Mind Matters Episode 7

The Role of Technology in Supporting Cognitive Health

Podcast Transcript and Technology Resource Guide

Featuring Katie Reilly, Marisa Romanini, and Christina Sanders
Acts Memory Services Team

Important Note

The technologies and screening tools discussed in this episode are presented for educational purposes. Cognitive screening does not provide a diagnosis. Questions about cognitive changes or the suitability of a specific tool should be discussed with a qualified healthcare professional.

Introduction

Hi, everyone, and welcome to another episode of Mind Matters, where we talk about brain health, dementia care, and many topics in between.

Today, we're talking about an increasingly timely and relevant topic: the role of technology in cognitive health and cognitive support.

Technology is becoming part of nearly every aspect of our lives, and cognitive health is no exception. Today, we'll explore tools for cognitive screening, technologies that can make everyday life easier or the home environment safer for someone living with cognitive change, and some innovative ways technology can support engagement, connection, and overall brain health.

We're going to cover a lot of different programs and tools today!

Yeah, I think a great place to start is with cognitive screening tools. When we start talking about supporting cognitive health, one of the first questions people may have is, 'Where's my baseline? How am I doing right now?'

Let’s look at some of the cognitive screening tools that are available, including some that we use at Acts.

Cognitive Screening Technology

Absolutely. We've seen a lot of innovation in cognitive screening beyond the traditional pencil-and-paper tools that many of our residents may already be familiar with.

One that may be familiar to people at Acts is Cognivue Clarity.

It's a digital cognitive assessment that looks somewhat like a small laptop. The assessment takes about 10 minutes and is self-administered. You interact with it through a simple wheel while completing different tasks.

What I really like about it is that it can provide a snapshot of cognitive function in a different way from a traditional pencil-and-paper assessment. Because it's portable, it can also be used in a setting where the resident feels comfortable.

I've seen residents using it in the communities. They can sit comfortably at a table rather than feeling like they're sitting down to take a traditional test.

Exactly. Another digital tool is XpressO by MoCA, which is an app that can be downloaded to your smart phone. Many people are familiar with the Montreal Cognitive Assessment, or MoCA. XpressO is designed for individuals to assess aspects of their cognitive performance using their own device.

It looks at areas including processing speed, executive function, and memory.

We're also seeing artificial intelligence enter the cognitive health space. One example is the use of AI to analyze speech and language patterns as researchers explore ways to identify cognitive changes.

But there's something very important to remember about screening tools: screening is not the same thing as diagnosis.

A screening provides a snapshot of cognitive functioning at a particular point in time. It can help establish a baseline or identify something that may warrant further discussion with a healthcare provider, but it doesn't provide a diagnosis on its own.

It's almost like getting lab work done. It gives you information about where you are right now, and then you can decide whether there are things you want to discuss further or work on.

Smart Home Technology and Independence

Another important part of cognitive health is looking at how independently we're able to function in our everyday lives. There are so many technologies now that can help support independence.

Absolutely. Let's talk about the smart home!

Things like Amazon Alexa and Google Nest can act almost like an extra helper in your home. They can provide reminders, help with lists, set timers, and control compatible devices around the home.

I recently experienced this with my own father after he had heart surgery and needed some extra support remembering his medications. We were able to use Alexa to provide scheduled medication reminders.

There are also motion sensors, smart lighting, smart locks, and other technologies that can add an extra layer of support.

My mother, for example, uses lighting in her hallway at night. Something as simple as automatically having the right lighting available can make the environment easier to navigate.

The goal isn't to make someone's home more complicated. It's really the opposite. How can we simplify things and remove barriers so someone can continue to feel independent?

Even something as basic as a simplified TV remote with larger, easier-to-understand buttons can make a difference.

Technology for Staying Connected

Technology can also help us stay connected with the people we love, especially when they live far away.

Video calling through smartphones, tablets, Echo Show, FaceTime, and other platforms can make communication much more personal.

There are also simplified devices that can make connecting easier. Instead of searching through long contact lists, someone may be able to touch a picture of the person they want to call.

One example is GrandPad, which is designed to make things like calls, video calls, photos, music, and games more accessible for older adults.

That visual connection can be incredibly meaningful.

During COVID, my daughter was on the West Coast and couldn't be with us for Christmas. We shared Christmas dinner over video. It obviously wasn't the same as having her physically sitting at the table, but it allowed us to feel connected in a way a regular phone call couldn't.

Technology That Helps Us Continue Doing What We Love

Another area I love is reading. I talk with many residents who have always loved to read but say, "I just can't read like I used to." Technology can help remove some of those barriers.

Audiobooks allow us to experience books by listening, and e-readers allow us to enlarge the font, adjust lighting, and customize the reading experience.

