

This presentation is about tools that can complement anyone's effort to build long term recovery. Thank you for attending and participating today!

# How Apps, Devices, and Al Can Support Valued Outcomes in BH







### **Personal Control is Personal Power**



A PDF of the slides and presenter notes

Resources

The link to the Resources Page at the bottom of some slides will show you a set of resources for this presentation. On this slide there is also a link to a PDF of the slides and presenter notes.

In the first part of this presentation, I want to focus on three areas in which Assistive Technology can be useful in supporting real community inclusion and recovery for people with SMI, SUD, and IDD:

- AT to support Emotional Self-Regulation
- AT to support Executive Function
- AT to support Personal Safety

To the extent that you can transform existing control over a person to supporting the person's personal agency and choices, you will reduce the need for complicated control-based interventions.

In the second part, I'll give you an overview of neuromodulation and some of the devices that use mild brain stimulation to affect focus, depression, anxiety and other stress symptoms.

In the third part, I'll give you an overview of Artificial Intelligence bots (AI). There are frantic efforts to develop AI right now, but there is enough usefulness available to talk about some daily use cases in behavioral health. The biggest barrier to use in the disability community is the lack of mature methods that can accommodate everyone with a disability.

## **Questions & Housekeeping**



- Questions are welcome throughout the webinar today; Feel free to take care of your needs as they arise.
- If I can't get to your question today, email me and I will answer them by email.

If you know of good apps to support Recovery, Device uses and info, or AI tips, by all means, pass them on. You can use my email <a href="mailto:ndelisle@mymdrc.org">ndelisle@mymdrc.org</a>.



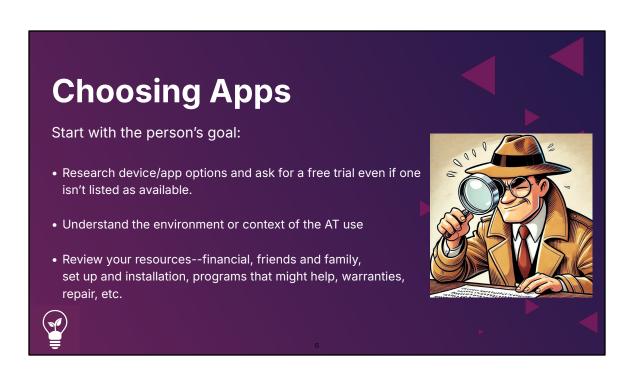
The Michigan Assistive Technology Program is a part of Michigan Disability Rights Coalition.

Our mission is what we believe and it's reflected in our work. Our mission is not a marketing meme, but a statement of purpose and a express desire for allies.



- Not all Assistive Technology has a battery or needs to be plugged in. In fact, a lot of AT is low-tech, like the rainbow pill organizer in the left hand lower corner of the screen; it could be useful for someone who has difficulty remembering to take their medication.
- Also shown on this slide is:
  - A door knob gripper attached to a round door knob. This device can make it easier for more people to open door knobs; really useful for people with arthritis, limited fine motor control, etc.
  - A person using a walker.
- AT can also help prevent falls and has made the difference for helping people moving out of nursing

• homes and into their own homes.



These rules of thumb are the same ones you would use for any other important choice or purchase.

# **Apps in A Plan of Recovery**

Recovery is the personal management of barriers to autonomy and free choice through effort, learning, habit-building, effective ritual, natural supports, and the tools available through support systems, including AT, Devices, and AI.



Resources

Recovery is the term chosen by the community of people with lived experience of severe mental illness (SMI), substance use disorder (SUD), or IDD. In the larger culture, recovery carries an implication of "cure". But the way the word is used by activists with lived experience involves the shifting of the responsibility for control from oppressive social and medical systems to personal control in an environment of natural social supports (family, friends, and allies).

The System's role becomes a source of Tools, not a source of Solutions.

Apps, ND, and AI allow independent control of the environment by the person, and enhance the depth and meaning of natural supports.

### **Outcome 1: Supporting Emotional Self-Regulation**

- Apps for Emotional Self-Regulation (ESR) have expanded dramatically during the pandemic and the last few years
- Apps allow the building of both ritual/habit management of emotion, and the accumulation of personal data, which can be used to expand personal understanding
- All allow sharing, with some tied to clinical support



Resources

I started casually tracking the availability of apps focused on ESR some years ago. The early ones were primitive, and largely mechanical without a social element.

