

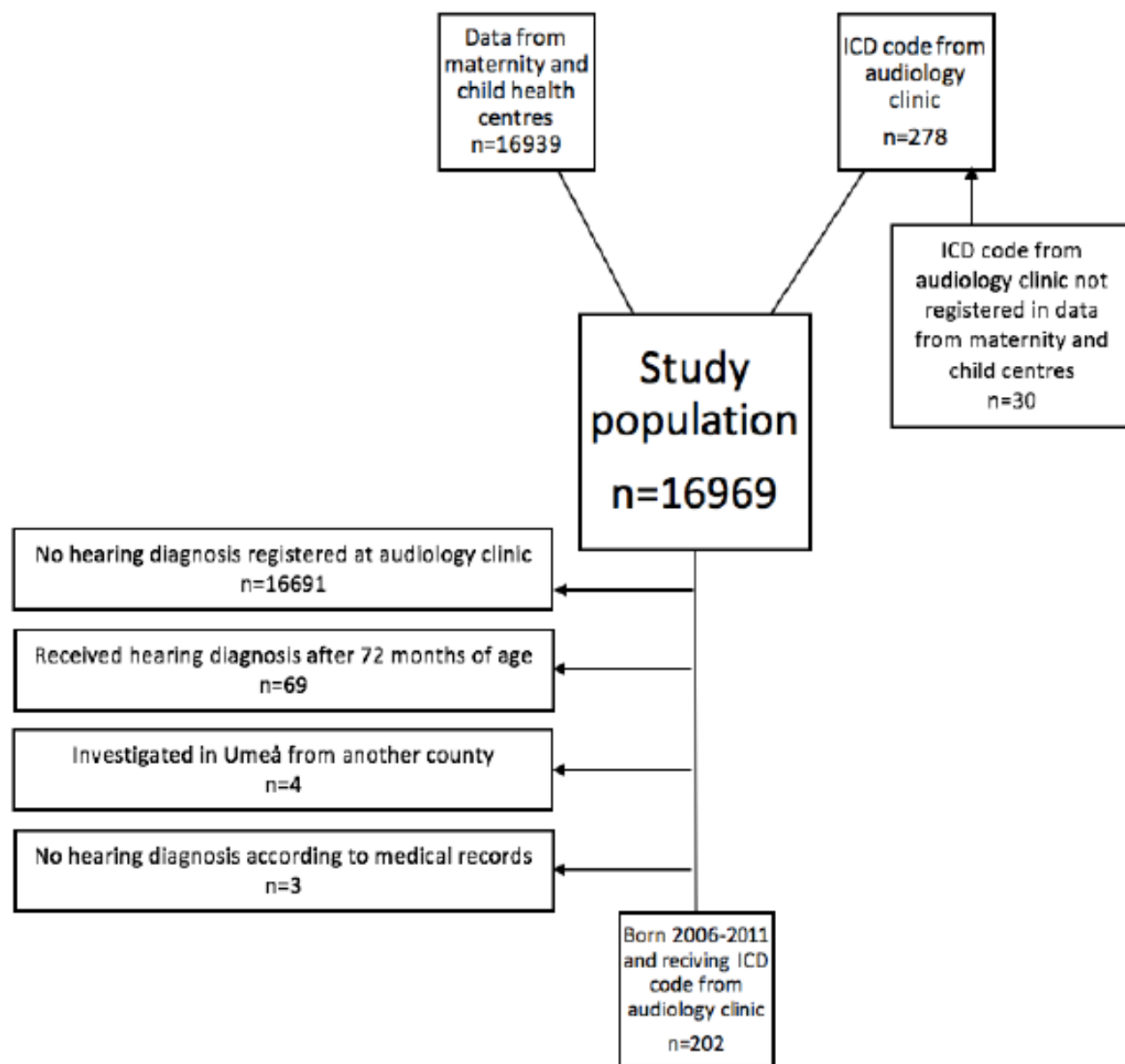
Hörselscreening barn födda 2006-2011 i Västerbotten

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| ICD-code | Diagnosis group | Diagnosis group* |
|--|--|---------------------|
| H 900, Conductive hearing loss, bilateral | Conductive hearing loss (CHL) | Other hearing loss* |
| H 901, Conductive hearing loss, unilateral with unrestricted hearing on the contralateral side | | |
| H 902, Conductive hearing loss, unspecified | | |
| H 903, Sensorineural hearing loss, bilateral | sensorineural hearing loss (SNHL) | |
| H 904, Sensorineural hearing loss, unilateral with unrestricted hearing on the contralateral side | | |
| H 905, Unspecified sensorineural hearing loss | | |
| H 906, Mixed conductive and sensorineural hearing loss, bilateral | Mixed conductive and sensorineural hearing loss (MHL) | |
| H 907, Mixed conductive and sensorineural hearing loss, unilateral with unrestricted hearing on the contralateral side | | |
| H 908, Mixed conductive and sensorineural hearing loss, unspecified | | |
| H 918, Other specified hearing loss | Other hearing loss | Other hearing loss* |
| H 919, Unspecified hearing loss | | |

