

Making Assistive Technology and Rehabilitation Engineering a Sure Bet

## **COMPUTER ACCESS TECHNOLOGY: Impact of Diagnosis, Functional limitations and Occupation**

Anupama Khanna, MOT (candidate)<sup>1</sup> ; Amol M. Karmarkar, PhD, MS<sup>6</sup>;  
John J. Coltellaro, MS, ATP, RE<sup>2</sup>; Rosemarie Cooper, MPT, ATP<sup>2</sup>;  
Brad E. Dicianno, MD, MS<sup>2-5</sup>; and Rory A. Cooper, PhD<sup>3-4</sup>

<sup>1</sup>Indian Spinal Injuries Centre, New Delhi, India

<sup>2</sup>Center for Assistive Technology, University of Pittsburgh, PA

<sup>3</sup>Human Engineering Research Laboratories, VA Pittsburgh Healthcare System, Pittsburgh, PA

<sup>4</sup>Department of Rehabilitation Science and Technology, University of Pittsburgh, PA

<sup>5</sup>Department of Physical Medicine and Rehabilitation, University of Pittsburgh

<sup>6</sup>Division of Rehabilitation Sciences, University of Texas, Medical Branch

### **ABSTRACT:**

The impact of diagnosis, functional limitations and occupation on the prescription of computer access technology (CAT) has not been studied extensively. The purpose of this study was to identify the CAT recommended at the Center for Assistive Technology during 2008-2009. A total of 43% of clients had neurological disorders, and 31% had learning disabilities. Clients' functional limitations were classified in eight categories. A total of 85% participants were unemployed, 66% had tentative plans of student role. Ninety six percent of clients were prescribed both hardware and software, 4% were prescribed solely hardware. While 63% of the overall prescribed hardware were standard external (SE) devices, 56% of the software were reading assist (RA) devices. Clients with neurological disorders were prescribed 69 types of hardware, of which SE devices were the largest group (48%). Those who intended to continue education were prescribed a total of 523 different types of hardware and software.

### **KEYWORDS:**

Computer Access Technology; hardware; software; diagnosis; functional limitations; Tentative occupational Plans

### **ACKNOWLEDGEMENT:**

Funding for this research was provided by the National Science Foundation, Project EEC 0552351.

### **Contact Information:**

Anupama Khanna, ISIC Institute of Rehabilitation Sciences, Sector C, Vasant Kunj, New Delhi – 110070, India. Email: anupamakhanna\_ot@yahoo.co.in, anupamakhanna.ot@gmail.com Phone: 91 – 9891529023