Today, there are hundreds, with a remarkable diversity, and social survivor communities are an expected and normal part of the effort to self-regulate. Although I don't have the time to focus on more than a few examples, they need to be a part of every effort to build support for ESR.

## **Some Apps That Support ESR**

- · VA PTSD Coach Online iOS Android Family Coach
- iBreathe iOS Medito Android
- 12-Step Toolkit Android iOS
- Rosebud Journaling
- Me.Bot: Memory and Life Flow App





The **VA PTSD Coach** is probably the best single app for individuals and families dealing with issues of emotional self-regulation. It also has many uses for anyone who is dealing with trauma and SUD, or cognitive issues and anxiety. From the PTSD Coach online site:

"PTSD Coach Online is for anyone who needs help with upsetting feelings. Trauma survivors, their families, or anyone coping with stress can benefit."

The site offers tools for specific symptoms like worry, anger, depression, and so on. It also allows users to make their own choices from the catalog of tools, and permits identity safe recovery document creation.

**iBreathe and Medito**: It is entirely possible to reduce anxiety and racing thoughts by using structured breathing

that promotes parasympathetic response. These apps will help you to find a pattern of breathing exercise that accomplishes this. I personally use one pattern if I wake up at 2 am with my current list of impossible to solve issues demanding immediate attention.

**12-Step Toolkit:** If someone is using a 12 Step program or has a history of using such programs successfully, this toolkit provides easy to find and digest resources on each step organized by the steps themselves. If someone isn't using a 12-step program, this toolkit will provide both an introduction and resources for each step that doesn't require any commitment to a specific program or belief system.

**Rosebud Journaling**: Journaling is a well accepted method for persons to learn and reflect during their recovery. There are many such apps, and finding one that connects with you is the only real issue. Rosebud is a reasonable place to start.

Me.bot: Memory and Lifeflow App: This app is an example of a growing trend toward apps that tie together life experiences, memories, epiphanies, and many other parts of being alive, and using modern search (and probably AI eventually) to make it easier to access when you wish. I am personally uncomfortable with any app that contained this much of myself, but many people, especially ones that aren't as old as I am, find this a potentially very useful tool category. This particular app is well developed and can give you the flavor of what such a compendium might do for your recovery.

### **Outcome 2: Supporting Executive Function**

- Executive Functions (EF) include focusing attention, working memory,
   planning, time management-the skills we associate with effective work
- These skills begin to expand dramatically in adolescence and continue to improve for many decades
- Executive Functions and ESR work together to expand Personal Recovery and Social Inclusion



Resources

Actually, even very small children use their brains to support executive function. They just don't support the kinds of EF skills we see as useful in adults.

No matter how much a set of skills is seen as a human birthright, if there is no chance to practice, or the environment doesn't permit real use of EF, they won't magically appear.

Alexander Luria, the foremost neuropsychologist in history, was part of a team that went to isolated tribal groups in the suddenly new Soviet Union in the early 1920s. The team has the foresight to do testing with the new citizens to find out how they dealt with their world cognitively before the team instituted change (like schooling). They found complex and sophisticated cognition, but a type very different from the western view of EF. After two years of

schooling, the new citizens thought much the same as everyone else who went through formal European style schooling.

Our notion of both the content of EF and it's uses is a product of the social and physical environment we have constructed, not some intellectual version of the laws of physics. Executive function is for solving personal, social, and community problems, not for showing off on a test.

# Some Apps that Support EF

- <u>Leantime:</u> For non-project managers and ADHD, Dyslexia, and Autism. Well thought out project, to-do, notes, etc.
- <u>Liquid Text:</u> The best document as resource app I've run across. Originally iOS, now versions for other OS, and a web version.
- <u>Diigo:</u> A document and annotation organizer that is easy to use and has a free version.
- Some More Apps





Executive Function Supports are used by all of us. But, a combination of symptoms and side effects that is the lot of anyone with a major behavioral health or cognitive issue means that almost everyone can make real use of these cognitive support tools if they wish.

There are so many apps that support planning, time management, resource organizing, reminders, and similar purposes, that picking out the "best" one is very hard to do without knowing the specific problem that a person is trying to resolve. Here are some I know personally are useful:

**Leantime:** If you have ADD of any sort, this is well worth investigation. It lays out Project Management, milestones, daily to-dos, overdue ones, and everything else very well. It also has little tricks to make sure you pay attention to

what you didn't pay attention to earlier. There is a free try, and I would suggest you use it since it gives you a real feel for the app.

