

Other relevant prevention strategies	<p>A number of other programmes and initiatives contribute indirectly to reducing the determinants of child abuse, including the following.</p> <ul style="list-style-type: none"> • The Government has a number of initiatives to reduce teenage fertility, since both low maternal age and unintended pregnancy are risk factors for child abuse occurring to the children of these mothers (MacMillan et al 1993). • The current alcohol control programme is likely to have a role in limiting total population consumption. This could possibly have some effect on limiting family violence and child abuse, though there is no direct evidence on this. • Strengthening Families is an intersectoral initiative involving health, welfare, education and other social sectors. It has a significant work programme for children at risk of poor outcomes, which aims to improve life outcomes including improved health, better educational achievements, and a reduced incidence of persistent offending or abuse and neglect (see the <i>Child Health Strategy</i>, Ministry of Health 1998b). • Intensive home visiting services have been explored by three out of the four RHAs (now offices of the HFA) (Ministry of Health 1996b), and this work will be continued by the HFA as part of the Strengthening Families strategy. This will involve the implementation of Family Start, the prototype intensive home-visiting programme, to be established initially in West Auckland, Whangarei and Rotorua.
<i>Secondary prevention</i>	
Support for victims	Child protection strategies for identified victims of child abuse are provided by the Department of Social Welfare (Children, Young Persons and their Families Service).

Target revision

No revision is recommended at this stage.

Child Hearing Loss

Key points

- Hearing loss in early childhood has a significant effect on speech and language development and on emotional, social and educational development.
- The current rate of failing screening tests for hearing at school entry is 13 percent in Māori, 16.1 percent in Pacific, and 6.4 percent in other children.
- The year 2000 target of a hearing-loss prevalence of 5 percent or less is unlikely to be achieved, especially in Māori and Pacific children, without additional intervention.

TARGET

To reduce hearing loss in children at school entry to 5 percent or less by the year 2000.

Target derivation

The target was set in the policy advice paper *Child Hearing Loss: The Public Health Commission's advice to the Minister of Health 1993–1994* (PHC 1994b) by reviewing hearing failure rate data collected by the National Audiology Centre and assessing the projected trend. Targets were set for 1995 and 2000. The baseline rate was 10.5 percent for the total school entrant population in 1991.

Indicator

Hearing screen failure rate at school entry is the failure upon audiometry on two consecutive occasions approximately 16 weeks apart, or a serious failure on one test (two thresholds of greater than 40 dBHL).

Data source

National Audiology Centre (1998) *New Zealand Hearing Screening Statistics*.

The most recent data cover the period July 1996 to June 1997.

Related targets

- Smoking
- Breastfeeding
- Immunisation

Health impact

Hearing loss in early childhood has a significant effect on emotional, social and educational development. Its early detection is essential to ensure optimum development of speech and language and to minimise the longer-term effects on educational performance (PHC 1995f). The prevalence of hearing loss is high among young children, with an average of 8.4 percent of new school entrants failing screening tests for hearing nationally. Among new school entrants, Māori and Pacific children are more than twice as likely to fail hearing tests as are other children (National Audiology Centre 1998).

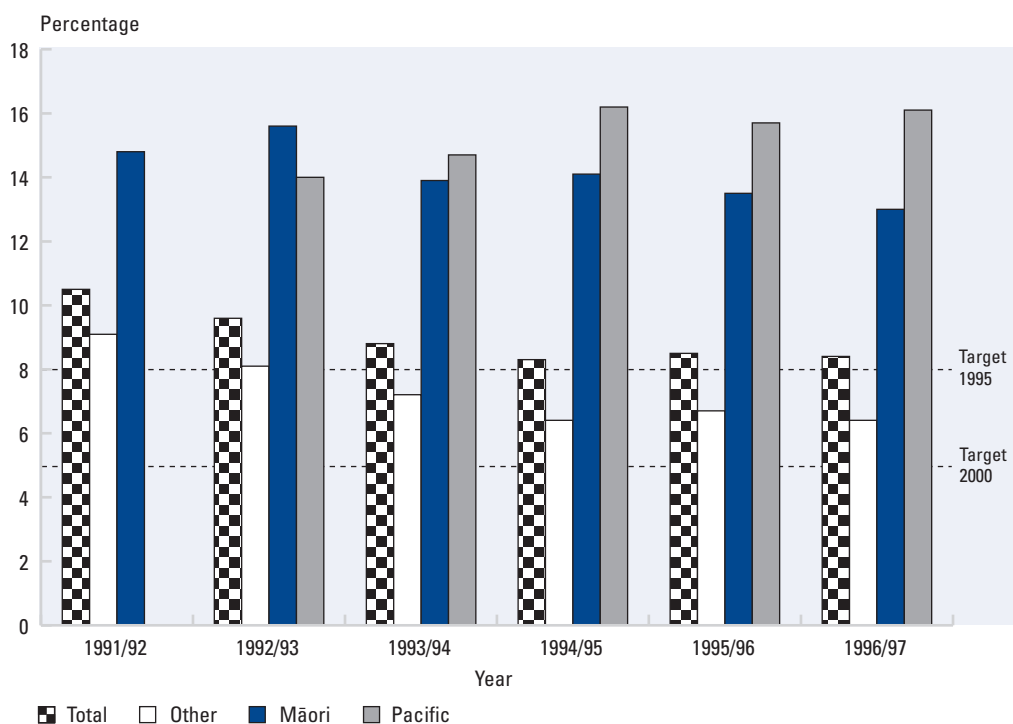
There are two types of hearing loss: sensorineural and conductive. Sensorineural hearing loss can result from intrauterine or early childhood infection (eg, congenital rubella, bacterial meningitis, mumps), congenital abnormalities or asphyxia at birth. It is much less common than conductive hearing loss but is a significant public health problem because it often affects children who have not yet learned to speak (pre-lingual), and it is therefore both more difficult to detect and more profound in its effect on cognitive and behavioural development (PHC 1995f). The age at which the diagnosis of moderate to severe sensorineural hearing loss is made has been increasing in New Zealand (National Audiology Centre 1997). Furthermore, Māori children with at least moderate hearing loss tend to be identified later than other children (Greville 1996).

