blem, with low detection rate for sensorineural cases and over referral of cases with transient otitis media with effusion. For an initial trial period of two years, the screen is to be discontinued and a programme of surveillance introduced to secure a more efficient system. The data will be monitored and published in due course.

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Commentary

The appearance of this paper is very timely. Reports of studies demonstrating successful outcome from the use of the distraction test in a screening context are unfortunately very rare,[1 2] and it is more common to see adverse reports.[3] This situation reflects the extreme variability in the standard of application of the test technique and in the quality of services. There is absolutely no doubt that a properly performed distraction test can provide an effective method for screening hearing and Scanlon and Bamford acknowledge this.

The question at issue is whether it is worthwhile allocating the necessary resources to achieve this good level of performance or whether it might be more appropriate to redirect these resources in an attempt to identify impairment at an earlier age than is presently achieved. It is their hope that their alternative approach may detect deafness earlier and reduce the requirement to follow up cases with intermittent or less significant degrees of hearing loss in the first year of life.

Scanlon and Bamford are taking a bold step with their revised system, but the reader must be under no misapprehension about the resources required to achieve their alternative service. It is first necessary to establish a full neonatal hearing screening test programme with a back up diagnostic audiology service for babies of a few weeks of age: this should be available in all districts already but unfortunately it is not and it is confined to only a few. The next requirement is to train health visitors in hearing surveillance and to develop an ongoing support service to ensure that such a vigilant service can continue to operate. Scanlon and Bamford stress that this requires new forms of training and a reallocation of resources. They are not talking about a cost cutting exercise but rather additional resources to establish these two basic introductions to their service before abandoning the distraction test for a trial period.

While respecting the need for the approach taken by Scanlon and Bamford there must be a concern as to whether they will acquire sufficient data within the time scale allocated. There will only be 10–12 000 births over that period in their district giving a yield of only six to eight severely or profoundly deaf children and it will be necessary to allow a period of three or four years to elapse after their two year trial period to see the appearance of any late detected cases missed by their method. Serious consideration will have to be given as to what they should do during that period given the evidence already available to show how effective the distraction test can be (given appropriate training and correct technique). The questions that really should be addressed before their study is undertaken are why do they not achieve better success already, why are their standards not at the level expected and achieved by others, and why do they not allocate resources to further improve the distraction test?

From the data they present there is clear evidence that their current level of performance of the distraction test is poor in terms of its sensitivity, positive predictive value, and referral rate and all of these values are unacceptable and fall far short of those reported by Haggard and Gannon for the Nottingham service.[4] It may be instructive here to quote the results from the Nottingham service where every effort has been made over the years to refine and improve the distraction test in addition to incorporating neonatal hearing screening for at risk babies and introducing a surveillance method utilising the hints for parents form 'Can your baby hear you'.[1 6]

Included in the table are the details of the initial factor leading to referral for babies/children with later confirmed congenital or neonatally acquired severe and profound hearing loss. The babies were born over the three year period 1984–6 from a total birth population of approximately 36 000. Babies born in more recent years have not been included because any late detected cases might not have emerged and a true picture would not be portrayed. Cases with mild, moderate, and acquired hearing losses have not been included.

Despite the availability of neonatal screening (for at risk cases) and a parent check list surveillance system the distraction test result was the singly most important factor leading to referral of severely and profoundly deaf children requiring hearing aids.

This method of analysis is useful because it

Factor leading to referral in 21 children, 1984–6*

No of children	*Initial factor prompting assessment*	*Age hearing aid fitted and details*
10	Failed health visitor distraction test	Before 12 months (n=6) After 12 months (n=4) Tested late (n=1) Tested late, did not attend appointments (n=1) Had middle ear surgery (mixed losses) before hearing aids fitted (n=2)
3	Neonatal screen	Fitted at 3 months (n=1) Fitted at 6 months (n=1) Fitted at 22 months—did not attend earlier appointments (n=1)
4	Parental concern	Fitted at 4 months (n=1) Fitted at 9 months (passed health visitor test) (n=1) Fitted at 14 months (referred before distraction test but multiple problems and hospitalisation (n=1) Fitted at 18 months—referred before distraction test but moved from area and lost to follow up for a time (n=1)
4	Professional persons concerned	Fitted at 16 months—failed neonatal screen but failed appointments (n=1) Fitted at 22 months—failed neonatal screen and health visitor screen but no follow up arranged (n=1) Fitted at 34 months—failed health visitor screen but mismanaged (n=1) Fitted at 39 months—passed health visitor screen (n=1)

*0·58/1000 births.
Distraction test: 12/14 correctly referred (86%) and 2/14 incorrectly passed (14%); 7/21 referred before test (33%).

illustrates the need to check the performance of the service system before forming conclusions about earlier screening tests. Several children correctly failed the distraction test but problems or delays in the system, and in some cases difficulties in assessment, resulted in late confirmation of deafness. Scanlon and Bamford stress the need to improve their referral system in preparation for the trial.

From the above analysis it cannot be denied that when the distraction test is undertaken well it offers an excellent method alongside neonatal screening and parental surveillance. Materials to help other authorities improve the distraction test are readily available.[5 6]

Undoubtedly we do need neonatal screening and the methods used are being progressively improved to identify deafness very early. Universal neonatal hearing screening is unlikely to become available within the next decade and many authorities will be unable to obtain the equipment and staffing or service to offer targeted screening of high risk babies within this time scale. It has been anticipated in the literature that screening of high risk babies will identify 50% of severely or profoundly deaf babies and Scanlon and Bamford are placing high hopes on the surveillance method to identify the remaining 50%. Only time will tell whether they can do this effectively within the first year of life without the distraction test and the results of their study with follow up data in six years time are awaited with great interest.

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