

## **Hearing Disability (v1)**

### **Definition Fact Sheet & Technical Brief**

**Authors:** Margaret Nilz, MPH<sup>1</sup>; Erika Austhof, PhD, MPH<sup>2</sup>; Kelley G. Chester, DrPH MPH JM<sup>3</sup>; Josh Levy<sup>4</sup>; Robyn A. Cree, PhD<sup>5</sup>; Allison Wray, MPH<sup>6</sup>; Joseph Holbrook, PhD, MPH<sup>5</sup>; Qi Cheng, PhD<sup>5</sup>; Qing Zhang, PhD, MD<sup>5</sup>; Catherine E. Rice PhD<sup>5</sup>; Rene Borroto BA<sup>7</sup>; Sandra Gonzalez PhD MPH<sup>8</sup>; Jessica Schultz MPH<sup>9</sup>; Lakshmi Radhakrishnan MPH<sup>10</sup>; Zachary Stein MPH<sup>10</sup>; Adrianna Evans, MPH<sup>1</sup>

**Author Affiliations:** <sup>1</sup>Association of State and Territorial Health Officials; <sup>2</sup>Aengle Consulting LLC; <sup>3</sup>Thought Bridge LLC; <sup>4</sup>Levy Informatics; <sup>5</sup>National Center on Birth Defects and Developmental Disabilities, US Centers for Disease Control and Prevention; <sup>6</sup>Oak Ridge Institute for Science and Education; <sup>7</sup>Georgia Department of Public Health; <sup>8</sup>Colorado Department of Public Health & Environment Electronic and Disease Reporting Branch; <sup>9</sup>Tennessee Department of Health; <sup>10</sup>Office of Public Health Data, Surveillance, and Technology, US Centers for Disease Control and Prevention

**Acknowledgements:** We extend our heartfelt gratitude to the Council of State and Territorial Epidemiologists' National Syndromic Surveillance Program Community of Practice, the MA Department of Public Health for sharing a list of ICD codes associated with disability, and all scientific panel participants for their invaluable contributions in crafting these comprehensive syndromic surveillance definitions to identify emergency department visits by people with disabilities.

#### **Points of contact:**

Robyn Cree, PhD ([nru7@cdc.gov](mailto:nru7@cdc.gov)) – CDC/NCBDDD

Joseph Holbrook, PhD ([vzt4@cdc.gov](mailto:vzt4@cdc.gov)) – CDC/NCBDDD

**Definition Description:** The Hearing Disability (v1) definition is part of a group of eight definitions (seven domain-specific and one overall) to identify emergency department visits by people with disabilities using a set of criteria based on diagnostic codes, including ICD-9, ICD-10, SNOMED codes, and keywords representing patient reason for visit. These definitions can be used to disaggregate monitored health outcomes by disability status and type and will ultimately help improve emergency and ongoing surveillance efforts. We encourage National Syndromic Surveillance Program (NSSP) Community of Practice (CoP) members to work with disability organizations and members of the disability community within their jurisdictions when using the definitions, interpreting results, and developing recommendations based on these findings. This definition was tested and intended to run on the "CC and DD parsed free text" field in ESSENCE.

**New or Revised Definition:** New Definition

**Date Added to ESSENCE:** February 2025

#### **Use-Cases for Definition:**

Case-finding: Not Intended as Use Case

Trend monitoring: Primary

Early outbreak detection: Not Intended as Use Case

Emergent Condition: Not Intended as Use Case

**Justification for New Definition:** Information on disability status and type are not systematically collected during health encounters, and, as such, monitored health outcomes cannot currently be disaggregated by this demographic. Identifying people with disabilities using definitions for syndromic surveillance could bolster ongoing surveillance before, during, and after emergencies. It could also improve national, state, and local capacity to respond to, detect, understand, and monitor health events among people with disabilities during emergencies.

**Data Source During Development:** Emergency department visits

Validation Methods: The Association of State and Territorial Health Officials (ASTHO) worked collaboratively with CDC and the Council of State and Territorial Epidemiologists (CSTE)-led NSSP CoP to create diagnostic code-based definitions to identify emergency department visits from people with disabilities through a stakeholder-informed process. ASTHO, with support from Thought Bridge LLC, collected stakeholder feedback through a two-step process to inform the development of diagnostic code- and chief complaint-based definitions for disability to be used in NSSP. This two-step process included key informant interviews (KIIs) followed by five scientific panel sessions to inform definition development and broader dissemination efforts to promote uptake of the definitions. See Overall Disability (v1) Definition Fact Sheet & Technical Brief for a full description of definition development methods.