The goal is simple: How can we remove barriers so people can continue doing the things that bring them joy and meaning?

And apps like Libby can connect people with digital books and audiobooks through their local library.

Orientation and Daily Structure

Another useful category is technology that supports orientation and everyday routines.

One example is a digital day clock. These can go well beyond displaying the time. Depending on the device, they can provide easy-to-read information such as the day, date, time of day, weather, or other reminders.

For someone experiencing cognitive changes, visual information can provide support without another person constantly having to give reminders.

Another option is a digital family calendar. There are several products available, including Skylight Calendar and others.

A digital calendar can help provide structure to someone's day through appointments, schedules, reminders, and other information. And because these tools can often be personalized, families can adapt them around what is most helpful to the individual.

Cognitive-Motor Training and Dual Tasking

We've talked about technology that supports daily life, but there's also technology designed around cognitive engagement.

One area is dual-task training, which combines cognitive challenges with physical activity. We can certainly do dual-task activities without technology, but technology can make this type of engagement especially interactive.

One example we use at Acts is SMARTfit.

SMARTfit combines cognitive tasks with movement, turning the experience into something that feels more like a game. Activities can challenge things like processing speed, attention, decision-making, and cognitive flexibility while the individual is also moving.

Another technology is BlazePods. These are small light-up pods that can be positioned in different locations and used in activities that challenge reaction time, balance, and decision-making. For example, several colors may appear, but the participant taps the pod only when a particular color lights up.

We're also looking at Dividat NEURO GYM, which combines cognitive challenges with physical movement using a pressure-sensitive platform.

And then there is exergaming, which simply combines exercise with video games. Wii Sports and Wii Fit are familiar examples. The common thread is making movement and cognitive engagement enjoyable.

Reminiscence, Photos, and Music

Technology can also provide wonderful opportunities for reminiscence. Something like GrandPad can make it easier to share and enjoy family photos.

But there's an important person-centered point here. When we're looking at pictures with someone living with dementia, we don't want to turn the experience into a memory test.

Instead of saying, "Mom, don't you remember that trip?" we might say, "That's us at the beach. We had such a wonderful time, and I know how much you've always loved the beach."

We're sharing the memory rather than testing the person.

Technology also makes personalized music easier than ever to access. We can create playlists filled with music that is personally meaningful, maybe hymns someone heard in church, music from their wedding, favorite songs from their younger years, or music associated with important life experiences.

The goal is not simply background music. It's using music intentionally to create connection, enjoyment, and opportunities for reminiscence.

Crdl and Sensory Connection

Another fascinating piece of technology is Crdl. It's almost a combination of technology and art.

Two people place their hands on the Crdl and then make physical contact with one another, completing a circuit. The system translates different types of touch into different sounds.

What makes this especially interesting is that interaction doesn't depend on conversation. That can create another avenue for connection when verbal communication has become more difficult.

Robotic Pets and AI Companions

Technology has even entered the world of companionship. Many of our communities use robotic companion pets. They can look, feel, and sound like pets and may respond to touch or movement.

For someone who has always loved animals, that can provide another avenue for interaction and companionship without the responsibilities associated with caring for a live animal.

JOY FOR ALL Companion Pets, for example, include interactive cats and pups designed to respond to touch, movement, or voice.

We're also beginning to see AI-based companions. One example is ElliQ, an AI companion designed for older adults. It combines conversation and interactive activities with other forms of everyday support.

These technologies are especially interesting because they show how broad the spectrum of supportive technology is becoming.

Interactive Engagement Technology

Another technology that many of our Acts communities are familiar with is the Tovertafel.

It's an interactive projection system that places games and experiences onto a surface. People can interact with the projection through their movements.

Activities can range from more cognitively stimulating experiences to sensory experiences, making the system adaptable for people with different abilities.

There's also the Tovertafel Pixie, a mobile version designed to bring interactive projections into different spaces.

One of the things we especially appreciate about this type of technology is that there doesn't always have to be a right or wrong response. Someone can move a hand, interact with the image, and experience an immediate response. That gives us another opportunity to set someone up for success.

Memory Lane TV

Another interesting option is Memory Lane TV. Memory Lane TV offers programming specifically adapted for people living with memory loss and their care partners. Much of the programming is positive and plot-free.

That's important because complicated storylines may become difficult or frustrating for someone experiencing cognitive changes. Instead, this type of programming focuses more on experiencing the moment and creating opportunities for enjoyment, relaxation, connection, and reminiscence.

Virtual Reality

Virtual reality is another technology that has evolved dramatically. VR originally became familiar to many people through gaming, but today we're seeing possibilities for using virtual experiences to support older adults as well.

A headset can provide experiences such as virtual travel and other immersive activities that may be particularly meaningful for someone who has limited opportunities for travel or mobility.

