
Computers and Technology Offer a New Paradigm for Rehabilitation Management and Hope for People with Disabilities

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• A woman wants to meet with you to discuss rehabilitation options for her 50 year old husband who just has a stroke.

• A mother calls to ask about the possibility of rehabilitation for her son who had a head injury five years ago and is not successful in school.

• A therapist calls for your guidance to explore treatment options and find therapists in another state.

• A son wants to explore additional options for his father who has communication problems from a degenerative disease.

• A mother wants to enhance the quality of life for her grown child with developmental disabilities.

• A teacher wants to learn more about how to use technology to help a student with disabilities.

• A daughter is concerned about her mother who is becoming more forgetful and wants to find out how to keep her brain active and sharp.

• Family members ask you if the use of technology with their loved one could improve their thinking and communication abilities.

clients/residents/patients/students who come to us for help expect us to provide the highest quality of care possible and we want to do our best to help them. We need to be able to refer them to the most effective programs and hook them up with helpful resources. People look to us for guidance and direction involving treatment alternatives and state-of-the-art rehabilitation services. At the same time, we are all very pressed for time, are asked to play multiple roles, face an increase in the expectations placed on us at work. It is often easier to maintain the status quo and keep doing things the way we always have. We often have less time to spend helping families and people with disabilities. There is little time or money allocated for helping professionals keep up with changes in society that may help make our lives easier and improve the effectiveness of our services. It requires much effort to stay on top of new rehabilitation treatment approaches and advances.

The integration of technology into rehabilitation is a new vision that we must embrace and learn more about in order to provide the highest level of care possible and make our lives more rewarding. It reduces the burn out factor many rehabilitation professionals face. The use of technology can not only improve the lives of our clients, but can also help us improve day-to-day productivity in our careers and make our jobs more fun and satisfying. Even if we are unable to spend the ideal amount of time with those we are helping, we can offer them a list of helpful online resources or knowledge of technology that they can explore further. Informed consumers are more successful self-advocates.

Benefits of Technology

There are many benefits for integrating technology into daily work routines. As a clinical social worker, life care planner,

Introduction

Do these scenarios catch you off guard? Do you feel stressed trying to meet the multiple demands placed on you at work? Read on to find out resources to help you find solutions for your clients and ways to make your life easier when confronted with situation such as those described above.

Technology has slowly crept into our professional and personal lives. We are in the midst of a paradigm shift involving our approach to helping others. The families and

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return-to-work coordinator, case manager, discharge coordinator, rehabilitation consultant, vocational counselor, forensic expert, technology coordinator, case-coordinator, administrator or therapist, there are many reasons you might want to learn more about using technology as part of what you do.

Benefits may include to:

- Locate appropriate resources for clients
- Learn more about evidence-based, effective, state-of-the-art treatment approaches and treatment alternatives
- Help others research conditions, and medications
- Network with Professionals
- Improve the quality and time it takes for documentation
- Empower people to help themselves
- Assist clients returning to work
- Help clients become more successful in school
- Help others explore leisure, educational, work, community re-entry, and social pursuits
- Use time more efficiently
- Increase revenue by using technology to create lucrative and successful education and rehabilitation programs.
- Identify barriers to success and determine solutions that promote independence.
- Improve client satisfaction
- Make work more rewarding and enjoyable

Help for Those Who Are Disabled

People challenged by disabilities can benefit from technology in many aspects of their lives. Computers and other devices, when selected and used with the help of a skilled clinician, can help improve communication and cognitive skills related to education, employment, recreation, social and medical needs. Assistive technology (AT) can help individuals increase independence, build self-confidence and self-esteem, and improve quality of life.

Better, more affordable technology holds great promise for individuals who have communication and cognitive challenges. Some professionals have welcomed this development of new resources to help others with open arms, some have avoided, resisted or ignored these helpful tools, and others are unaware that new and exciting treatment opportunities exist. Children and adults with a broad range of difficulties resulting from strokes, head injuries, and developmental and learning disabilities can independently handle a wider range of activities with the help of software and devices to read, write, organize, remember, learn, communicate, and search for information.

People who are appropriate candidates for learning support from computers may have experienced or still have the following:

- A brain insult such as a stroke, a closed-head injury, a tumor, or an aneurysm
- A progressive degenerative disease such as Parkinson's, amyotrophic lateral sclerosis (ALS), or multiple sclerosis (MS)
- A cognitive decline
- Poor performance in school
- Work-related challenges
- Unintelligible speech
- A developmental delay
- Developmental apraxia of speech
- Mental retardation
- Autism
- A learning disability
- A voice disorder
- Hearing impairment
- Low vision

As technology becomes even more important to mainstream society, people who do not have ready access to a computer or the Internet and are not exposed to support from skilled professionals will be at an increasing disadvantage.

It may be difficult for individuals with communication and cognitive challenges to do the following:

- Provide computer input with movement of a mouse or typing on the keyboard
- Read and interpret information on the monitor
- Sequence and analyze procedures needed to use software applications
- Use e-mail to obtain information and interact socially
- Surf the Web

As computers continue to become more powerful, less expensive, and more portable, they are increasingly helpful in improving speech, language, new learning, reasoning, and memory. By creating opportunities as well as removing performance barriers, technology can help us explore new frontiers in meeting our clients' needs.