We used the following developed definitions from the CCW to develop the hearing domain. If only ICD-10 was available in a definition, we used the prior version for ICD-9:

- [Sensory - Deafness and Hearing Impairment](#)

Using this initial set of codes, we abstracted relevant ICD-10 codes following inclusion criteria. Additional codes were collected from an ongoing project at the Massachusetts Department of Health, Office of Health Equity. Many of these codes overlapped with the existing CCW definition. Keywords were developed from feedback following the third and fourth scientific panels, and from keywords included in the Washington Group Short Set related to hearing. Following state and local pilot testing, we excluded additional terms and excluded specific ICD-10 codes that were leading to false positive results.

**Important Analytic Note:** *If users plan to explore the co-occurrence of the Hearing Disability domain with the Specific Developmental or Learning Disability domain, revision of the keyword negations should be conducted as this domain includes “vision impaired” and “vision problems” whereas the Specific Developmental and Learning Disability domain excludes these as keywords.*

A summary of documented changes made during each step of the development process is included in Table 3. We have also created an Excel sheet with all codes and chief complaints included in this definition as an appendix. The definition domain fact sheets offer versatile guidance, allowing users to employ them individually or collectively as a whole definition of disability based on the objectives of the jurisdiction. Utilizing the accompanying Excel sheets enables a comprehensive understanding of the conditions included within each domain.

This project was supported by the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award totaling \$650,000 with 100 percent funded by CDC/HHS. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by CDC/HHS, the U.S. Government, Government, the California Department of Public Health or the California Health and Human Services Agency.

Validation Results: Jurisdictions found that this definition was broadly able to capture the intended cases. A few false positives were identified, as a result of misspellings, negations, and use of the word ‘hear’ in case text. The Hearing Disability (v1) definition was tested nationally and by three states: TN, GA, and CO. Jurisdictions partnering with CDC and ASTHO to pilot this definition saw a positive predictive value (PPV) of 87% for TN, 38% for GA, and 40% for CO. As a result of the validation process, all codes in the H66 and H61.2 ICD-10 list (same exclusions added for ICD-9 and SNOMED were added to exclusions, and exclusion variations were included for variations of ‘HEAR’ with ‘VOICE’, ‘SOUND’, ‘NOISE’, ‘SCREAM’, ‘CRY’, ‘POP’, ‘WHEEZ’, ‘COUGH’, misspellings due to the use of the word ‘HEAR’ instead of ‘HERE’, e.g. ‘HEAR FOR DIALYSIS’, and negations, such as ‘DENIES ANY HEARING LOSS’, ‘NO LOSS OF HEARING’. As a result of the low jurisdiction PPV, validation was conducted again at the national level following final definition revisions. As part of national testing, ‘EAR INFECTION’ and ‘IMPACTED CERUMEN’ were added as negations. Following edits made following jurisdiction testing and the second round of national-level testing, PPV at the national level was 96.5%.

Limitations: This definition has some limitations, including some false positives that remain related to impacted cerumen, pulled in combination with general hearing loss codes such as unspecified hearing loss, bilateral hearing loss, etc. (though infrequently).

Additionally, there are at least five limitations common to the Overall Disability (v1) definition and all seven disability domain-specific definitions. First, identifying people with disabilities as a demographic using diagnostic codes follows a medical model of disability, and does not capture the social or identity-based aspects of disability preferred by many disability advocates. However, NSSP-ESSENCE is limited by the information routinely collected in the medical record such as diagnostic codes and notes captured as “chief complaint” to document presenting medical and relevant information for the visit. Future efforts to also include self- or other-report of functional disability collected as a demographic at the point of care may inform refinements to these definitions. Second, diagnostic codes do not map directly to functional limitations and a person may have more than one disability type, yet only discuss certain chief complaints during an ED visit. However, we can assume that certain conditions can be reasonably expected to produce functional limitations (e.g., someone with muscular dystrophy could reasonably be categorized as having a mobility disability). Third, coding practices can vary by region, hospital, and provider. Fourth, this method depends on factors outside the provider’s control (billing considerations; EMR systems such as Epic or Cerner may have limits on how many dx codes can be listed under a visit). As a definition that is dependent on secondary diagnosis codes for detection not necessarily captured by the chief complaint, the ability to identify a person with a disability is influenced by the number of diagnosis codes a facility submits for syndromic surveillance. Therefore, this definition may be better able to identify people with disabilities in better resourced facilities, while data from lower cost EMR systems may be more likely to underrepresent the disability community. Fifth, many people with disabilities will be missed using this method as it relies on existing data collected on electronic health records (EHR), rather than standard self-reported questions that are commonly used to identify people with disabilities. People presenting to an emergency department for a health crisis or emergency may not have disability-related diagnoses indicated on their EHR, because their disability was not recognized by the provider and/or disclosed by the patient. Mild (or non-apparent) disabilities and/or disabilities unrelated to the reason for the ED visit may be more frequently under-documented than more apparent disabilities or those directly associated with the reason for visit.

