

The Need for Aggressive Pursuit of Healthy Childhood Voices

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Kahane, J.C. and [Mayo, R.](#) (1989). The need for aggressive pursuit of healthy childhood voice. *Language, Speech, and Hearing Services in Schools*, 20 (1), 102-107.

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Abstract:

In this paper we argue for the aggressive management of voice disorders. Aggressive management includes early identification, prevention, and treatment of voice disorders. The argument for aggressive management is supported by current incidence trends, laryngologists' expectations, and the benefits of prevention programs.

Article:

In the previous paper, Sander argued for less aggressive management of voice disorders in children. In this paper, we provide support for an opposing view (i.e., aggressive management that includes early identification, prevention, and treatment of childhood voice dysfunction is often warranted and that this is reflected in the contemporary literature on this subject).

Currently, the majority of children with clinically significant voice deviations are not seen by a speech-language pathologist. Of the approximate 6% of children aged 6 to 18 years identified as having clinically significant voice disorders (Moore, 1982; Senturia & Wilson, 1968), only 1% of them are seen by speech-language pathologists (Wilson, 1987). These statistics are surprising in view of the fact that approximately 45-80% of childhood dysphonias are the result of vocal abuse resulting in vocal nodules (Baynes, 1966; Herrington-Hall, Lee, Stemple, Niemi, & McHone, 1988).

We believe that children with voice disorders resulting from vocal abuse need to be identified and pursued because of the potentially serious consequences that may result from them. These consequences include childhood injury that can affect the vitality of the adult voice (Pahn, 1966) and social and academic penalties to the child (Bennett & Runyan, 1982).

Addressing the management of childhood dysphonia is not an easy task because there are problems of definition and application of terminology for voice quality deficits (Fairbanks, 1960; Jensen, 1965; Pannbacker, 1984) and also non-uniform criteria for referral. We recognize that terminology by itself cannot accurately convey the perceptions of vocal deviations heard in clinical practice. We do however believe that good clinical practice calls for more than mere labeling and we suggest that more than this is done by clinicians despite obvious gaps in the knowledge base.

For example, Andrews and Summers, (1988) point out that when voice quality deviations cause a child embarrassment or frustration, the problem is real, despite professional difficulty with descriptive terminology. Aronson (1980) suggests that:

More important than terminology is the clinician's ability to integrate perceptual, acoustic, physiologic, and psychologic dimensions of abnormal voice, to interpret the abnormal sound in order to determine its cause, and to develop a sensitivity to nuances of voice during therapy. (p. 6)

From the aforementioned, it is clear that clinicians must move away from relying on terminology to explain observed deficits and begin to rely on sound multilevel inquiries to arrive at precise diagnoses and therapy programs. With regard to the problem of when to refer a child for a voice evaluation, it appears reasonable to suggest that referral for examination is warranted when a child's voice calls attention (negatively) to itself, is inefficient for communication needs, or is at risk for further injury.

Although we do not presume to have definitive solutions for the problems in management of childhood dysphonias, we can suggest some areas worthy of inquiry. These include: (a) re-examining incidence trends and norms, (b) discussing the use of mass voice screenings, (c) developing a better understanding of laryngologists' expectations, (d) examining the need for the need for public and professional education, and (e) developing prevention programs.

Re-examining Incidence Trends and Norms

The re-examination of incidence figures is necessary because it is important that voice disorders in children be managed early (Miller & Madison, 1984 a,b; Moran & Pentz, 1987; Pahn, 1966; Wilson, 1987). This position is underscored by Cooper (1973) who points out that deviations observed in many adults are a continuation of a pattern that originated in early childhood. Pahn (1966) reported that vocal malfunctions identified in adult patients were frequently traced back to childhood and youth. He encouraged the use of prophylactic voice exercises in school as early as kindergarten to avert the development of more severe dysphonias later in life.

The notion that the incidence of voice disorders decreases with increasing age after the third grade and thus, that voice therapy is not warranted for children who have hoarseness and/or vocal nodules (Senturia & Wilson, 1968) may need to be re-examined in light of recent observations by Warr-Leeper, McShea, and Leeper (1979). These authors found that the incidence of voice disorders in middle school children (8.2%) may be greater than previously expected. Children in later years are likely to engage in extracurricular activities such as cheerleading and competitive sports in which vocal abuse frequently and insidiously becomes part of the fervor of the activity. Thus, education about good vocal practices and aggressive management of vocally abusive behaviors in middle school children continues to be an essential role of the speech-language pathologist. Incidence data and referral for treatment are also influenced by the awareness of adults in the child's environment. These points taken together argue for a broader understanding of age groups that are at risk for developing voice disorders. Early identification and appropriate management by the speech-language pathologist appears to be warranted and professionally responsible.

Mass Voice Screenings

We advocate mass voice screenings as a quick cost-effective means of identifying individuals with a possible voice problem. However, screenings need to go beyond labeling or mere categorizing. Rather than depending on a single set of labels to record perceptions of voice disorders, descriptions of the physical-acoustic features that constitute the disorder should be used to clarify the evaluation process (Moneur & Brackett, 1974). A few examples include the presence or absence of aperiodicity in the vocal tone, degree of laryngeal valving, and prosodic characteristics such as use of pitch and loudness changes.

Mass screenings of school children may also help in developing longitudinal age grouped databases of normal and disordered voices (Kent, Kent, & Rosenbeck, 1987). In this manner, the child who is suspected of having a voice quality deviation would be judged not on the basis of some ambiguous vocal ideal, but rather, on the basis of how different his/her voice is from age-matched peers in his/her particular community.

