

Healthy People 2010 Operational Definition

28-13. Increase the proportion of persons with hearing impairments who have ever used a hearing aid or assistive listening devices or who have cochlear implants.

28-13b. Persons who are deaf or very hard of hearing who have new cochlear implants.

National Data Source	Healthcare Cost and Utilization Project (HCUP), AHRQ; National Health Interview Survey (NHIS), CDC, NCHS.
State Data Source	State Ambulatory Surgery Databases (SASD), HCUP, AHRQ (see Comments).
Healthy People 2000 Objective	Not applicable.
Changes since the 2000 Publication	New subobjective (see Comments).
Measure	Rate per 10,000 population (see Comments).
Baseline (Year)	57 (2001)
Target	63
Target-Setting Method	10 percent improvement. For a discussion of target-setting methods, see Part A, section 4.
Numerator	Number of cochlear implant surgeries in the U.S.
Denominator	Persons who are deaf or very hard in hearing.
Population Targeted	U.S. resident population.
Questions Used To Obtain the National Baseline Data	Not applicable.
Expected Periodicity	Annual.
Comments	A cochlear implant is a medical device that bypasses damaged structures in the inner ear and directly stimulates the auditory nerve, allowing some

deaf stimulates the auditory nerve, allowing some deaf individuals to hear and to maintain or develop speech and language.

The numerator for this objective, number of cochlear implant (CI) surgeries, is derived from two databases in the HCUP system, because CI surgeries can be performed as inpatient surgeries or, increasingly, on an ambulatory basis in hospital-affiliated clinics. These databases are:

1) The Nationwide Inpatient Sample: The largest all-payer inpatient care database in the United States, which contains data on more than seven million hospital stays from approximately 1,000 hospitals. and

2) The State Ambulatory Surgery Databases (SASD): State databases that capture records from hospital-affiliated ambulatory surgery sites on surgeries performed on the same day in which patients are admitted and discharged.

CIs are coded in HCUP by ICD-9-CM procedure codes 20.96-20.98, which are used by all the hospitals or hospital-affiliated outpatient clinics included in HCUP.

Annual CI surgery data from Nationwide Inpatient Sample are available as nationally-weighted estimates from HCUP, and can be further classified by age categories, gender, and race. For more information about HCUP, consult the internet at: HCUP Project Overview. Healthcare Cost and Utilization Project (HCUP). October 2003. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/overview.jsp.

Internally at AHRQ, as part of the HCUP project, hospital-affiliated ambulatory surgery data existed for 18 states in 2001 along with their inpatient discharge data.

To obtain the baseline, the number of inpatient and outpatient CI for SASD states across age groups was combined. Using the percent of the U.S. population contained in the SASD state databases year-by-year, the estimates were adjusted to provide a U.S. estimate of CI ambulatory surgeries.

The estimated number of CI surgeries in the U.S. annually is obtained by adding the Nationwide Inpatient Sample and the adjusted AS estimates.

Objective 28-13 moved from developmental to measurable during the Healthy People 2010 Midcourse review. Four subobjectives were created, each targeting different age groups and different methods of hearing assistance.

Subobjectives 28-13a and c focus on increasing the proportion of adults with hearing loss aged 20-69 and aged 70 and older who have ever used a hearing aid, respectively. Subobjective 28-13b targets persons of any age who are deaf or very hard of hearing who have new cochlear implants; 28-13d focuses on adults aged 70 years and older with hearing loss who use assistive listening devices.

For some objectives, data do not meet the criteria for statistical reliability, data quality, or confidentiality and have been suppressed. Information on suppression of data for the major Healthy People 2010 data systems has been published in a *Healthy People Statistical Note*.¹

See Part C for a description of NHIS and Appendix A for focus area contact information.

References

1. Klein, R.J.; Proctor, S.E.; Boudreault, M.A.; Turczyn, K.M. Healthy People 2010 Criteria for Data Suppression. *Statistical Notes* No. 24. Hyattsville, MD: National Center for Health Statistics. 2002.