| Referral reason | Referral groups |
|---|-------------------------|
| After OAE | Screening |
| After BOEL | |
| After Pure-tone audiometry | |
| Known at ear nose throat clinic | Contact with healthcare |
| After contact with speech therapist | |
| Referral from children's hospital | |
| Contact with healthcare of another reason | |
| Parental suspicion | Parental suspicion |
| Unknown | Unknown |



| Year of birth | In database from maternity clinics (n) | Inscribed on maternity clinic at 4 years old according to annual report (n) | Proportion (%) |
|----------------------|---|--|-----------------------|
| 2006 | 2805 | missing data | |
| 2007 | 2705 | 2726 | 99.2% |
| 2008 | 2923 | 2951 | 99.1% |
| 2009 | 2985 | missing data | |
| 2010 | 2898 | 2993 | 96.8% |
| 2011 | 2653 | 2990 | 88.7% |
| Total | 16969 | | |

| | | |
|-----------------------------------|----------------------------|------------|
| Sensorineural hearing loss | Screening | 60 (80.0%) |
| | After OAE | 22 |
| | After BOEL test | 7 |
| | After Pure-tone audiometry | 31 |
| | Contact with healthcare | 9 (12.0%) |
| | Parental suspicion | 3 (4.0%) |
| | Unknown | 3 (4.0%) |
| | Total | 75 (100%) |

Received hearing diagnosis after Pure-tone audiometry

| | Other hearing loss* | Mixed hearing loss | Sensorineural hearing loss | Total |
|------------------------------------|----------------------------|---------------------------|-----------------------------------|-----------------|
| Individuals | n=25 | n=2 | n=31 | n=58 (%) |
| OAE result | | | | |
| pass | 21 | 1 | 21 | 43 (74.1%) |
| deviant | 1 | 1 | 6 | 8 (13.8%) |
| not performed | 2 | 0 | 3 | 5 (8.6%) |
| missing data | 1 | 0 | 1 | 2 (3.4%) |
| BOEL result | | | | |
| pass | 21 | 2 | 27 | 50 (86.2%) |
| deviant | 0 | 0 | 1 | 1 (1.7%) |
| not performed | 3 | 0 | 2 | 5 (8.6%) |
| missing data | 1 | 0 | 1 | 2 (3.4%) |
| Pure-tone audiometry result | | | | |
| pass | 1 | 0 | 1 | 2 (3.4%) |
| deviant | 21 | 1 | 28 | 50 (86.2%) |
| not performed | 2 | 1 | 1 | 4 (6.9%) |
| missing data | 1 | 0 | 1 | 2 (3.4%) |

| Diagnosis groups | Referral reason | n (%) |
|---|----------------------------|------------|
| Conductive hearing loss | Screening | 9 (23.1%) |
| | After OAE | 0 |
| | After BOEL test | 0 |
| | After Pure-tone audiometry | 9 |
| | Contact with healthcare | 21 (53.8%) |
| | Parental suspicion | 8 (20.5%) |
| | Unknown | 1 (2.6%) |
| | Total | 39 (100%) |
| Sensorineural hearing loss | Screening | 60 (80.0%) |
| | After OAE | 22 |
| | After BOEL test | 7 |
| | After Pure-tone audiometry | 31 |
| | Contact with healthcare | 9 (12.0%) |
| | Parental suspicion | 3 (4.0%) |
| | Unknown | 3 (4.0%) |
| | Total | 75 (100%) |
| Mixed conductive and sensorineural hearing loss | Screening | 3 (75,0%) |
| | After OAE | 1 |
| | After BOEL test | 0 |
| | After Pure-tone audiometry | 2 |
| | Parental suspicion | 1 (25%) |
| | Total | 4 (100%) |
| Other hearing loss | Screening | 28 (33.3%) |
| | After OAE | 6 |
| | After BOEL test | 6 |
| | After Pure-tone audiometry | 16 |
| | Contact with healthcare | 41 (48.8%) |
| | Parental suspicion | 8 (9.5%) |
| | Unknown | 7 (8.3%) |
| | Total | 84 (100%) |

This study shows that

- *pure-tone audiometry at age of four is an important method to detect hearing impairment
- *pure-tone audiometry detects more cases of sensorineural hearing loss than otoacoustic emission tests in the hearing-screening program in the county of Västerbotten