153.

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
2	A personal sound amplifier	13	13	
.	Missing	14973	14986	

## AUQ149c - Now have a cochlear implant

**Variable Name:** AUQ149c

**SAS Label:** Now have a cochlear implant

**English Text:** Which was it?

**English Instructions:** CODE ALL THAT APPLY CAPI INSTRUCTION: IF ANY OR ALL RESPONSE OPTIONS 1, 2, OR 3 ARE SELECTED, GO TO AUQ153.

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
3	A Cochlear implant	4	4	
.	Missing	14982	14986	

## AUQ153 - Past 2 weeks how often worn hearing aid

**Variable Name:** AUQ153

**SAS Label:** Past 2 weeks how often worn hearing aid

**English Text:** In the past 2 weeks, how often {have you/has SP} worn a {hearing aid and/or personal sound amplifier and/or cochlear implant}? If unsure, provide your best estimate of the average amount of time {you have/he has/she has} worn {your/his/her} {hearing aid, and/or personal sound amplifier, and/or cochlear implant}.

**English Instructions:** CAPI INSTRUCTION: IF AUQ149 = 1, DISPLAY "hearing aid" IF AUQ149 = 2, DISPLAY "personal sound amplifier" IF AUQ149 = 3, DISPLAY "cochlear implant" IF AUQ149 = 1 AND AUQ149 = 2, DISPLAY "hearing aid and/or personal sound amplifier" IF AUQ149 = 1 AND AUQ149 = 3, DISPLAY "hearing aid and/or cochlear implant" IF AUQ149 = 2 AND AUQ149 = 3, DISPLAY "personal sound amplifier and/or cochlear implant" IF AUQ149 = 1 AND AUQ149 = 2 AND AUQ149 = 3, DISPLAY "hearing aid and/or personal sound amplifier and/or cochlear implant" READ CATEGORIES IF NECESSARY.

**Target:** Both males and females 6 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Less than 1 hour a day	18	18	AUQ435
2	1 to 3 hours a day	30	48	AUQ435
3	4 to 7 hours a day	55	103	AUQ435
4	8 or more hours per day	195	298	AUQ435
5	Never	23	321	AUQ435
7	Refused	0	321	AUQ435
9	Don't know	0	321	AUQ435
.	Missing	14665	14986	

## AUQ630 - Ever worn hearing aid/amplifier/implant

**Variable Name:** AUQ630**SAS Label:** Ever worn hearing aid/amplifier/implant**English Text:** {Have you/Has SP} ever worn or used a hearing aid, a personal sound amplifier, or cochlear implant in the past?**Target:** Both males and females 6 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	84	84	
2	No	5253	5337	
7	Refused	0	5337	
9	Don't know	1	5338	
.	Missing	9648	14986	

## AUQ435 - CHECK ITEM

<b>Variable Name:</b>	AUQ435
<b>English Instructions:</b>	BOX 4A. IF SP AGE >= 6 AND SP AGE <= 15 CONTINUE. OTHERWISE, GO TO AUQ101.
<b>Target:</b>	Both males and females 6 YEARS - 19 YEARS
<b>Target:</b>	Both males and females 70 YEARS - 150 YEARS



## AUQ440 - Ever had Special Ed/Early Intervention

**Variable Name:** AUQ440

**SAS Label:** Ever had Special Ed/Early Intervention

**English Text:** Has SP ever received Special Education or Early Intervention Services for speech-language, reading, hearing or listening skills, intellectual disability, movement or mobility difficulties (e.g., using arms or legs), or other developmental or disability problems?

