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Beware of Labels in Audiology

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We live in a world of diagnostic categories and labels. Everyone likes to label and health care professionals are no exception. We have become obsessed with categorization, and once a label has been applied it often takes on a life of its own. Perhaps the most (over)enthusiastic are the psychology/psychiatry professionals who have to label every disorder according to the latest edition of the *Diagnostic and Statistical Manual of Mental Disorders*.

In audiology there is also a trend towards labeling. To be clear, a label is not the same as a distinct diagnostic category. It is more broadly based – much less distinct. The more we learn about specific etiology and symptom characteristics the better we can sub-divide broad labeled groups.

In audiology, there are a few common labels, for example “auditory neuropathy spectrum disorder” (ANSD) and (central) “auditory processing disorder.” I would also add to the list “congenital” hearing loss and “Meniere’s.” In all cases there may be some relatively well-defined inclusion guidelines, but no matter how strict the inclusion criteria, the category is never homogeneous.

We all know that there can be certain benefits for patients to have some designation. For children, certain labels can open up doors for special educational provisions, for scarce (re)habilitation resources, or for special needs financial support. Often the label definitions are “stretched” so as to accommodate borderline cases. Criteria for inclusion are often interpreted “generously.” If patients are helped, then that is good. However we should beware of treating the labeled patient as a well-defined entity.

I have often read research papers where the authors take a group of subjects with a label, and compare the group, as if it was a distinct entity, to normal controls. The problem here is that the labeled cohort is far from homogeneous. The group contains a wide variety of types in terms of severity of disorder, etiology and co-morbidity. Most often the study group has so much variance that statistical power is hard to achieve, even if the sample size is very large - which it rarely is. I myself have been hampered by this in reviewing cochlear implantation outcomes in children labeled as having ANSD. Without more well-defined sub-categorization such research studies, such as in ANSD children can rarely lead to solid conclusions that can be generalized to other children with ANSD.

But all this academic stuff is not my major concern. My concern is the risk that hearing health care professionals treat the labeled patient according to the label and not the individual characteristics of the hearing disorder. There are, in my opinion, two important factors that should be uppermost in the minds of audiologists. Firstly that the range of “whatever the problem is” within a labeled group is huge. This was indeed recognized in relation to auditory neuropathy with the addition of the term “spectrum disorder”. This was a good move to recognized the heterogeneity and the severity range of AN.

Secondly we must recognize that an “un-labeled” patient may have characteristics in common with

those labeled. Consider this: any subject who has a “cochlear hearing loss” also has some degree of retro-cochlear neural degeneration. I mean every patient, no matter - noise induced hearing loss, age related hearing loss, congenital deafness. When cochlear (inner) haircells are damaged or do not properly develop there is some degeneration of spiral ganglion cells, and from there, deficient connectivity with more central neurons in the auditory pathway. This is “auditory neuropathy”. All of your SNHL patients have ANSD! Similarly all patients with a hearing loss (of peripheral origin) have some degree of “auditory processing disorder”.

So I will leave you with these suggestions. Take cautious note of any label that has been given to a patient. Do not make any conclusions about hearing problems purely based on the label. Pretend that the label is meaningless; it very often will be.

Make your own detailed assessment of a patients hearing problem and describe the problem (s) accurately. Some use of a diagnostic category may be necessary, but use labels with caution.