Early Identification of Hearing Loss
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Introduction

A method for the earliest possible identification of hearing loss has been sought for many years. However, the major emphasis on screening based on observed behavioral changes in the newborn began with a 1964 article by Downs and Sterritt. While the techniques described in that paper were sound in principle, the specific testing procedures were not as sensitive as is desirable. As a result, those who did not understand the preliminary nature of that report instituted newborn hearing screening programs and found themselves passing some hard of hearing and deaf children (false negatives) and failing a significant number of normal children (false positives). To combat a proliferation of those improperly controlled testing programs, the American Speech and Hearing Association asked both the Academy of Pediatrics and the Academy of Otorhinolaryngology and Ophthalmology to join in forming a committee to study infant hearing screening programs and to make recommendations regarding acceptance and implementation. The committee published a statement designed to halt the spread of uncontrolled programs, and later issued a second statement specifically recommending the use of the high risk register as a screening procedure. Copies of the Joint Committee on Infant Hearing Screening statements may be found in the appendix to the attached Recommendations of the Conference.

At the same time the Joint Committee was providing structure for the direction of research programs, the US Government, the Elks Purple Cross Deaf Detection and Development Fund in Canada, and other government and private foundations were funding the controlled, longitudinal programs necessary to further research and to develop and refine acceptable testing techniques. The results of the longitudinal studies have been eventually finding their way into print, but, unfortunately, much is lost in space limitations, translations,
lack of clarity in presentation, insufficient time to prepare materials for publication, and the normal time lags associated with published research. There has been little opportunity for groups of researchers working in the same general area to meet one another, and to have the concentrated exchange of ideas and information necessary for a real understanding of the work that has been done.

The Benevolent and Protective Order of the Elks and their auxiliary the Order of the Royal Purple, have established the Purple Cross Deaf Detection and Development Program in Canada. Because of their past work in neonatal projects, and their continued effort in a 10,000 baby longitudinal study involving three provinces in Canada, they were contacted through the offices of the Chairman of the program, Mr. Robert Coulling. They were asked for funds to convene the Nova Scotia Conference on Early Identification of Hearing Loss, whose purpose was to bring together people from all around the world who had demonstrated continued research and commitment to the problems of early identification. It was expected that the outcome of such a meeting would be a series of recommendations for early identification procedures based on hard research data which could be adopted and implemented on a universal basis.

The conference brought together representatives from six countries. The delegates traveled a combined total of nearly 200,000 miles to attend the meetings. They came to Nova Scotia from as far west as Victoria, British Columbia; as far east as Jerusalem, Israel; as far north as Stockholm, Sweden; and as far south as San Juan, Puerto Rico. Many of them had never met in person, but they all knew of each other's work. The group met for four days, first presenting a series of public papers describing their work and highlighting similarities and differences in results. The group then met in closed session, during which they shared interdisciplinary expertise, combined data, explored new ideas, reaffirmed areas of agreement, and of course, tried to resolve areas of conflict in results.

In her keynote address to the assembled participants, Marion Downs directed her comments to the urgency of developing and defining early identification programs. Citing Lenneberg's model of language as a 'biological time-locked function', she stressed the need for early identification to avoid the devastating effects of hearing loss during the language learning periods. Reporting that only 1% of the United States newborn population is actually being screened through the high risk register recommended by the Joint Committee on Infant Hearing Screening, Mrs. Downs reminded the conference participants that they must also offer a direction for delivery of the programs they recommend.

Following Mrs. Downs' address, each of the participants presented his/her formal report of ongoing research. The Keynote Address and each of the formal papers is included in this text. In addition, the question-discussion period which followed the presentations has been transcribed, so that the reader may not only sense the thinking of the speakers and the audience, but more importantly, be a part of the freewheeling interchange of ideas which highlighted this landmark conference.

Following the papers, the group entered into two days of closed door discussions during which they hammered out the recommendations. They knew that much had been
said about the high risk register. However, they also knew that one of their challenges would be to analyze the groups' research data, in terms of the over 150,000 babies that they had examined, to confirm that register as a good identifying system. They also reviewed behavioral, electrophysiological, semi-objective, and objective systems for screening children to determine which, if any, would be an appropriate supplement or replacement for the high risk register. The procedures were reviewed along the lines of the five areas the Joint Committee had specified in the 1970 statement. That is: the stimuli had to be valid; the response patterns had to be definite and beyond question; the environmental factors had to be controlled; the status of the infant at the time of testing had to be controlled or analyzed; and the scoring procedures had to be clearly specified. In addition, as was pointed out by Downs in the Keynote Address and Mencher in the final charge to the group, the procedure had to be feasible in terms of administration, and viable in terms of economic constraints on an international basis. The end product of all those deliberations is seen as the Recommendations of the Conference.

There is no doubt that it would be a tremendous responsibility to spearhead a program for the implementation of the recommendations of the meeting. But, a conquest of the devastating effects of deafness requires that we, as specialists in communication disorders, accept that responsibility. The recommendations are based on many years or hard research and the evidence gained from testing thousands of newborn babies in cities all over the world. The wording of the document is flexible enough, in certain passages, to allow for the divergency of programs associated with so many different national and international environments. Clearly, controversy must now shift to 'how' early identification programs can be implemented as quickly as possible, and not 'which' program to use. Halifax, Nova Scotia, June 1975 George T. Mencher