**Target:** Both males and females 6 YEARS - 15 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	689	689	
2	No	2328	3017	AUQ460
7	Refused	0	3017	AUQ460
9	Don't know	3	3020	AUQ460
.	Missing	11966	14986	

## AUQ450a - Had service for speech-language

**Variable Name:** AUQ450a

**SAS Label:** Had service for speech-language

**English Text:** Which was it?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD  
AUQ2

**Target:** Both males and females 6 YEARS - 15 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Speech-language	471	471	
77	Refused	0	471	
99	Don't know	0	471	
.	Missing	14515	14986	

## AUQ450b - Had service for reading

**Variable Name:** AUQ450b

**SAS Label:** Had service for reading

**English Text:** Which was it?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD  
AUQ2

**Target:** Both males and females 6 YEARS - 15 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
2	Reading	291	291	
.	Missing	14695	14986	

## AUQ450c - Had service for hearing/listening skills

**Variable Name:** AUQ450c

**SAS Label:** Had service for hearing/listening skills

**English Text:** Which was it?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD  
AUQ2

**Target:** Both males and females 6 YEARS - 15 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
3	Hearing or listening skills	72	72	
.	Missing	14914	14986	

## AUQ450d - Had service for intellectual disability

**Variable Name:** AUQ450d

**SAS Label:** Had service for intellectual disability

**English Text:** Which was it?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD  
AUQ2

**Target:** Both males and females 6 YEARS - 15 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
4	Intellectual disability	96	96	
.	Missing	14890	14986	

## AUQ450e - Had service for movement/mobility issues

**Variable Name:** AUQ450e

**SAS Label:** Had service for movement/mobility issues

**English Text:** Which was it?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD  
AUQ2

**Target:** Both males and females 6 YEARS - 15 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
5	Movement or mobility difficulties	81	81	
.	Missing	14905	14986	

## AUQ450f - Had service for other disabilities

**Variable Name:** AUQ450f

**SAS Label:** Had service for other disabilities

**English Text:** Which was it?

**English Instructions:** INTERVIEWER INSTRUCTION: CODE ALL THAT APPLY HAND CARD  
AUQ2

**Target:** Both males and females 6 YEARS - 15 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
6	Other developmental or disability problems	158	158	
.	Missing	14828	14986	

## AUQ460 - Exposed to very loud noise 10+ hrs/wk

**Variable Name:** AUQ460**SAS Label:** Exposed to very loud noise 10+ hrs/wk**English Text:** Has SP ever been exposed to very loud noise or music for 10 or more hours a week for a period of 3 months or longer? This is noise so loud {he/she has} to shout to be understood or heard 3 feet away.**Target:** Both males and females 6 YEARS - 15 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	62	62	
2	No	2952	3014	End of Section
7	Refused	0	3014	End of Section
9	Don't know	6	3020	End of Section
.	Missing	11966	14986	



## AUQ470 - How long exposed to loud noise 10+hrs/wk

**Variable Name:** AUQ470**SAS Label:** How long exposed to loud noise 10+hrs/wk**English Text:** How long has SP been exposed to very loud noise or music for 10 or more hours a week? This is noise so loud that {he/she has} to shout to be understood or heard 3 feet away.**English Instructions:** READ CATEGORIES IF NECESSARY**Target:** Both males and females 6 YEARS - 15 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Less than 1 year	24	24	End of Section
2	1 to 2 years	11	35	End of Section
3	3 to 4 years	7	42	End of Section
4	5 or more years	19	61	End of Section
7	Refused	0	61	End of Section
9	Don't know	1	62	End of Section
.	Missing	14924	14986	

## AUQ101 - Difficult to follow conversation w/noise

**Variable Name:** AUQ101

**SAS Label:** Difficult to follow conversation w/noise

**English Text:** How often {do you/does SP} have difficulty hearing and understanding if there is background noise, for example, when other people are talking, TV or radio is on, or children are playing? Would you say...

**English Instructions:** HAND CARD AUQ3

**Target:** Both males and females 16 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Always	182	182	
2	Usually	331	513	
3	About half the time	510	1023	
4	Seldom	875	1898	
5	Never	733	2631	
7	Refused	0	2631	
9	Don't know	6	2637	
.	Missing	12349	14986	

## AUQ110 - Hearing causes frustration when talking?

**Variable Name:** AUQ110

**SAS Label:** Hearing causes frustration when talking?

**English Text:** How often does {your/SP's} hearing cause {you/him/her}to feel frustrated when talking to members of {your/his/her} family or to friends? Would you say...