**Liquid Text:** It's hard to describe this app. It allows you to store documents annotate them, comment on sections, pull out the text of significance, and many other things (for example, you can save your comments back to the original PDF). You can connect to cloud storage, draw on documents, add web pages, and many other things. But it isn't cheap to sync across your devices.

**Diigo:** A great document resource with lots of capabilities that is less expensive than Liquid Text. I used it for years.

**Some More Apps:** These have a narrower focus, but can be very useful for the right individual.

### **Outcome 3: Supporting Personal Safety**

- Authority-based models of imposing safety constraints produce apathy, sabotage, and rebellion, undermining personal autonomy and personal safety.
- Personally motivated steps to ensure personal safety work best over the long term.
- Risky behavior and SUD are the two biggest concerns of external control systems, and the 2 problems that must be managed by the person.

Resources

There is a decent literature on how external incentives and disincentives corrupt personal choice, especially in the area of personal safety. The use of external controls can gradually eliminate the use of internal controls or prevent them from ever being acquired. If you find yourself quickly defaulting to the imposition of external control, ask yourself whether doing so solves a problem for the person or for you.

One definition of addiction is the submission of control over personal behavior to a substance. I don't see why the end result would be any different if the control was exerted by any system that can punish in the broad sense of that word.

The scaffold framework of "harm reduction" is a reasonable part of any strategy to increase personal safety

by allowing engagement with the person without immediately jumping to eliminating personal agency.

Note that SUD and dangerous behavior are connected. Also note, that every addiction builds its own addictive community, whose purpose is to procure, distribute, and use the substance of the addiction. These communities do not have to be focused on a drug, but can be focused on just about anything, as the example of cults shows.

Incidentally, over the years, I developed a deep concern about the use of alcohol and other addictive drugs in the IDD community. Because mainstream addiction treatment seems to have little or no idea of how to support people with IDD and addiction, this remains a deep concern of mine.

# Some Apps That Support Safety

- Environmental Alerts: Everbridge
- Best Weather apps of 2024 cover most hazards
- No, Using a Personal Safety App Doesn't Make You Paranoid





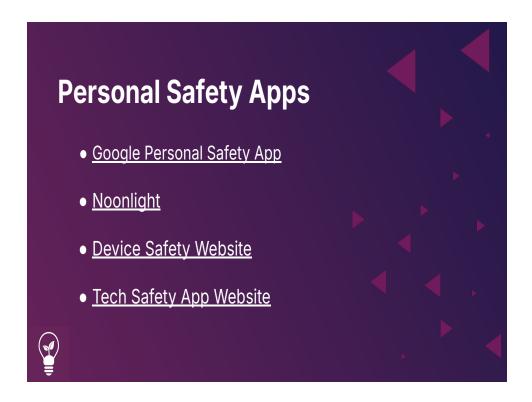
One aspect of personal safety that crosses all marginalized communities, including people with SMI, SUD, and IDD, is danger from other people and systems. The single most important part of controlling these threats is someone who supports the person knowing that they are being threatened. There are also now useful apps available for defeating stalking and surveillance threats, and they are just as useful to people with disabilities as they are to victims of domestic violence.

Typically, these apps are aimed at the mainstream and may require additional accommodation to be genuinely useful to a disabled person.

All modern weather apps have the ability to report alerts. The one a person chooses has more to do with exactly what they want to know than any specific app. Many are

regional, but there has been more and more emphasis put on microclimate in weather, local detail in radar apps, and short term local prediction. If this is important to someone, it is worth looking for something that will alert them about what is important to them. A not far-fetched example is a person who is triggered by rain falling on their skin. Knowing that it is worth carrying an umbrella can prevent a meltdown out in public.

Alerting systems also have the property of reducing worry when there are no alerts, once trust in the app is built up.



There is no single personal safety resource. The ones on the slide are useful if you review them all and select what really matters to you. Personal safety expansion is shifting to watches made by tech corporations and such a solution is worth considering, especially if you re going to be using the watch for health care monitoring as well.

