

## **Adoption/Certification Workgroup – Hearing on Usability of EHRs – April 21, 2011**

### WRITTEN TESTIMONY OF DR STANLEY WAINAPEL

My name is Stanley Wainapel. I am a 64 year old physician with a progressive retinal degenerative disorder from which I have been functionally blind for almost 20 years. I can only see shapes and movement as well as light, and in dark environments I cannot see anything at all. I work as a specialist in Physical Medicine and Rehabilitation ( a physiatrist ), and have been in practice for 37 years since completing my residency training. My patients have a wide range of physical disabilities such as paralysis from spinal cord injury or stroke, lower or upper limb amputations, arthritis, fractures, severe heart or lung disease, and chronic musculoskeletal pain. My goal is to coordinate the care of such patients in order to restore them to their maximal level of physical, mental, social, and vocational function. My current position, where I have been for the past 16 years, is as Clinical Director of the Department of Physical Medicine and Rehabilitation at Montefiore Medical Center, located in the Bronx, New York. My academic rank is Professor of Clinical Physical Medicine and Rehabilitation at the Albert Einstein College of Medicine. I have published more than 60 articles and book chapters on topics including vision rehabilitation, alternative medicine, physicians with physical disabilities, and the medical problems of musicians.

With respect to computer technology, I have been using software for text-to-speech ( screen reader ) for 15 years, without which I would have been unable to maintain my ability to write, do e-mail, utilize the Internet, and ultimately to remain a productive physician in my current job. The particular software I selected was JAWS for Windows, although there are other text-to-speech options such as Window-Eyes. Additional software for optical-character recognition ( OCR ) has been helpful for me when I needed to read printed material such as medical reports or memoranda. In this case I have selected the Kurzweil 1000 program, but again there are several other brands of software providing OCR functions.

In order for me to effectively deal with future electronic health records, it is essential that they be compatible with the software I use, and with other programs which other visually impaired individuals use. Certain scripts such as Java may not work as well with these software programs. Also, the graphic-user-interface ( GUI ) poses a major challenge for visually impaired computer users; the fewer the graphic images or icons, the better. Also please remember that a large number of people with visual impairment have significant residual vision and might not be using text-to-speech software. Instead, they might use magnification software ( for example, Zoomtext ), or might simply need to enlarge the font of the print on the computer screen. Finally, a much larger number of potential computer users among health care professionals may have reading difficulty due not to vision loss but to dyslexia, and many of them would benefit from similar accommodations in the workplace.

Since I also am familiar with some of the technology needs of people with other types of disabilities, I would certainly want electronic health records to be accessible for a paraplegic, or for someone with severe hand arthritis. Here one can utilize voice-activated programs such as the Dragon system. And it should

not be overlooked that computer terminals and keyboards would need to be physically accessible to someone who is a wheelchair user.

I would recommend that for the most up to date information on computer access for visually impaired individuals you contact the Technology Department at the National Federation of the Blind ( NFB ) in Baltimore, Maryland. They will have a wealth of information and practical recommendations.