**English Instructions:** HAND CARD AUQ3

**Target:** Both males and females 16 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Always	98	98	
2	Usually	160	258	
3	About half the time	273	531	
4	Seldom	591	1122	
5	Never	1510	2632	
7	Refused	2	2634	
9	Don't know	3	2637	
.	Missing	12349	14986	

## AUQ480 - Avoid groups, limit social life?

**Variable Name:** AUQ480

**SAS Label:** Avoid groups, limit social life?

**English Text:** How often does {your/SP's} hearing cause {you/him/her} to avoid groups of people, limiting or hampering {your/his/her} personal or social life? Would you say...

**English Instructions:** HAND CARD AUQ3

**Target:** Both males and females 16 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Always	54	54	
2	Usually	76	130	
3	About half the time	150	280	
4	Seldom	368	648	
5	Never	1985	2633	
7	Refused	2	2635	
9	Don't know	2	2637	
.	Missing	12349	14986	

## AUQ490 - Problem with dizziness, lightheadedness?

**Variable Name:** AUQ490

**SAS Label:** Problem with dizziness, lightheadedness?

**English Text:** During the past 12 months, {have you/has SP} had a problem with dizziness, lightheadedness, feeling as if {you are/s/he is} going to pass out or faint, unsteadiness or imbalance?

**English Instructions:** INTERVIEWER INSTRUCTION: DO NOT INCLUDE TIMES WHEN DRINKING ALCOHOL.

**Target:** Both males and females 16 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	970	970	
2	No	1663	2633	
7	Refused	0	2633	
9	Don't know	4	2637	
.	Missing	12349	14986	

## AUQ191 - Ears ringing, buzzing past year?

**Variable Name:** AUQ191**SAS Label:** Ears ringing, buzzing past year?**English Text:** In the past 12 months, {have you/has SP} been bothered by ringing, roaring, or buzzing in {your/his/her} ears or head that lasts for 5 minutes or more?**Target:** Both males and females 16 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	475	475	
2	No	2156	2631	AUQ300
7	Refused	1	2632	AUQ300
9	Don't know	5	2637	AUQ300
.	Missing	12349	14986	

## AUQ250 - How long bothered by ringing, buzzing?

**Variable Name:** AUQ250

**SAS Label:** How long bothered by ringing, buzzing?

**English Text:** How long {have you/has SP} been bothered by this ringing, roaring, or buzzing in {your/his/her} ears or head?

**English Instructions:** READ CATEGORIES IF NECESSARY

**Target:** Both males and females 16 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Less than three months	69	69	
2	Three months to a year	66	135	
3	1 to 4 years	94	229	
4	5 to 9 years	57	286	
5	Ten or more years	182	468	
7	Refused	0	468	
9	Don't know	7	475	
.	Missing	14511	14986	

## AUQ255 - In past yr how often had ringing/roaring

**Variable Name:** AUQ255

**SAS Label:** In past yr how often had ringing/roaring

**English Text:** In the past 12 months, how often {have you/has SP} had this ringing, roaring, or buzzing in {your/his/her} ears or head? Would you say...

**Target:** Both males and females 16 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Almost always	195	195	
2	At least once a day	64	259	
3	At least once a week	71	330	
4	At least once a month	49	379	
5	Less frequently than once a month	91	470	
7	Refused	0	470	
9	Don't know	5	475	
.	Missing	14511	14986	



## AUQ260 - Bothered by ringing after loud sounds?

**Variable Name:** AUQ260**SAS Label:** Bothered by ringing after loud sounds?**English Text:** {Are you/Is SP} bothered by ringing, roaring, or buzzing in {your/his/her} ears or head only after listening to loud sounds or loud music?**Target:** Both males and females 16 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	69	69	
2	No	398	467	
7	Refused	0	467	
9	Don't know	8	475	
.	Missing	14511	14986	

## AUQ270 - Bothered by ringing when going to sleep?

**Variable Name:** AUQ270**SAS Label:** Bothered by ringing when going to sleep?**English Text:** {Are you/Is SP} bothered by ringing, roaring, or buzzing in {your/his/her} ears or head when going to sleep?**Target:** Both males and females 16 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	157	157	
2	No	314	471	
7	Refused	0	471	
9	Don't know	4	475	
.	Missing	14511	14986	