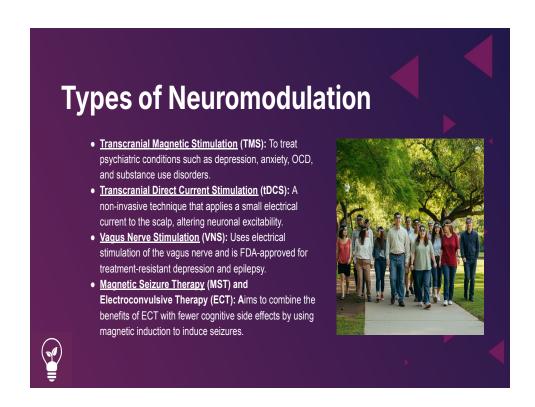
**Apple Watch** 

**Google Watch** 

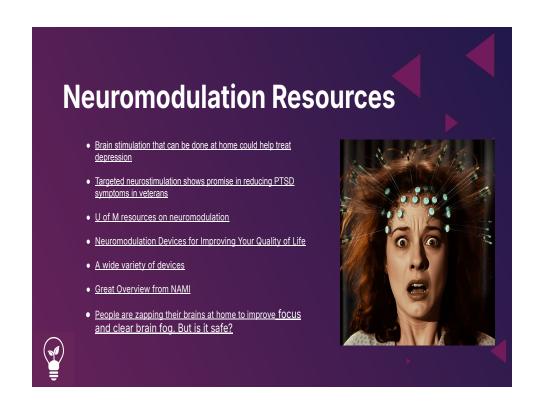
**Smart Watches on Amazon** 

# The New Kid: tCSM and Other NM Devices • Liftid: t.ly/6Vq5A • Neuromyst: t.ly/kMWw1 • The Brain Driver: t.ly/B4y6N • Best tDCS Devices of 2024: https://bit.ly/4g6NEkV

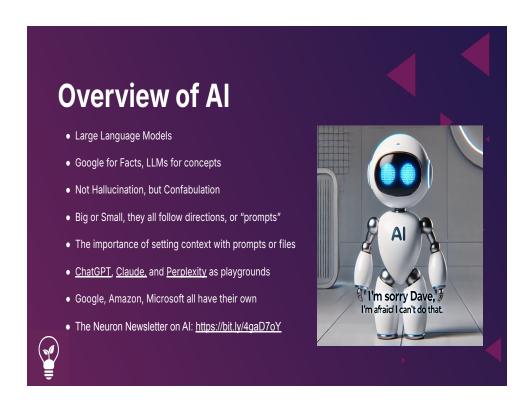
These are 3 of what is a rapidly expanding device market, and an overview of "the best" this year. We are in the early stages of this tool development. A choice for a device needs to be thought through, or framed by the use of others that the person knows. There noninvasive devices in medical programs, and, I suppose, eventually in the commercial market, that use ultrasound as the stimulation vehicle. Ultrasound has the great if worrisome capacity to pinpoint stimulation in a specific location, even deep in the brain, from the outside.



As the slide lets us know, there are many types of ND for almost any issue anywhere in the body, and right now, it requires real care to make a good selection that actually will help. The situation will improve over time, but it is a bit of the wild west out there right now. Care must be taken.



This is a small representative selection of resources on various aspects of ND. I think these are good resources, but the number and type of resources is exploding, and these resources should be seen as a start, not the whole story. If you have a real interest in this area, it is worth setting up a method of automatic searching for your particular interest.



Al has gone from a candle off in the distance on a dark night, to being everywhere all the time and increasingly showing up on our apps, our browsers, our work, our recreation, and all of our problem solving. The situation referred to in the picture is an Al's response to Dave, who is outside his spaceship trying to get in. The Al knows that Dave is going to sabotage him to regain control of the ship.

Prompting is a critical part of using AI, but it is easier to get good at it by playing with chatbots and varying prompts than it is to learn from research (at last count, there were 50 different prompting tools in the research). You can tell an AI that it missed something in your original prompt, or that you want more of one of the numbered results or less or none. If it apologizes too much, you can tell it to stop apologizing. It won't get mad at you, and your choices are always the right

ones.

Up to some specific limit, you can add files to build a context for your concern. But remember that most bots don't have up to date info from the web. Perplexity is able to search current info on the web as well as having access to high quality LLMs, so if you want something that includes recent internet info, use Perplexity. Perplexity also gives you the cites it used to answer your query. This search ability is becoming more and more common in more and more bots.

When you provide files or other info, you are setting the context for the Al's interpretation, not giving it the answer.

More and more, the AI bots are allowing the creation of artifacts (no matter what they call them), and supporting a project based approach for work by individual users. Image generators are becoming easier to use. Many of the images in this slideshow were created with Google's Gemini Imogen 2. (version 3 is coming out soon). Imogen is the easiest image creator I have used for photorealistic picture. Mid Journey is very sophisticated, but a lot harder to use. I can't use Imogen through my work email because it is targeted toward organizations and an organization has to enroll in it. But my personal email account works great.



