An Inservice Training Program To Assist Regular Classroom Teachers In Serving The Mildly Hearing Impaired

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A recent issue of Exceptional Children contained several articles related to children who are the "yet to be served." One of these articles reports this unidentified population is primarily the mildly handicapped (Meyan & Moran, 1979). These authors hypothesized that the reallocation of resources, the effects of labelling, and the lack of visibility, among other variables, tend to create additional stumbling blocks in the educational pathways of the mildly handicapped child.

REALLOCATION OF RESOURCES

The "least restrictive environment" requirement of PL 94-142 has significantly increased the numbers of profoundly hearing impaired children who are "mainstreamed" to their home school districts. Consequently, available resources are necessarily being channeled to this more severely impaired population. As a result, already difficult identification and programming for the mildly

hearing impaired is further delayed.

EFFECTS OF LABELLING

A direct quote from Meyen and Moran (1979) is applicable to the specific problems of the child with a mild hearing loss:

The clear intent of Public Law 94-142 is that the right of access to a free appropriate education be extended to all children. Yet as handicapped learners are increasingly served in the regular classroom, there is no corresponding attempt to allow access to special services for normally developing learners. The student who can learn normally most of the time but is handicapped sporadically by adverse environmental conditions has as much right to special services as does the child who is handicapped most of the time to be mainstreamed under conditions in which the child can function in the regular classroom. In the zeal to provide services to handicapped learners, the commonality of human rights shared by all learners may have been lost from view. Implementation of Public Law 94-142 should not be viewed as a special education movement, but as an educational innovation that allows all children access to programs meeting individual needs. To this end, special services must accommodate normally developing youngsters when they need special help (i.e., present themselves as being mildly handicapped), just as regular education has been asked to accommodate handicapped learners.

The mildly hearing impaired student continues to be somewhat of an enigma in the public school today. He is neither deaf (so he doesn't pigeonhold nicely into the "deaf" curriculum), nor is his hearing normal (so he doesn't fit conveniently into the graded system). Placement decisions become the classic example of "fitting the child to the system" in most cases, rather than fitting the system to the child. In a nutshell, it appears that the mildly hearing impaired student is usually mainstreamed first, with little or no support services, later to be failed or to be sent to a learning disabilitites self-contained or resource room. Neither of these alternatives, as they exist today, is the most appropriate placement for the mildly hearing impaired student. Special service units have a tendency to focus their resources on the child who has been categorically labelled.

VISIBILITY

Two sources of visibility exist for the mildly hearing im-

paired:

- 1. Parent groups and their influence
- 2. Identification and referral sources

In most instances, parents of all categories of mildly involved children have not considered their child to be handicapped. Parent groups for hearing impaired children additionally do not have a history of being extensively involved in effecting extensive legislation and programming for their children. The problems of the mildly hearing impaired, therefore, do not become high priorities in existing parent groups.

In the past, the mildly hearing impaired have not been effectively referred for appropriate services. Several reasons exist for this lack of effective referrals. It has been a common practice for audiologists to refer a child with a mild conductive hearing loss only for medical attention. This may be due in part to an attitude that mild hearing loss is relatively benign in terms of its effects on language development (Lewis, 1976). It is a common misconception that a hearing loss must be severe before learning problems become serious; that is, a mild loss = mild problems. However, Lewis (1976) reports that learning problems do not always depend on the magnitude of the pure-tone sensitivity decrement. The experimental group discussed in this study had average losses which would have been considered mild and some would have passed conventional audiometric screening tests such as are utilized in public schools. A hearing loss as mild as 15 dB in the speech frequencies has been reported to have the potential to place the child educationally "at risk." Quigley and Thomure (1968) indicate that the effects of a hearing loss of a very mild nature should not be minimized. Kaplan et al (1973) has reported that children he studied with otitis media before two years of age and hearing better than 26 dB showed lower achievement and verbal scores than the normal group to which they were compared. Other authors have indicated similar findings underlining the child with chronic middle ear problems as "at risk" (Wishik, Kramm & Koch, 1958; Holm & Kunze, 1969; Ling, 1972; and Kaplan, Fleshman, Bender, Baum & Clark, 1973).