## AUQ280 - How much of a problem is ringing?

**Variable Name:** AUQ280**SAS Label:** How much of a problem is ringing?**English Text:** How much of a problem is this ringing, roaring, or buzzing in {your/his/her} ears or head? Would you say...**Target:** Both males and females 16 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	No problem	122	122	
2	A small problem	186	308	
3	A moderate problem	123	431	
4	A big problem	29	460	
5	A very big problem	13	473	
7	Refused	0	473	
9	Don't know	2	475	
.	Missing	14511	14986	

## AUQ500 - Discussed ringing with doctor?

**Variable Name:** AUQ500**SAS Label:** Discussed ringing with doctor?**English Text:** {Have you/Has SP} ever discussed this ringing, roaring, or buzzing in {your/his/her} ears or head with {your/his/her} doctor or other health care professional?**Target:** Both males and females 16 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	255	255	
2	No	216	471	
7	Refused	0	471	
9	Don't know	4	475	
.	Missing	14511	14986	

## AUQ300 - Ever used firearms for any reason?

**Variable Name:** AUQ300

**SAS Label:** Ever used firearms for any reason?

**English Text:** This next question is about {your/SP's} use of firearms that {you/he/she} may have used for target shooting, hunting, for {your/his/her} job or in military service. {Have you/Has SP} ever used firearms for any reason?

**Target:** Both males and females 16 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	1044	1044	
2	No	1592	2636	AUQ330
7	Refused	1	2637	AUQ330
9	Don't know	0	2637	AUQ330
.	Missing	12349	14986	

## AUQ310 - How many total rounds ever fired?

**Variable Name:** AUQ310**SAS Label:** How many total rounds ever fired?**English Text:** How many total rounds {have you/has SP} ever fired?**English Instructions:** READ CATEGORIES IF NECESSARY. INTERVIEWER: ONE ROUND EQUALS ONE SHOT. INCLUDE TARGET SHOOTING, HUNTING, YOUR JOB AND MILITARY SERVICE.**Target:** Both males and females 16 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	1 to less than 100 rounds	479	479	
2	100 to less than 1000 rounds	245	724	
3	1000 to less than 10,000 rounds	203	927	
4	10,000 to less than 50,000 rounds	64	991	
5	50,000 rounds or more	28	1019	
7	Refused	2	1021	
9	Don't know	23	1044	
.	Missing	13942	14986	

## AUQ320 - Wear hearing protection when shooting?

**Variable Name:** AUQ320

**SAS Label:** Wear hearing protection when shooting?

**English Text:** How often {did you/did SP} wear hearing protection devices (ear plugs, ear muffs) when shooting firearms?

**English Instructions:** HAND CARD AUQ1. INTERVIEWER: PROTECTIVE HEARING DEVICES INCLUDE PLUGS AND EARMUFFS.

**Target:** Both males and females 16 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Always	257	257	
2	Usually	93	350	
3	About half the time	82	432	
4	Seldom	109	541	
5	Never	499	1040	
7	Refused	1	1041	
9	Don't know	3	1044	
.	Missing	13942	14986	

## AUQ330 - Ever had job exposure to loud noise?

**Variable Name:** AUQ330**SAS Label:** Ever had job exposure to loud noise?

**English Text:** These next questions are about noise exposure {you/SP} may have had at work. {Have you/Has SP} ever had a job, or combination of jobs where {you were/s/he was} exposed to loud sounds or noise for 4 or more hours a day, several days a week? (Loud means so loud that {you/s/he} must speak in a raised voice to be heard.)

**Target:** Both males and females 16 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	753	753	
2	No	1742	2495	AUQ370
3	Never worked	139	2634	AUQ370
7	Refused	0	2634	AUQ370
9	Don't know	3	2637	AUQ370
.	Missing	12349	14986	



## AUQ340 - How long exposed to loud noise at work

**Variable Name:** AUQ340

**SAS Label:** How long exposed to loud noise at work

**English Text:** For how many months or years {have you/has SP} been exposed at work to loud sounds or noise for 4 or more hours a day, several days a week?