The definitions can be used to identify important trends and serve as a “signal” of group variation for key outcomes of interest. However, NSSP users must be aware that results are likely an incomplete indicator of disability status or type. Despite limitations, these definitions can help serve as a stopgap to identify people with disabilities within NSSP-ESSENCE while we work collectively to address systemic issues related to collecting disability as a demographic at the point of care.

Definition Fields and Structure: Hearing-related disability, including unique chief complaint terms and diagnostic codes.

## Detailed Definition Components

**Table 1. Inclusion and exclusion terms based on a case definition using hearing disability-specific discharge diagnosis codes, Hearing Disability (v1) definition**

| Variable Type                         | Terms   | Description (Diagnosis Codes Only)   |
|---------------------------------------|---|--|
| <b>Inclusions</b>                     |   |  |
| Discharge<br>Diagnosis: ICD-10-<br>CM | D33.3, H93.3                                    | Acoustic neuroma   |
|                                       | G60.1   | Refsum disease   |
|                                       | H81.0, H81.4                                    | Disturbance of labyrinthine-vestibular function, Meniere's disease   |
|                                       | H90.0, H93.8, H93.93                            | Hearing loss, bilateral  |
|                                       | H90.3   | Sensorineural hearing loss, bilateral  |
|                                       | H90.4   | Sensorineural hearing loss, unilateral with unrestricted hearing on the contralateral side                               |
|                                       | H90.5   | Unspecified sensorineural hearing loss   |
|                                       | H90.6   | Mixed conductive and sensorineural hearing loss, bilateral   |
|                                       | H90.7   | Mixed conductive and sensorineural hearing loss, unilateral with unrestricted hearing on the contralateral side          |
|                                       | H90.8   | Mixed conductive and sensorineural hearing loss, unspecified   |
|                                       | H90.A21   | Sensorineural hearing loss, unilateral, right ear, with restricted hearing on the contralateral side                     |
|                                       | H90.A22   | Sensorineural hearing loss, unilateral, left ear, with restricted hearing on the contralateral side                      |
|                                       | H90.A31   | Mixed conductive and sensorineural hearing loss, unilateral, right ear with restricted hearing on the contralateral side |
|                                       | H90.A32   | Mixed conductive and sensorineural hearing loss, unilateral, left ear with restricted hearing on the contralateral side  |
|                                       | H91.01  | Ototoxic hearing loss, right ear   |
|                                       | H91.02  | Ototoxic hearing loss, left ear  |
|                                       | H91.03  | Ototoxic hearing loss, bilateral   |
|                                       | H91.09  | Ototoxic hearing loss, unspecified ear   |
|                                       | H91.2   | Sudden idiopathic hearing loss, NOS  |
|                                       | H91.3   | Deaf nonspeaking NEC   |
|                                       | H91.8X1   | Other specified hearing loss, right ear  |
|                                       | H91.8X2   | Other specified hearing loss, left ear   |
|                                       | H91.8X3   | Other specified hearing loss, bilateral  |
|                                       | H91.8X9   | Other specified hearing loss, unspecified ear  |
|                                       | H91.9   | Unspecified hearing loss   |
|                                       | H93.25  | Auditory processing disorder   |
|                                       | Q16.0, Q16.1, Q16.2, Q16.3, Q16.4, Q16.5, Q16.9 | Congenital malformations of ear causing impairment of hearing  |
|                                       | Z96.21  | Cochlear implant status  |
| Discharge<br>Diagnosis: ICD-9-<br>CM  | 315.23  | Auditory processing disorder   |
|                                       | 356.3   | Refsum disease   |
|                                       | 388.11  | Other specified hearing loss   |
|                                       | 389   | Conductive and sensorineural hearing loss  |
|                                       | 389.10  | Unspecified sensorineural hearing loss   |
|                                       | 389.11  | Sensory hearing loss, bilateral  |
|                                       | 389.12  | Neural hearing loss, bilateral   |
|                                       | 389.13  | Neural hearing loss, unilateral  |
|                                       | 389.14  | Central hearing loss   |

