



THE CONSORTIUM OF  
MULTIPLE SCLEROSIS CENTERS

## Making Technology Work for Patients

By George H. Kraft, MD, MS and Kurt L. Johnson, PhD, CRC

In today's fast-paced, digital environment, technology has revolutionized the way we conduct business, interact with our family and friends, and in the healthcare community, how we treat our patients. Yet for people with multiple sclerosis (MS), challenges including limited dexterity, visual impairment and cognitive impairment, can make the use of computer-related technologies difficult.

In a recent survey of more than 2,000 people with MS conducted by the MS Technology Collaborative (*"Staying Connected: An Investigation of How Technology Affects People Living with MS"*), 33 percent of respondents said they have trouble typing on a standard computer keyboard and 30 percent reported having trouble reading text on a standard screen. However, only 5 and 6 percent of respondents respectively indicated making any adjustments to their computer to make these tasks easier.

While by many accounts the MS community stands to benefit significantly from new technology, many are unaware of how to use it to their advantage. And in many MS clinics, there may not be a comprehensive understanding of available technology for persons with MS.

### Accessible Information Technology

People with physical or cognitive disabilities can more fully and easily use information technologies such as computers and software when they are accessible. For people with MS, accessible information technology can have a profound impact on their quality of life by helping them to create or maintain relationships, seek information about multiple sclerosis and treatment options, assist in daily activities, and even help to maintain employment.

For example, speech recognition software allows people to give commands and enter text using their voice instead of a mouse or keyboard, making it possible for people with limited dexterity to use a computer more efficiently. Screen magnifiers enlarge a portion of the computer screen to increase legibility and make images easier to see, allowing people with vision impairments to read e-mail and access the internet.

There are many other examples of accessible technology that can help people with MS, including:

- Screen readers: systems that can read everything on a screen, including text, graphics, control buttons and menus and speak it in a computerized voice.
- Text to speech systems: these systems are relatively inexpensive and can render text to synthesized speech.

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#### Consortium of Multiple Sclerosis Centers

359 Main Street, Suite A, Hackensack, NJ 07601

Email: [info@mscare.org](mailto:info@mscare.org)

Website: <http://www.mscare.org>

Federal ID # 22-3216416



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- Word prediction programs: programs that allow a person to select a word from a computer-generated list to reduce keyboarding demand or to compensate for cognitive difficulties.
- Alternative input devices: keyboards and pointing devices (such as mouse, joy stick, trackball) which may provide easier access to computers for people with various kinds of limitations in dexterity. One example is Intelligent Keys, where a person with a tremor or weakness who may hit an adjacent key by error has the correct letter typed.
- Laser operated keyboards: a type of keyboard that relies on a head- or eye-pointing device that directs a laser beam at an on-screen keyboard.

Many types of accessible information technology are built right into the operating system found on home and business computers. These features can be modified as symptoms change which is important for people with MS. For example, if a person has MS-related optic neuritis, a screen magnifier can be adjusted to accommodate different levels of visual impairment.

### **Are your patients aware of these tools that can help them live better with MS?**

By incorporating information about accessible information technology as a part of treatment, you ensure patients are aware of their options and are able to access information, communicate with family and friends and perhaps even stay in the workplace longer.

### **You don't have to be a "techie" to help your patients with technology.**

Recognizing the advantages that accessible information technology can bring to people with MS, leaders from the pharmaceutical, technology and patient advocacy sectors, including Bayer HealthCare Pharmaceuticals, Microsoft, and the National Multiple Sclerosis Society, came together in a landmark alliance known as the **MS Technology Collaborative**.

The Collaborative is formed by a steering committee of nine people with MS, as well as a Professional Advisory Board of leading healthcare professionals in the field of MS. These individuals are working together to improve the way technology can help people with MS maintain their health and independence, have support for their life choices, and stay connected with their families, friends, and communities.

Drawing upon the results of the Collaborative survey "*Staying Connected: An Investigation of How Technology Affects People Living with MS*," the Collaborative launched a personalized, interactive, Web-based program called "Snapshot". "Snapshot" is designed to inform people with MS about technology

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resources through a customized report featuring accessible technology solutions tailored to meet their specific needs.

To learn more about the MS Technology Collaborative, go to [MyMSMyWay.com](http://MyMSMyWay.com). Here you can access the full survey results, see the Snapshot tool, and receive additional information about how accessible technology can help people live better with MS.

If you are interested in receiving additional updates and information from the Collaborative to share with your patients, please e-mail [MyMSMyWay@edelman.com](mailto:MyMSMyWay@edelman.com) with your name and affiliation.

*George H. Kraft, MD, MS is a professor of MS research, rehabilitation medicine, and neurology at the University of Washington's Department of Rehabilitation Medicine. Dr. Kraft also serves as a member of the MS Technology Collaborative Professional Advisory Board.*

*Kurt L. Johnson, PhD, CRC is a professor of rehabilitation medicine and the head of the Division of Rehabilitation Counseling at the University of Washington's Department of Rehabilitation Medicine.*

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