The list are all things I have done, but the actual use case ecosystem is so huge, it is better to assume that there is a way for you to do what you want, rather than assuming some kinds of limits. And, to repeat, playing around with prompts is the best way to learn how to do them well. Also, using the same prompt with different bots will give you some insight into the internal differences in viewpoint of different LLMs.

Although I didn't mention it in the slide, you can tell the AI for example, that it is a world class grant writer, used to getting grants from large foundations, and that you want it to write a grant proposal about a specific outcome. Include files that describe the funding source and the specific RFP context of the outcome, and give it a go. You will need to carefully edit is, but I can tell you that you will save a lot of time.

Find someway to save useful prompts. I use Goodnotes, but there are many others. Although the bots do that, finding one becomes more difficult the more prompts you make. It can also be difficult to find a prompt if you use more than one bot. You can also have a prompt that focuses only on writing style, grammar, spelling, active voice, etc. that you can plug in every time you do text generation. There are now ways to give the Al your personal context, your values, and text expression choices as part of the context for many Als. I use a prompt to change text voice from passive to active, because that is a long standing problem for me. I have tried to stop, but some instances seem to creep in.

Remember that large LLMs are not better at producing useful generations than smaller ones for most of what we want to do with AI, but they are a lot slower and have lower use caps. Unless you are doing something truly obscure try out a middle range or the smallest bot before using the biggest one.



# Create Chain of Thought Prompts that are based on your unique values and organizational frameworks:

These are the ones I have created for my use at MDRC, and for blog posts I publish. I just copy the doc or save it and use it in the prompt or content attachments. They are not final in any way. The one toward the end that seems entirely out of place is one I expect to continue to edit until it produces something useful.

- Disability Justice: <a href="https://bit.ly/3UcqArD">https://bit.ly/3UcqArD</a>
- Intersectionality: <a href="https://bit.ly/3Y5mDq0">https://bit.ly/3Y5mDq0</a>
- Mutual Support at every level: <a href="https://bit.ly/4eW0d18">https://bit.ly/4eW0d18</a>
- Local Relationships and Power: <a href="https://bit.ly/3U9yEcJ">https://bit.ly/3U9yEcJ</a>
- Primacy of Individual Agency: <a href="https://bit.ly/4h5qdsJ">https://bit.ly/4h5qdsJ</a>
- Disability Accommodation as Empowerment: <a href="https://bit.ly/4eKdWbH">https://bit.ly/4eKdWbH</a>

- How people with disabilities can use their multiple identities as intersectional dimensions in creating a whole person pattern that can make life plans and change plans for themselves reflecting the complexity of their identities: <a href="https://bit.ly/4f3IGnz">https://bit.ly/4f3IGnz</a>
- Philosophy of Personalism: <a href="https://bit.ly/3YajCoa">https://bit.ly/3YajCoa</a>

## **Summing UP**

- No technology solves a human problem by itself.
- The technology should be a scaffold, not a solution.
- When a person uses an app, device, or Al, they are engaged in a support ecosystem. They need to make conscious use of that ecosystem.
- Somewhere there are a bunch of people trying to solve similar problems to yours. See if you can find them.



Using Technology to support persons in emotional self-regulating, executive function, and personal safety, or using an ND Device or AI is less about the technology and more about the specific difficulties each individual is having. There is no lack of apps for supporting people, but there is often a lack of the ability to customize the support to the person's current need.

Don't think of an app as a hammer to pound in a nail. I think a better metaphor might be using a hammer to pound in a nail outside in a raging blizzard at below zero temperatures. You need to know where the hammer is, you need clothing that will give you protection from the cold. The nail might stick to your fingers when it gets cold enough, and if you drop the nail in the snow, you have a new order of problem. Using AI teaches us that the context is at least as important as the question.

The need for person-centeredness is just as great in finding an effective app, device, or bot as it is in choosing a support person who helps the individual every day. Both of these are equally complex and demanding.

### **MDRC AT Demonstrations**

- AT demonstrations help a person decide between alternative devices oand apps to support their goals
- More Information on MDRC AT Demonstrations
- Fill out the <u>application for an AT</u>
   Demonstration





You know that Assistive Technology (AT) helps all of us with disabilities to live our lives the way we want to. It supports our choices, and makes those choices more effective.

