The Hype and The Hope of Assistive Technology

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ABSTRACT: This talk explores two very different assistive technologies meant to aid individuals with deficits in movement. One, the wheelchair, is arguably the most important technology clinicians can offer an individual with mobility impairment. Wheelchairs, however, need significant improvement. The other technology, brain-computer interfaces, holds great promise, but these are not yet clinically available. The balance between hype and hope offered by these two technologies will be discussed in the broad context of assistive technology research.

BIOGRAPHY: Dr. Michael Boninger is a professor and the UPMC endowed vice chair for research in the Department of Physical Medicine & Rehabilitation at the University of Pittsburgh School of the Health and Rehabilitation Sciences. He has joint appointments in the departments of bioengineering and, rehabilitation science and technology, and the McGowan Institute of Regenerative Medicine. He is senior medical director for post-acute care for the health services division of UPMC and vice president for medical affairs for community provider services. He is also a physician researcher for the United States Department of Veterans Affairs.

Dr. Boninger has an extensive publication record of over 220 papers; is the author of five U.S. patents; and has been recognized for his research on spinal cord injury, assistive technology and overuse injuries, particularly those associated with manual wheelchair propulsion. Dr. Boninger's central research focus involves enabling increased function and participation for individuals with disabilities through development and application of assistive, rehabilitative and regenerative technologies. In addition to his extensive experience and multiple publications related to training researchers, his students have won more than 50 national awards. Dr. Boninger holds four U.S. patents and has received numerous honors, including induction into the National Academy of Medicine of the National Academy of Science.