A one-time hearing screening is usually the primary basis for referrals. This practice has several drawbacks in regard to the mildly hearing impaired: (a) Many students with losses milder than the cutoff point for referral are missed. These milder losses can produce measurable disturbances in academic performance (Kessner & Kalk, 1973; Kessner, Snow & Singer, 1974; Kaplan et al, 1973; Fry, McJones & Kalton, 1969). (b) "Otitis media prone" students can be missed using one-time hearing screening for

referral (Lewis, 1976; Liden, 1978). Otitis media can produce an almost invisible loss due to the "hear today, gone tomorrow" nature of the accompanying hearing loss. (c) The student who has had recurrent bouts of otitis media and now suffers only from the effects (language delay, school failure, etc.) will certainly not be associated with a mild hearing loss if the hearing screening is the only determinant used (Eisen, 1962; Neeldleman, 1977).

The mildly hearing impaired are notoriously difficult to identify. This is due in part to the criteria for identifying hearing loss in the ordinary school population being themselves unclear (Fisher, 1971). Moreover, in identifying the mildly hearing impaired, the secondary characteristics often become the primary source of identification and perhaps the focus of educational intervention. For example, speech remediation can become the focal point when appropriate diagnosis and specialized instruction appropriate to the hearing loss is the primary need. Although this group is difficult to identify, there is sufficient data to tell us that these hard-to-identify hearing impaired children do in fact exist. The Pittsburg Study (Eagles, Wishik, Doerfler, Melnick and Levine, 1963) indicates an estimate of 50 per 1000 school children who demonstrate hearing levels, bilaterally or unilaterally, at one or more frequencies beyond the normal range. Silverman (Davis and Silverman, 1970) reports a similar percentage of school age children who have one ear, at least, outside standard normal ranges. In an unpublished study of school records referred to by Goetzinger, Harrison and Baer (1964), it is reported that slightly more than 2% of the total population had hearing losses of 20 dB or greater (1030 students) and of that number, 1.31% (63) demonstrated mild hearing losses. Henry (1947) suggests that the majority of hard-of-hearing children in public schools fall below an average loss of 30 dB. It is apparent that there are several mildly hearing impaired children in every school building. This is justification enough to attempt to develop a more efficient and systematic program to identify and serve this population.

It is no easy task to serve the mildly hearing impaired student "appropriately." The Executive Committee of the Council on Education of the Deaf has recognized that individualized education programs for the hearing impaired offer a wide range of options — including full-time regular classroom placement. In any case, there are a number of professional disciplines who must become mutually involved in serving the mildly hearing impaired — audiology, medicine, education to name a few — thus underlining the critical need for an interdisciplinary approach in order to provide a continuum of services for the mildly hearing impaired child. Within the public school milieu, a practical approach to meeting this need for a continuum of services is to train Regular Classroom Teachers with whom this mildly handicapped child spends the major portion of his days. (In most cases, the regular classroom is the mildly hearing impaired child's "least restrictive environment.") Training would include identifying the mildly hearing impaired, evaluating the effects of mild hearing impairment on school achievement and individualizing education programs for this student. The goal would be for the Regular Classroom Teacher to become the mildly hearing impaired student's Program Coordinator. The Regular Classroom Teacher is. in fact, accountable for the mildly hearing impaired child's total educational program. He/she sees the student most frequently and is most accessible to other school personnel and parents. With the Regular Classroom Teacher designated as the Program Coordinator, the continuum of services becomes more efficient - i.e., the individualized planning by the remedial reading teacher, the speech clinician, and other support personnel would be better coordinated. With this goal in mind, the authors are developing an instructional series * designed to teach Regular Classroom Teachers more about the mildly hearing impaired youngsters found in their classrooms. The basic goals are to:

- 1. train Regular Classroom Teachers to identify students with mild hearing impairments
- 2. train Regular Classroom Teachers to evaluate the effects of mild hearing impairment on academic achievement
- 3. train Regular Classroom Teachers to individualize instruction for the mildly hearing impaired student.