### There is AT for:

- Helping smooth out our emotional ups and downs
- Helping organize and plan how we will make our choices real
- Making sure we are safe in all the places we live our lives.
- Choosing an ND Device

MDRC offers demonstrations (or, "demos") of AT tools based on what you see as most important in your life. Demos are free and can be done effectively remotely. You can learn more by visiting the MDRC Website:

### **Device Demonstrations & Short-Term Loan**

Contact us today for your next step in expanding your life. We are available to answer your questions, please call us at (800) 578-0280 or use this <a href="Contact MATP form">Contact MATP form</a>!

### **Your Presenter: Norm DeLisle**

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- Mastodon: @disabilitynorm@mastodon.social
- Facebook: <a href="https://www.facebook.com/disability.norm">https://www.facebook.com/disability.norm</a>

#### **Blogs:**

- Change Strategy: https://wordpress.com/view/changestrategy.net
- Disability Cosmos Daily: https://disabilitycosmos.wordpress.com/
- Michigan AT program blog: <a href="https://miatblog.org/">https://miatblog.org/</a>
- MVBH: https://michiganvoicesforbetterhealth.wordpress.com/



I have been working in the disability community since 1970 and have had a lived experience of severe mental disability (depression and PTSD) for most of my life. I have worked in medical, educational, substance abuse, mental health, and developmental disability services and support programs, but my passion is advocacy and systems change. I worked for Michigan Protection and Advocacy Services (now Disability Rights Michigan) for 13 years and have long experience in policy advocacy around all issues that can expand and support the free choice of people with disabilities for the lives they wish to live. I am currently a Policy Consultant in Physical and Behavioral Supports for the Michigan Disability Rights Coalition and was the Executive Director for 18 years.

My studies have included developmental psychology and biology, and I have retained an interest in those areas as an avocation over the decades.

I was a combat veteran with the First Air Cavalry Division from March 1968 to December 1969.

My overriding interest is the ways that complex systems change.

I am married.

I remain a "true believer" in the ability of the disability community to make real use of technology and personal relationships of support, helping to create a world of choice and possibility for everyone.

### **Some General Resources**

- Bibliography: The links below are a tiny portion of the literature on AT, emotional self regulation, executive function, and personal safety
- Don't forget to look over MDRC AT resources
- <u>Job Accommodation Network:</u> Although JAN is focused on work, the accommodations can be used wherever there is a use for them.
- Check out the Resources Link below for this Presentation



Resources

<u>Self-Regulation through Assistive Technology (PPTX)</u>: From the Wisconsin Assistive Technology Initiative (2009)

How do YOU organize a Children's Party? <u>Video</u> or <u>Transcript</u>

<u>Assistive Technology Supports for Self Determination and Community Inclusion</u> by Jim Skouge, Ed.D, University of Hawaii (2007)

BUILDING A TECHNOLOGY TOOLKIT FOR WORK, SCHOOL + IN LIFE: SUPPORTING AUTISM, NEURODIVERSITY, & MENTAL HEALTH: From Brain in Hand 2019

The developmental trajectories of executive function from adolescence to old age by Heather J. Ferguson, Victoria E. A. Brunsdon & Elisabeth E. F. Bradford, ci Rep 11, 1382

How using assistive technology for cognitive impairments improves the participation and self-determination of young adults with intellectual developmental disabilities, By Sylvia Söderström, May Østby, Hege Bakken, Karl Elling Ellingsen: cited in PubMed 2021, available through The Journal of Intellectual Disabilities from Sage-**PMID**: 31645186 **DOI**: 10.1177/1744629519882582

<u>The Self-Determination Channel on Youtube</u>: 4 people living self-determined lives.

Self-determination and choice in the context of mental health services: qualitative insights from a study of self-directed care, by Elizabeth C. Thomas, PhD, Yaara Zisman-Ilani, MA, PhD, and Mark S. Salzer, PhD, PMC, Psychiatr Serv. 2019 Sep 1; 70(9): 801–807., Published online 2019 May 21. doi: 10.1176/appi.ps.201800544

<u>Self-determination theory: a framework for the recovery paradigm</u>, by Anthony D. Mancini; Advances in Psychiatric Treatment (2008), vol. 14, 358–365 doi: 10.1192/apt.bp.107.004036

# **Any Last Questions?**

- Use my email address from the Presenter Page and I'll respond
- Thank you for this opportunity to talk about something dear to my heart
- The next time you use your smartphone, think "This is AT! (and maybe AI)"





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Thanks for being here today!