**English Instructions:** READ CATEGORIES IF NECESSARY

**Target:** Both males and females 16 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Less than 3 months	65	65	
2	3 to 11 months	65	130	
3	1 to 2 years	84	214	
4	3 to 4 years	70	284	
5	5 to 9 years	83	367	
6	10 to 14 years	71	438	
7	15 or more years	313	751	
77	Refused	0	751	
99	Don't know	2	753	
.	Missing	14233	14986	

## AUQ350 - Ever exposed to very loud noise at work

**Variable Name:** AUQ350**SAS Label:** Ever exposed to very loud noise at work**English Text:** In {your/SP's} work {were you/was he/was she} exposed to very loud noise?  
(Very loud noise is noise that is so loud {you have/he has/she has} to shout in order to be understood by someone standing 3 feet away from {you/him/her}.)**Target:** Both males and females 16 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	461	461	
2	No	290	751	AUQ370
7	Refused	0	751	AUQ370
9	Don't know	2	753	AUQ370
.	Missing	14233	14986	

## AUQ360 - How long exposed to very loud noise?

**Variable Name:** AUQ360**SAS Label:** How long exposed to very loud noise?**English Text:** This next question is about {your/SP's} work in jobs where there was very loud noise for 4 or more hours a day, several days a week. Please give me the total number of months or years for all jobs where this has happened.**English Instructions:** READ CATEGORIES IF NECESSARY**Target:** Both males and females 16 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Less than 3 months	28	28	
2	3 to 11 months	33	61	
3	1 to 2 years	54	115	
4	3 to 4 years	48	163	
5	5 to 9 years	62	225	
6	10 to 14 years	33	258	
7	15 or more years	196	454	
8	Not exposed	1	455	
77	Refused	0	455	
99	Don't know	6	461	
.	Missing	14525	14986	

## AUQ370 - Had off-work exposure to loud noise?

**Variable Name:** AUQ370**SAS Label:** Had off-work exposure to loud noise?

**English Text:** Outside of a job, {have you/has SP} ever been exposed to very loud noise or music for 10 or more hours a week? This is noise so loud that {you have/s/he has} to shout to be understood or heard 3 feet away. Examples are noise from power tools, lawn mowers, farm machinery, cars, trucks, motorcycles, motor boats or loud music.

**Target:** Both males and females 16 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Yes	296	296	
2	No	2339	2635	AUQ380
7	Refused	0	2635	AUQ380
9	Don't know	2	2637	AUQ380
.	Missing	12349	14986	

## AUQ510 - How long exposed to loud noise 10+hrs/wk

**Variable Name:** AUQ510**SAS Label:** How long exposed to loud noise 10+hrs/wk**English Text:** How long {have you/has SP} been exposed to very loud noise or music for 10 or more hours a week? This is noise so loud that {you have/s/he has} to shout to be understood or heard 3 feet away.**English Instructions:** READ CATEGORIES IF NECESSARY**Target:** Both males and females 16 YEARS - 19 YEARS**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Less than 1 year	86	86	
2	1 to 2 years	40	126	
3	3 to 4 years	30	156	
4	5 or more years	137	293	
7	Refused	0	293	
9	Don't know	3	296	
.	Missing	14690	14986	

## AUQ380 - Past year: worn hearing protection?

**Variable Name:** AUQ380

**SAS Label:** Past year: worn hearing protection?

**English Text:** In the past 12 months, how often did {you/SP} wear hearing protection devices (ear plugs, ear muffs) when exposed to very loud sounds or noise?

**English Instructions:** INTERVIEWER INSTRUCTION: PLEASE INCLUDE BOTH ON THE JOB AND OFF THE JOB EXPOSURES. HAND CARD AUQ4

**Target:** Both males and females 16 YEARS - 19 YEARS

**Target:** Both males and females 70 YEARS - 150 YEARS

Code or Value	Value Description	Count	Cumulative	Skip to Item
1	Always	123	123	
2	Usually	104	227	
3	About half the time	67	294	
4	Seldom	158	452	
5	Never	1572	2024	
6	No noise exposure past 12 months	613	2637	
77	Refused	0	2637	
99	Don't know	0	2637	
.	Missing	12349	14986	