There's also exciting potential for combining VR with cognitive-motor activities and education. As with any technology, though, the important thing is finding something that is appropriate, comfortable, meaningful, and enjoyable for the individual.

Brain Training Apps

Finally, there are mobile and online platforms designed specifically around cognitive training.

One example is BrainHQ, which includes exercises targeting areas such as memory, attention, processing speed, decision-making, and navigation.

Again, technology gives us another option for making cognitive engagement accessible and interactive.

Closing

We've covered a lot of technology today!

We've talked about cognitive screening, smart-home technology, communication and connection, orientation and daily structure, cognitive-motor training, reminiscence, music, companion technology, interactive engagement, specialized television, virtual reality, and brain-training platforms.

And if there's one theme that connects all of these technologies, it's that technology should support the person, not complicate their life.

The right technology can help remove barriers, support independence, encourage connection, and provide meaningful opportunities for engagement.

In the transcript accompanying this episode, we've included a technology resource guide if you'd like to learn more about some of the tools we've discussed today.

We hope you found this episode helpful and maybe discovered something new to explore. Until next time, remember that your mind matters.

Technology and Resource Guide

The links below lead to official product or service resources. Product inclusion is informational and does not represent a clinical recommendation or endorsement. Features, availability, pricing, and subscription requirements may change.

Cognitive Screening

Cognivue Clarity

A self-administered digital cognitive assessment using FDA-cleared technology. Cognivue states that Clarity is an adjunctive evaluation tool and not a stand-alone diagnostic tool.

Learn more about Cognivue Clarity

XpressO by MoCA

A brief digital self-assessment addressing processing speed, executive function, and memory. It is intended for awareness rather than diagnosis.

Learn more about XpressO by MoCA

Smart Home, Communication, and Reading

Amazon Alexa and Echo Show

Voice-assistant and smart-display products that may support reminders, lists, timers, communication, and compatible smart-home controls.

Explore Amazon Alexa

Google Nest

Smart-home products and displays that may support voice assistance, communication, reminders, and compatible home controls.

Explore Google Nest

GrandPad

A simplified technology platform designed for older adults, with features such as calls, video calls, photos, music, games, email, and other connectivity tools.

Explore GrandPad

Jitterbug Phones by Lively

Simplified cell phones designed for older adults, with easy-to-use features, larger text and buttons on select models, and optional health and safety services.

Libby by OverDrive

An app that allows library users to borrow available e-books, audiobooks, and magazines through participating local libraries.

Explore Libby

Amazon Kindle

E-readers and reading apps that allow users to adjust features such as font size and display settings.

Explore Kindle

Skylight Calendar

A digital family calendar designed to display schedules, routines, lists, and reminders.

Explore Skylight Calendar

Cozyla Calendar

A digital family calendar and smart display referenced in the podcast discussion.

Explore Cozyla Calendar

Cognitive-Motor Training and Exergaming

SMARTfit

A gamified cognitive-motor platform that combines cognitive challenges with physical activity.

Explore SMARTfit

BlazePod

Interactive light-based technology used for reaction, decision-making, and brain-body training.

Explore BlazePod

Dividat NEURO GYM

A cognitive-motor training platform that combines thinking challenges with physical movement.

Explore Dividat NEURO GYM

Nintendo Wii

A gaming platform discussed as a familiar example of exergaming through titles such as Wii Sports and Wii Fit.

Explore Nintendo support

Sensory, Reminiscence, and Companion Technology

Crdl

An interactive care instrument that translates human touch into sound to support shared sensory connection.

Explore Crdl

JOY FOR ALL Companion Pets

Interactive robotic companion pets designed with older adults in mind.

Explore JOY FOR ALL

ElliQ

An AI companion designed for older adults that provides conversation, activities, and interactive support.

Explore ElliQ

Interactive Engagement and Media

Tovertafel and Tovertafel Pixie

Interactive projection technology designed to provide purposeful play and engagement. Pixie is the mobile version referenced in the episode.

Explore Tovertafel Pixie

Memory Lane TV

A streaming platform offering positive, plot-free, multisensory programming adapted for people living with memory loss and their care partners.

Explore Memory Lane TV

BrainHQ by Posit Science

An online brain-training program with exercises addressing cognitive skills such as memory, attention, and processing speed.

Explore BrainHQ

Choosing Technology Thoughtfully

- Start with the person: their interests, routines, abilities, comfort level, and goals.
- Use technology to support connection and independence, not to replace human relationships or individualized care.
- Introduce one tool or feature at a time and simplify the setup whenever possible.
- Consider privacy, security, accessibility, supervision, cost, subscriptions, internet requirements, and caregiver support.
- For screening tools or health-related technology, involve an appropriate healthcare professional when interpreting results or making care decisions.