|   |  |  |
|---|--|--|
|   | 389.15   | Sensorineural hearing loss, unilateral   |
|   | 389.15   | Sensorineural hearing loss, unilateral, left ear, with restricted hearing on the contralateral side  |
|   | 389.15   | Sensorineural hearing loss, unilateral, right ear, with restricted hearing on the contralateral side |
|   | 389.16   | Sensorineural hearing loss, asymmetrical   |
|   | 389.17   | Sensory hearing loss, unilateral   |
|   | 389.18   | Sensorineural hearing loss, bilateral  |
|   | 389.2  | Mixed conductive and sensorineural hearing loss  |
|   | 389.7  | Deaf nonspeaking NEC   |
|   | 389.8  | Other specified forms of hearing loss  |
|   | 744  | Congenital malformations of ear causing impairment of hearing  |
|   | 225.1, 388.5   | Acoustic neuroma   |
|   | 386.00, 386.01, 386.02, 386.03, 386.04, 386.2  | Hearing loss, bilateral  |
|   | Discharge<br>Diagnosis:–<br>SNOMED concepts  | 15188001   |
| 15241006                                |  | Unspecified sensorineural hearing loss   |
| 25362006                                |  | Refsum's disease   |
| 77507001                                |  | Mixed hearing loss   |
| 79471008                                |  | Sudden idiopathic hearing loss, NOS  |
| 95820000                                |  | Hearing loss, bilateral  |
| 111339003                               |  | Congenital malformations of ear causing impairment of hearing  |
| 194424005                               |  | Central conductive, and sensorineural hearing loss   |
| 194429000                               |  | Mixed conductive and sensorineural hearing loss, bilateral   |
| 359612003                               |  | Cochlear implant status  |
| 427772009                               |  | Other specified hearing loss   |
| 126949007, 77949003                     |  | Acoustic neuroma   |
| 13445001, 38403006, 20425006            |  | Disturbance of labyrinthine-vestibular function, Meniere's disease                                   |
| 15241006, 427772009, 60700002, 95820000 |  | Sensory hearing loss, unilateral   |
| 229752008, 188061000119100              |  | Auditory processing disorder   |
| 61947007, 788953003, 95821001           |  | Deaf nonspeaking NEC   |
| 77507001, 95820000                      |  | Neural hearing loss, bilateral   |
| Chief Complaint<br>Terms                | deaf, hearing impair, sign language, ASL, D/HH<br>(trouble, hard, difficulty, impair, problem, loss, reduced) AND (hear) |  |
| <b>Exclusions</b>                       |  |  |
| Discharge<br>Diagnosis:ICD-10-<br>CM    | H66  | Suppurative and unspecified otitis media   |
|   | H61.20, H61.21, H61.22, H61.23   | Impacted cerumen   |
| Discharge<br>Diagnosis: ICD-9-<br>CM    | 380.4  | Impacted cerumen   |
|   | 382.0, 382.1, 382.2, 382.3, 382.4, 382.9   | Suppurative and unspecified otitis media   |
|   | 18070006   | Impacted cerumen   |

|  |  |  |
|--|--|--|
| Discharge<br>Diagnosis:<br>SNOMED concepts | 65363002   | Suppurative and unspecified otitis media |
| Chief Complaint<br>Terms                   | heart, hear for dialysis, (denie, deny, no) AND (hear) AND (loss, problem),<br>(voices, sound, noise, scream, cry, pop, wheez, cough) AND (hear),<br>ear infection, impacted cerumen |  |

Plain Language Syntax Description: The Hearing Disability (v1) definition intends to identify emergency department visits by people with hearing-related disabilities. The definition includes diagnosis codes and words related to functional difficulty related to hearing. Users can combine the hearing definition with other definitions used to track important public health outcomes (e.g., heat-related illness, suicide attempts, or infection) to find out if emergency department visits for these important outcomes are more common among people with hearing-related disabilities compared to people without hearing-related disabilities. This definition will not capture everyone with a hearing-related disability, but it can be used to look at trends and help public health professionals better understand the impact of health concerns on the disability community. This information can be used to help make sure the needs of people with disabilities are considered and addressed when responding to health concerns.