Conductive hearing loss has a variety of causes, including malformations of middle-ear structures and middle-ear inflammation resulting in ruptured ear drums, but by far the major cause in children is persistent otitis media with effusion (glue ear). Glue ear is associated with the common cold and other causes of nasal congestion, exposure to

environmental tobacco smoke, low rates of breastfeeding, overcrowding, and attendance at childcare centres (PHC 1995f).

Progress toward targets

Figure 35: Percentage of new school entrants failing hearing tests, by ethnicity, 1991–96



Source: National Audiology Centre 1998

Assessment

Data quality

Coverage data from the National Audiology Centre indicate that close to 100 percent of five-year-olds are reached by the school entry hearing loss screening programme. However, in a number of regions, coverage rates over 100 percent are obtained, suggesting that the estimated population of five-year-olds in some areas may have been incorrect. Despite this limitation, the failure rate of hearing tests at school entry is useful as an indicator of trends.

Interpretation of trend

The hearing failure rate among 'other' children was well below the 1995 target of 8 percent, but the rate of improvement has now plateaued, indicating that even for this group the year 2000 target of 5 percent will not be met without additional intervention. For Māori children the failure rate continues to slowly decline but remains high at 13 percent. The failure rate for Pacific children is the highest and has increased since last year from 15.7 to 16.1 percent. The 1995 target was not met in either of the latter two groups, nor does the year 2000 target look achievable without the introduction of major targeted programmes.

Strategies

<p>Primary prevention</p>	<p>Primary prevention means reducing risk factors for:</p> <ul style="list-style-type: none"> • developing chronic otitis media, eg, through reducing exposure to environmental tobacco smoke, encouraging breastfeeding, and reducing levels of family adversity • acquiring sensorineural damage, eg, through encouraging immunisation against rubella, measles, mumps and <i>Haemophilus influenzae</i> B. <p>For more details about strategies for addressing these risk factors, refer to the related targets.</p>
<p>Screening neonates for hearing loss</p>	<p>Currently, congenital sensorineural hearing loss is screened for by providing audiological assessment (usually including auditory brainstem response) for infants with risk factors. This is combined with developmental surveillance as part of the <i>Well Child Schedule</i> throughout early childhood. However, this method of identifying infants with hearing impairment may not identify up to 50 percent of affected children (Pellow et al 1998).</p> <p>There is some evidence that routine screening of neonates for hearing impairment using either evoked otoacoustic emission testing or auditory brainstem response may be beneficial in reducing the long-term emotional, social and educational effects of early hearing loss (Watkin 1996; Downs 1994; Carney and Moeller 1998). On the other hand, prevalence of hearing impairment in newborns is low and there are practical difficulties screening this group (Bess and Paradise 1994; Greville 1996). The <i>Child Health Programme Review</i> (Ministry of Health 1998a) concluded that further analysis of evidence and cost-benefits of otoacoustic emission screening should be undertaken.</p>
<p>Screening children three and five years of age for hearing loss</p>	<p>At present, for older children, audiometry and tympanometry screening is carried out by vision-hearing technicians and public health nurses. Data are collected on new school entrants (age five years) and three-year-old preschoolers (National Audiology Centre 1998). Children are referred for medical or audiological attention if they fail screening tests serially (usually two tests at four months interval, to avoid referrals for acute self-resolving otitis media). Those requiring surgery (grommet insertion) are prioritised according to their likelihood of benefiting from surgery, using factors such as the age of the child, the degree of disturbance in the child's life and the clinical severity of the problem.</p> <p>There is some debate about the value of screening asymptomatic preschool and school-age children. A number of major reviews have found that there is little evidence that screened children have better long-term functional outcomes than unscreened children (US Preventive Services Task Force 1996). There is also minimal evidence to indicate that current clinical interventions for glue ear provide major long-term improvements in function (US Preventive Services Task Force 1996). The <i>Child Health Programme Review</i> concluded that further analysis of evidence and cost-benefits of tympanometry screening and school-entry screening should be undertaken.</p>
<p>Health promotion</p>	<p>Community awareness programmes and health education resources help to increase the early identification and referral of children with hearing loss, thereby minimising the impact on their cognitive development. Examples of resources are the hearing checklist included in the <i>Well Child Health Book</i>, the pamphlet <i>Earache</i> in English and Māori (HE4209), and the training workbook for Māori community health workers, <i>Glue Ear</i> (HE4870).</p>

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Programmes for Māori and Pacific peoples	A significant means by which rates of child hearing loss will be reduced in New Zealand is to improve primary prevention in Māori and Pacific populations. The accessibility of primary and secondary health care services including screening, referral and health promotion are important (PHC 1995f).
<i>Child Health Strategy</i>	The Ministry of Health has developed a cohesive child health strategy with an emphasis on prevention, improving service co-ordination, workforce development and increasing culturally appropriate and effective services for Māori and Pacific children in particular (Ministry of Health 1998b).

Target revision

The target for the year 2000 is unlikely to be achieved by all children, and especially by Māori and Pacific children. A review of this target may be necessary if current strategies do not result in an improvement in hearing failure rates.