In order to identify the initial target population, a number of school districts in Greater Kansas City were contacted. We were seeking the Regular Classroom Teacher with the "yet to be served" mildly hearing impaired student in his/her classroom. This included those mildly hearing impaired students who were either not identified or were receiving inadequate or imappropriate services. It was specified, therefore, that we were interested only in the child who had some hearing loss, who had never been in a special classroom for the hearing impaired, and who was receiving relatively few, if any, special services. The referrals for this project came primarily from school nurses and school psychologists. Through this process a large number of students were identified. The Regular Classroom Teachers of these students were asked if they wanted to be involved in a program which would teach them more about the mildly hearing impaired student in their classrooms. A small number of teachers declined and the children in these rooms were referred back to school personnel. Subsequently, the following information on those identified was sought from the public schools:

- (1) day-to-day classroom performance and anecdotal information from the RCT
- diagnostic information contained in school records
- (3) audiological information on the student's hearing loss and its nature
- (4) language level/speech intelligibility as observed by the speech clinician

The target population became 38 school personnel including 23 RCT, 12 Special Education teachers, 2 teacher aides and 1 principal who served a total of 33 students (the majority of whom had conductive hearing losses). The teachers were in school districts within a 25 mile radius of the Greater Kansas City area. Most of the teachers were in elementary schools, with a majority of the teachers having children from kindergarten through third grade levels. (There were two from the preschool level and two from the junior high level.) In other words, the target population was mainly primary level teachers.

Training for the target population was provided individually, in small groups and in large groups. The goal was to develop a set of instructional materials which would teach teachers first about hearing loss in general and then, specifically, the problems associated with mild hearing loss. The primary method of developing the instructional material was to instruct teachers, evaluate what was taught and how it was taught. Based on that evaluation, the materials were revised and reorganized. This point is important to emphasize in order to clearly point out that programmed material was not developed in a professor's office based on "a priori" assumptions about what teachers were to know.

As materials were being developed, a primary concern was how much a Regular Classroom Teacher wants and needs to know about hearing loss in order to effectively work with the hearing impaired student in her classroom. The amount of information teachers thought they needed varied from individual to individual ranging from developing and implementing individualized education plans to informating-seeking only. Initially, instruction was individualized and presented to the teacher in that teacher's own school building. Then a graduate level course was taught through the University's continuing education division. In addition, a "dog and pony show" concerning mild hearing impairment became one of the inservice meetings for many school districts. This training series is now being developed in Programmed Instructional Blocks (PIB's). The PIB's contain very basic information on each of ten topics:

- 1. Anatomy of the ear
- 2. Physiology of hearing
- 3. Audiometry
- 4. The Audiogram
- 5. Utilizing several sources of identifying mild hearing impairment
- 6. Causes of hearing impairment
- 7. Effects of mild hearing impairment
- 8. Medical intervention and mild hearing impairment
- 9. Hearing aids
- 10. Educational intervention and mild hearing impairment

In conclusion, we recognize that it is difficult to rank order the problems which are encountered in programming for the mildly hearing impaired child. If screening methods were better, would identification of these children solve the educational dilemma? Communication among school personnel is another problem which ranks high on the list of problems. Communication often breaks down between teachers and the support personnel assigned to school programs. For example, one of the teachers in our target group was responsible for a child who was being seen by a speech clinician, an LD teacher and a remedial reading teacher. None of the specialists made educational planning decisions based on knowledge of what the other was doing. The classroom teacher was keeping the child on schedule but did not know what the support staff was doing with the child assigned to her classroom. This example may appear extreme; however, this breakdown of communication is not uncommon in public schools. It may be reality that the support specialist has a case load which is heavy and has been assigned to too many schools to be effective, but this too points up that when communication breaks down, it is the child who pays the penalty. The audiologist has a responsibility to the MHI as an advocate. This group desperately needs an advocate. It is important that support personnel (psychologists, speech pathologists, audiologists, etc.) in the school system be alerted and informed about the large numbers of children who have (or have had) mild conductive hearing problems. The support personnel should be knowledgeable about the effects of mild hearing loss on language and academic achievement. Since it is not possible for the audiologist to be "all things to all people," he/she must be able to assist the Regular Classroom Teacher in locating appropriate resources and services for the MHI child. It is imperative that the audiologist facilitate inservice training for Regular Classroom Teachers and other school personnel in order that they may provide an appropriate educational program for the MHI student.