Therapy Focus

The needs of the person seeking help should influence the type of software and adaptive hardware selected. It's important to analyze carefully the strengths and weaknesses of the individual's communicative and cognitive profile. Therapy goals need to be related to improving functional aspects of daily living, educational or vocational pursuits, or social and leisure activities.

Computers do not replace specialized training with professionals. Users of the technology need to remain focused on the goals of therapy and work to achieve the desired

outcomes. Once software is selected, it should be adapted and used to best help the individual. People learn in different ways and are helped by different strategies and types of assistance. Communication and cognitive professionals are trained to help people with communication and cognitive deficits, and computers are only a tool to further that help. Developing an appropriate technology-based program for clients is a challenging process. No single hardware or software product addresses each person's unique communication and cognitive profile and specific needs. A variety of resources is most often needed, and products should be used in different ways with different clients. Clinical judgment is a critical component of individual assessment and effective program implementation.

There is a Lack of Experienced Clinicians Who Use Technology

Although the use of technology in treatment offers many benefits, is needed by many people, and is an effective practice approach, finding qualified help is often a difficult process for

Benefits of Computer Use in Communication and Cognitive Therapy

- It's interesting, practical, and fun
- It offers the ability to control tasks
- It gives independent, nonjudgmental, immediate feedback
- Computers promote effective independent practice
- It maximizes the effectiveness of limited treatment sessions
- It provides solutions to quickly improve quality of life
- Increased profitability
- Help Is available when there is a shortage of professionals
- Technology offers control for family

many clients. Furthermore, quality training is often difficult to obtain for professionals. The training of clinicians to use these new tools is a time-consuming endeavor with many barriers. Clinicians who desire to develop an expertise in this area are often discouraged by a lack of time, guidance, or money to learn about and implement available treatment resources. Consequently, many clients are not exposed to the numerous benefits of computer use in the learning process.

Cool Tools—Top Picks

Many software products and devices on the market today are affordable and easy to use in therapy, at work, in school, and at home. These tools were produced for a wide variety of audiences: some for people with special communication or cognitive needs, others for people learning English as a second language, people with

low vision, or those in mainstream society. In the hands of a creative and skilled therapist, these products can unlock the potential of many clients.

Software That Enables Computers to Read Aloud

Software that can read aloud is referred to as a "text reader" or "text-to-speech software." This technology often creates hope about potential technology treatment solutions. For many people, it also increases motivation. It can be used to read books, email, websites, and documents. The voice and rate of speech can be adjusted. Words can be magnified and highlighted as they are read aloud. In addition to helping people read, text readers can also help users proofread text they have written.

Software That Teaches English As a Second Language

Another type of product is software developed to teach English as a second language. These products tend to be very interactive, focus on practical, everyday communication skills, include entertaining, and educational games and are reasonably priced

Talking Photo Albums

Talking photo albums enable users to record the voice of a person that can be heard when clicking an arrow next to a picture. It can be customized to provide meaningful practice of relevant communication topics, to engage family members and friends in conversation, or to be used in treatment sessions.

Adapted E-mail and Internet Access

It's important for every client to be able to use e-mail and the Internet. E-mail is a great communication tool for maintaining social contacts and facilitating the assimilation of new information. Adapted e-mail programs offer many helpful features, including:

- Pictures of people in the address book
- The ability to "speak" messages as an alternative to typing them
- The ability to have incoming messages read aloud
- Large icons and text and simplified interfaces.

Multi-featured Software to Assist With Studying and Writing

Several programs on the market are helpful for struggling students and adults reentering the working world who may need extra support with reading and writing. Features of these programs include:

- Helping the user think of words with word prediction features
- Reducing the number of keystrokes needed for typing

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- Easing the typing burden with preprogrammed phrases and sentences that can be accessed with abbreviations
 - Help with reading speed and comprehension with text readers
 - Assistance with proofreading by having the computer read aloud
 - The ability to insert voice notes and text notes for future reference
 - The ability to highlight information for later review, as well as to extract the highlighted material and place it in its own file
 - Help with brainstorming ideas and formulating those ideas into a written narrative

New Handheld Technology to Help With Memory, Organization, and Communication

Handheld and wireless devices can be simplified and customized as needed to assist with memory, organization, and communication. With the help of a skilled clinician, they can provide new opportunities for people with communication and cognitive challenges to improve their overall quality of life. Devices include: cell phones, electronic organizers, pocket PCs, Palms and digital cameras

Online Support, Information and Discussion Groups

In addition to the many ways that the Internet can be used to enhance direct treatment for communication and cognition, it is an affordable and efficient way to access support and

information for our clients as well as for our own professional development. Unfortunately, many people are not aware that these helpful online resources exist.

The Internet can be used to:

- Link people with online and local support groups
- Access written literature regarding treatment approaches and research studies
- Assist clinicians with appropriate referral sources and help clients find the help they need
- Connect clients and clinicians with vendors who provide helpful products
- Provide an ongoing source of professional development for clinicians and continued information about new treatment techniques and products for clients

Conclusion

Technology has crept into our professional and personal lives. We are in the midst of a paradigm shift involving our approach to helping others. People look to us for guidance and direction involving treatment alternatives and state-of-the-art rehabilitation services.

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