**Table 2. ESSENCE syntax, Hearing Disability (v1) Definition**

|   |  |
|---|--|
| This definition was tested and intended to run on the “CC and DD parsed free text” field in ESSENCE.  |  |
| Hearing Disability  |  |
| <ul style="list-style-type: none"> <li>ICD9           <ul style="list-style-type: none"> <li>(,^;389^,or,^;389[278];^,or,^;389[1][0-9];^,or,^;38906;^,or,^;2251;^,or,^;2251[0-9];^,or,^;31523;^,or,^;3563;^,or,^;3563[0-9];^,or,^;386[02];^,or,^;386[02][0-9];^,or,^;388[2589];^,or,^;388[2589][0-9];^,or,^;38811;^,or,^;744;^,or,^;744[0-9];^,or,^;744[0-9][0-9];^,or,^;),ANDNOT,(,^;380.4;^,or,^;382[0-9];^,or,^;)</li> </ul> </li> <li>ICD10           <ul style="list-style-type: none"> <li>(,^;D333^,or,^;G601^,or,^;H81[04]^,or,^;H90[03-8]^,or,^;H90A[23]^,or,^;H91[02389]^,or,^;H9325^,or,^;H933^,or,^;Q16[0-9]^,or,^;Z9621^,or,^;),ANDNOT,(,^;H66[012349]^,or,^;H612[0-3];^,or,^;)</li> </ul> </li> <li>SNOMED           <ul style="list-style-type: none"> <li>(,^;79471008;^,or,^;427772009;^,or,^;60700002;^,or,^;229752008;^,or,^;194424005;^,or,^;61947007;^,or,^;13445001;^,or,^;359612003;^,or,^;111339003;^,or,^;15188001;^,or,^;77507001;^,or,^;194429000;^,or,^;25362006;^,or,^;15241006;^,or,^;77949003;^,or,^;188061000119100;^,or,^;788953003;^,or,^;38403006;^,or,^;95820000;^,or,^;126949007;^,or,^;95821001;^,or,^;20425006;^,or,^;),ANDNOT,(,^;18070006;^,or,^;65363002;^,or,^;)</li> </ul> </li> <li>All Together           <ul style="list-style-type: none"> <li>(,^;389;^,or,^;389[278];^,or,^;389[1][0-9];^,or,^;38906;^,or,^;2251;^,or,^;2251[0-9];^,or,^;31523;^,or,^;3563;^,or,^;3563[0-9];^,or,^;386[02];^,or,^;386[02][0-9];^,or,^;388[2589];^,or,^;388[2589][0-9];^,or,^;38811;^,or,^;744;^,or,^;744[0-9];^,or,^;744[0-9][0-9];^,or,^;D333^,or,^;G601^,or,^;H81[04]^,or,^;H90[03-8]^,or,^;H90A[23]^,or,^;H91[02389]^,or,^;H9325^,or,^;H933^,or,^;Q16[0-9]^,or,^;Z9621^,or,^;79471008;^,or,^;427772009;^,or,^;60700002;^,or,^;229752008;^,or,^;194424005;^,or,^;61947007;^,or,^;13445001;^,or,^;359612003;^,or,^;111339003;^,or,^;15188001;^,or,^;77507001;^,or,^;194429000;^,or,^;25362006;^,or,^;15241006;^,or,^;77949003;^,or,^;188061000119100;^,or,^;788953003;^,or,^;38403006;^,or,^;95820000;^,or,^;126949007;^,or,^;95821001;^,or,^;20425006;^,or,^;(^deaf^,or,^hearing impair^,or,^sign language^,or,^!ASL!,or,^D/HH^,or,^(^trouble^,or,^hard^,or,^difficulty^,or,^impaired^,or,^problem^,or,^loss^,or,^reduced^,or,^),AND,(^hear^,or,^),),ANDNOT,(,^;380.4;^,or,^;382[0-9];^,or,^;H66[012349]^,or,^;H612[0-3];^,or,^;18070006;^,or,^;65363002;^,or,^;ear infection^,or,^impacted cerumen^,or,^;(^voices^,or,^sound^,or,^noise^,or,^scream^,or,^cry^,or,^pop^,or,^wheez^,or,^cough^,or,^),AND,(^hear^,or,^),or,^heart^,or,^hear for dialysis^,or,^;(^denie^,or,^deny^,or,^no^,or,^),AND,(^hear^,or,^),AND,(^loss^,or,^problem^,or,^),),)</li> </ul> </li> </ul> |  |