REFERENCES

- Davis, H. Hearing and hearing loss. In Davis, H. and Silverman, S.R. (Eds.) Abnormal Hearing and Deafness. Holt, Rinehart & Winston, 1970, pp. 102-103.
- Downs, M.P. Hearing loss: definition, epidemiology and prevention. Public Health Reviews, 1975, IV (3 and 4), 225-380.
- Eagles, E.L., Wishik, S.M. Doerfler, L.G., Melnick, W., & Levine, H.S. Hearing sensitivity and related factors in children. (NINDH Grant NB-02375-07) Laryngoscope, June, 1973.
- Eisen, N.J. Some effects of early sensory deprivation on later behavior: The quondam hard-of-hearing child. J. of Abnormal Social Psych., 1962, 65, 338.
- Fisher, B. Hearing impaired children in ordinary schools. Teacher of the Deaf, 1971, 69 (407), 161-174.
- Fry, J., McJones, R.E. and Kalton, G. The outcome of otitis media British Journal Prev. Social Medicine, 1969, 23, 205-209.
- Goetzinger, C.P., Harrison C., Baer, C.J. Small perceptive hearing loss: its effect in school-age children. Volta Review, 1964, **66** (3), 124-131.
- Henry, S. Children's audiograms in relation to reading attainment I. Introduction to and investigation of the problem. Journal of Genetic Psychology, 70, 1947, 211-231.
- Holm, V.A. & Kunze, L.H. Effects of chronic otitis media on language and speech development. Pediatrics, 1969, 43, 833-839.
- Kaplan, G.J., Fleshman, J.K., Bender, T.R., Baum, C. and Clark, P.S. Long-term effects of otitis media: a 10-year cohort study of Alaska Eskimo Children. Pediatrics, 1973, 52, 577-585.
- Kessner, D.M. and Kalk, C.E. Middle-Ear Infection and Associated Hearing Loss, a Strategy for Evaluating Health Services: Contrasts in Health Status. National Academy of Sciences, Washington, D.C., 1973, 2, pp. 31-31.
- Kessner, D., Snow, C.K., and Singer, J. Assessment of Medical Care for Children: Contrasts in Health Status. National Academy of Sciences, Washington, D.C., 1974, 3.
- Lewis, N. Otitis media and linguistic incompetence. Archives of Otolaryngology, 1976, 102, 387-390.
- Liden, G. Methods for identification of middle ear disease. In Harford, E.R., Bess, F.H., Bluestone, C.D., and Klein, J.O.

- (Eds.) Impedance Screening for Middle Ear Disease In Children, 1978, Grune & Stratton, Inc., pp. 17-22.
- Ling, D. Rehabilitation of cases with deafness secondary to otitis media. In Glorig, A., and Gerwin, K.S. (Eds.) Otitis Media. Proceedings of the National Conference, Callier Hearing and Speech Center, Dallas, Texas, 1972, pp. 249-253.
- Meyen, E.L., and Moran, M.R. A perspective on the unserved mildly handicapped. Exceptional Children, 1979, 45 (7), 526-531.
- Needleman, H. Effects of hearing loss from early recurrent otitis media on speech and language development. In Jaffe, B. (Ed.) Hearing loss in Children: A comprehensive treatise. Baltimore, Md., University Park Press, 1977, pp. 640-649.
- Quigley, S., and Thomure, F.E. Some effects of hearing impairment on school performance. Illinois University, Urbana, Illinois. Institute for Research on Exceptional Children, 1969.
- Reynolds, L.G. The school adjustment of children with minimal hearing loss. Journal of Speech and Hearing Disorders, 1955, 20, 380-384.
- Ross, M. Definitions and descriptions. In Davis, J.J. (Ed.) Our forgotten children: Hard-of-hearing pupils in the schools. Minneapolis, Minnesota, 1977, 27-42.
- Ross, M., and Calvert, D.R. Guidelines for audiology programs in educational settings for hearing impaired children. Volta Review, 1977, April, 153-162.
- Wishik, S.M., Kramm, E.G., and Koch, E.M. Audiometric testing of school children. Public Health Report, 1958, 73, 265-278.