Editorial

Audiometric Practices

Fred Martin, his colleagues, and his students at the University of Texas in Austin perform a valuable service to the profession by conducting periodic "state-of-the-field" surveys. In this issue of JAAA, we report the results of their latest survey on current audimetric practices. I hope I am not the only one who becomes extremely depressed by his data. Usually, I try to maintain an upbeat attitude about the future of the profession, but these surveys always set me back a few weeks. Like Fred, I am concerned that perhaps we need at least a little more standardization in how we teach students to evaluate auditory function. Consider, for example, the fundamentals of pure-tone audiometry. When I was an audiology student in the early 1950s, we tested air conduction with dynamic earphones mounted in exceedingly uncomfortable donut (MX/41AR) cushions; we tested bone conduction from mastoid sites; and we tested everyone by both air and bone. We did it this way because that is how we were taught to do it.

Over the intervening decades, much has been learned about these venerable practices. First, thanks to modern tubephones (aka insert receivers), it is hardly necessary to subject clients to the discomfort of conventional earphone cushions for even short periods of time. Yet Fred’s survey finds that, more than 10 years after their general availability, only 24 percent of respondents report that they are using insert receivers in some clinical capacities.

Second, research over many decades has shown that the center of the forehead is a better place for the bone vibrator than the mastoid process. Yet 92 percent of Martin’s respondents report that they still place the BC transducer on the mastoid.

Third, the advent of immittance audiometry, more than 25 years ago, provided us with a tool vastly more sensitive to middle ear disorder than the air-bone gap. Yet only 6 percent of Martin’s respondents are convinced that there is no need for bone-conducted testing if immittance measures are normal. On the other hand, 17 percent still test every patient by bone-conduction. The testing rationale employed by the remaining 77 percent remains obscure.

As far as I can tell, the vast majority of clinicians are still testing the way I was taught 45 years ago. The millions of dollars spent on research over the intervening years, and the billions of words published in the interim, seem to have had remarkably little effect.

The survey’s results in the area of speech audiometry are equally disconcerting. Consider the speech detection threshold (SDT). The SDT is a useful clinical measure to attempt when, for any reason, the threshold for spondee words (SRT) cannot be obtained. The rationale is that, while you would prefer to have a threshold level at which words are correctly perceived, absent that it is still useful to seek a threshold level at which at least the presence of speech is detected. It is a relatively unsophisticated testing strategy of the genre “Try A first. If it works, fine. If it doesn’t, try B.” Interestingly, however, the survey tells us that 14 percent always obtain an SDT and 15 percent never obtain it. Hellooo! Are we all on the same page here?

Perhaps the single most depressing aspect of this survey is the fact that the use of monitored live voice, as the vehicle for carrying out speech audiometry, remains at an astonishing 82 percent. Only 18 percent report some form of modern (read post 1940) recorded-speech playback.
system. This enormous gap between what is considered to be a minimal standard of instrumentation in our sophisticated research environments and what passes for adequate practice at the vast majority of clinical sites will become increasingly difficult to justify.

It is always easy to blame our educators for the shortcomings of practicing clinicians. But there is plenty of room to spread the blame. Most clinicians seem to repeat, *ad infinitum*, what they learned in graduate school and apparently never dwell too long on the thought that there might be a better way. Sadly, the information is out there in the literature, but few clinicians, or educators for that matter, seem to read the serious journals assiduously.

We are all apprehensive about over-regulation by arbitrary committee decisions and cherish our right to do things the way we want to do them. But there has to be a limit to rugged individualism and I think we have just about reached it. Perhaps it is time for the Academy to give serious thought to defining and actively promoting at least minimal standardization of basic audimetric procedures.

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