Developing a Better Understanding of Laryngologists' Expectations

The goal of preventing childhood dysphonias and aggressively pursuing healthy childhood voices is a team effort. Stone, Hurbutt, and Coulthard (1978) stated that the management of a child's voice problem is

upgraded by the cooperation of specialists who become involved with the child. The laryngologist is an important member of this team of specialists.

Recent surveys of otolaryngologists preference for the management of vocal nodules in children indicate strong support for non-medical (i.e., voice therapy) treatment. Moran and Pentz (1987) surveyed 535 otolaryngologists. They found that these physicians identify speech-language therapies as the preferred alternative to surgical management of vocal nodules in children. The authors found that 59% of the respondents preferred voice therapy as the *sole* mode of treatment for vocal nodules in children; less than 1% preferred surgery as the sole treatment; and 9.4% recommended surgery to be followed by voice therapy. Half the physicians sampled indicated that voice therapy is frequently or always effective in the treatment of vocal nodules in children and, they also strongly supported (63%) the professional capabilities of the speech-language pathologist to manage these cases.

In their 10-year study of public school voice clinics, Miller and Madison (1984a) reported that nearly one-half (101 of 249) children examined had vocal nodules. The otolaryngologists recommended surgery in only 4% of the cases, opting for direct voice therapy or programs of vocal hygiene for most children. These findings reinforce the essential role that the speech-language pathologist plays in the management of children with vocal nodules.

The Need for Public and Professional Education

We join others (Clauson & Kopatic, 1975; DeGregorio & Polow, 1985; Polow & Kaplan, 1980; Wertz & Mead, 1975) who have found that classroom teachers can be effective listeners and facilitators of good speech and voice practice if they are taught the importance of their contribution. Phillips (1976) reported that a classroom teacher's understanding of speech problems was most highly correlated with academic experience, age, years of professional experience, and access to a *speech-language pathologist* (our emphasis).

A major component of the education process should be helping teachers recognize when to refer a dysphonic child to the speech-language pathologist. We need to educate teachers about what we do, the processes involved in remediation, and to encourage their participation in the treatment of the vocally abusive child. The classroom teacher serves as a model of good vocal usage and can facilitate therapy goals by monitoring and reinforcing appropriate targeted behaviors. His/her role in voice therapy should not be underemphasized.

Oyer, Crowe, and Haas (1987) provided a practical example of how the classroom teacher can facilitate vocal health care. They suggest that teachers work with speech-language pathologists to incorporate instruction on vocal hygiene into health or science curricula. This provides an opportunity for the child to learn about how vocal health and human communication processes are related to ones overall health.

Development of Prevention Programs

Because nearly all childhood dysphonia is preventable, it seems reasonable to make concerted efforts to reduce the incidence of vocal problems through prevention programs. Flynn (1983) has provided specific suggestions for implementation of a prevention program for vocal abuse/misuse in the classroom. For example, she provides instruction to parents and teachers to help them focus the child's attention on abusive vocal behaviors.

Nilson and Schneiderman (1983) devised an educational program to prevent vocal abuse and misuse in 155 second- and third-grade students. The teachers of these children also participated in the program. The content areas of the program included: a basic overview of the vocal mechanism and voice production, discussion of adequate and inadequate voice qualities, a review of hoarse and normal voice qualities, and discussion and identification of abusive vocal behaviors. The authors found that the students demonstrated significant improvement in their knowledge of vocal healthcare and were able to retain this information 5 months after

the end of the program. Teachers participating in the program also demonstrated significantly greater knowledge about voice production, voice quality, and vocal abuse/misuse than a control group of teachers who did not participate. The practical benefits of the prevention program were illustrated by the fact that no new cases of deviant voice quality were found during rescreening of the children who were part of the vocal hygiene program.

The findings of Nilson and Schneiderman underscore the importance and efficacy of vocal healthcare prevention programs in school-age children. These authors also demonstrated how the classroom teacher and the speech-language pathologist could work together to maintain healthy childhood voices. We suggest that the most effective vocal healthcare program is the one that incorporates the use of major community resources (i.e., professionals, the general public, and parents). The key elements in such a community resource program are summarized in Table 1.

TABLE 1. Framework for a vocal healthcare program for school-age children. (Adapted from Marge, 1984).

<i>Community resources</i>	<i>Possible roles</i>
Speech-language pathologist	<ul style="list-style-type: none"> ● Establish screening program in the schools for identification of children at risk. ● Mount a public media campaign coordinated with other community resources.
Physicians	<ul style="list-style-type: none"> ● Distribute brochures about vocal abuse to patients; assist in public media campaign.
Parents	<ul style="list-style-type: none"> ● Through communications and meetings, inform parents how to reduce vocal abuse behavior in their children. ● Serve as a model of vocal healthcare.
Teachers	<ul style="list-style-type: none"> ● Through classroom instruction, teach children about vocal abuse behaviors and how to control them. ● Along with the speech-language pathologist, encourage parents to follow through on recommended physician evaluations. ● Serve as a model of vocal healthcare.
Public media	<ul style="list-style-type: none"> ● Use of newspapers, television, and radio to discuss campaign and objectives and to seek public cooperation.

Conclusions

The purpose of this article was to present the case for the aggressive management of voice disorders in children. Aggressive management includes the early identification, prevention, and treatment of voice disorders. Clinicians can aggressively pursue the goal of healthy childhood voices by focusing on primary and secondary prevention through voice screenings and public and professional education. When necessary, voice therapy should be provided to eliminate vocal abuse and reduce existing lesions.

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