## Appendix

### Definition Evolution During Development: Hearing Disability (v1)

|  |
|--|
| <p>Iteration 1: The first iteration of the definition included domains of Hearing, Vision, Mobility, IDD, and Cognition and Central Nervous System Disorders. This first definition was presented to the scientific panel.</p> <ul style="list-style-type: none"><li>• General<ul style="list-style-type: none"><li>○ The scientific panel suggested we capture more domains and conditions, like those included in disability policies like the Americans with Disabilities Act (ADA). As a result, we excluded conditions generally expected to last less than 6 months, those that can be treated surgically or through medication, and are acute or generally self-limiting conditions (e.g., conditions that do not result in functional impairments or limitations to daily life).</li><li>○ We included additional domains for Self-care and Learning</li><li>○ Mapped ICD-10 to ICD-9 where needed</li></ul></li></ul>   |
| <p>Iteration 2: The second iteration was provided to the scientific panel for feedback and edits. The following changes were made:</p> <ul style="list-style-type: none"><li>• Hearing<ul style="list-style-type: none"><li>○ None</li></ul></li></ul>   |
| <p>Iteration 3: The third iteration was provided to the scientific panel for feedback and edits. The following changes were made:</p> <ul style="list-style-type: none"><li>• General<ul style="list-style-type: none"><li>○ Added numerous keywords provided during breakout sessions of the scientific panel</li></ul></li></ul>   |
| <p>Iteration 4: Following the third scientific panel, CDC pilot-tested the definition at the national level. The following changes were made:</p> <ul style="list-style-type: none"><li>• General<ul style="list-style-type: none"><li>○ Added key chief complaint terms discussed during the panel meeting to each domain</li></ul></li></ul>   |
| <p>Iteration 5: Following state and local pilot testing of the definition, the following changes were made:</p> <ul style="list-style-type: none"><li>• Hearing<ul style="list-style-type: none"><li>○ Suggestion to exclude codes for ear infections (otitis media) H66.9[123] and H61.2[123].<ul style="list-style-type: none"><li>▪ Decided to exclude all codes in the H66 and H61.2 ICD-10 list (same exclusions added for ICD-9 and SNOMED).</li></ul></li><li>○ Suggestion to determine if H81.09^MENIERE'S DISEASE UNSPECIFIED EAR or visits related to ear infection or impacted cerumen should remain included.<ul style="list-style-type: none"><li>▪ Decided to keep code H81.0 due to lifelong nature of condition but excluded impacted cerumen (H61.2).</li></ul></li><li>○ Cleaned up ICD-9, ICD-10, and SNOMED of duplicate codes in Excel sheet.</li><li>○ Added suggestions for exclusions and variations to keywords including:<ul style="list-style-type: none"><li>▪ Variations of 'HEAR' with 'VOICE', 'SOUND', 'NOISE', 'SCREAM', 'CRY', 'POP', 'WHEEZ', 'COUGH'.</li><li>▪ Misspellings due to the use of the word 'HEAR' instead of 'HERE', e.g. 'HEAR FOR DIALYSIS'.</li><li>▪ Negations, such as 'DENIES ANY HEARING LOSS', 'NO LOSS OF HEARING'</li></ul></li></ul></li></ul> |
| <p>Iteration 6: Following feedback from the fourth scientific panel, the following changes were made:</p> <ul style="list-style-type: none"><li>• General</li></ul>  |



- Description for how keywords were collected and references to the Washington Group Short Set were added to each relevant fact sheet

Iteration 7: CDC conducted additional round of pilot testing of the definition at the national level to address concerns with inconsistent and/or low PPVs at the state and local level. Due to the scope of proposed revisions as described below, the definition development team decided to hold an ad-hoc fifth scientific panel meeting in May 2024.

- Hearing
  - Suggested to add exclusions for chief complaints “ear infection” and “impacted cerumen” as many false positives were associated with these chief complaints were observed.

Iteration 8: Following the fifth and final scientific panel, the following changes were made:

- Hearing
  - Added exclusions for chief complaints ‘EAR INFECTION’ and “IMPACTED CERUMEN” as many false positives associated with these chief complaints were observed.

Note: Table includes revisions for hearing domain only. See Overall Disability (v1) Definition Fact Sheet & Technical Brief for a full list of revisions.