

Printable Forms and Guide for the Access Navigator app



Introduction

Access Navigator is an app that helps you and your clients with physical disabilities make decisions about alternative access, using a structured access assessment process. The app runs within a web browser on any device, such as a laptop or tablet.

To learn more about the app, give it a try at accessnavigator.org. Or [view the demo video](#).

This document contains the forms and help content within the Access Nav app. Print the forms for each assessment section to use when it is inconvenient or impossible to run Access Nav.

1. Gather Background Info (pp. 3-7)
2. Evaluate Abilities (pp. 8-11)
3. Test-drive Solutions (pp. 12-21)
4. Review (pp. 22-23)

Read through the Help content (starting on p. 24) for tips about each form and to understand the process behind the app. See the Resources and Appendix at the end of this document (starting on p. 51) for even more info about AT assessment and alternative access. (**Note:** These forms cannot replicate everything that the app does, but they do allow for the collection of very similar information.)

Contact us: Please contact us with any questions or suggestions, at accessnavigator@aac-learning-center.org.

Acknowledgment: Access Navigator was developed by an interdisciplinary team at the [RERC on AAC](#). The team includes Heidi Koester, Erik Jakobs, Susan Fager, Jessica Gormley, and Tabatha Sorenson. We are grateful for the many users who provided input and feedback along the way.

This research was supported by a grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant #90REGE0014) to the Rehabilitation Engineering Research Center on Augmentative and Alternative Communication (RERC on AAC). The contents of this site do not necessarily represent the policy of NIDILRR, and you should not assume endorsement by the Federal Government.



1. Printable Forms for Use with Access Navigator

Basic info

Client name: _____

Person(s) completing these forms: _____

Start date: _____

Forms: Gather Background Info

In this section, you'll be gathering key background information. This includes the client's:

- Goals and needs
- Contexts and environments for using alternative access
- Past experiences with access AT and other technology

Goals and Needs

G1. Activities

What activities does the client want or need to do? Check all that apply.

Full access to a computing device

- ☐ Use social media
- ☐ Write messages or documents
- ☐ Use Zoom (or similar video conferencing tools)
- ☐ Use email
- ☐ Use online tools (for shopping, banking, scheduling, etc.)
- ☐ Play mainstream computer games
- ☐ Use specialized software (like AutoCAD, graphics apps, other less common programs)

Early access activities

- ☐ Activate a call light (or ask for help)
- ☐ Play with a switch-adapted toy
- ☐ Control a preferred activity (e.g., play a video)
- ☐ Build skills toward communication
- ☐ Build skills toward full access of computer or speech-generating device

Access for low / no-tech communication

- ☐ Give yes-no responses
- ☐ Signal for attention (get someone's attention)
- ☐ Use a communication board (not a device)

- ☐ **Other** (specify) _____
-

G2. Priority Activity

Of the activities you identified above, pick one with the client to focus on now.

Priority Activity: _____

Picking a priority activity will help focus your work together and gauge progress more clearly. This might be the most motivating activity, or one that seems most attainable in the short term. You can always move on to a different activity at any time.

G3. Platforms

Are there specific devices that the client wants or needs to use? Check all that apply.

- ☐ Windows computer
- ☐ Mac computer
- ☐ Apple iPhone
- ☐ Android smartphone
- ☐ iPad tablet
- ☐ Android tablet
- ☐ Chromebook
- ☐ Other (specify) _____

If the client has particular types of devices that they need to access, mark those here. If the specific type doesn't matter, you can leave this blank.

Contexts

These context items make sure everyone has a clear understanding of where the client needs access, what positions they'll likely be in, and their preferences about support for setup and troubleshooting.

G4. Environments

What are the main environments where the client needs access? Check all that apply.

- ☐ Hospital or long-term care facility
 - ☐ Home
 - ☐ School
 - ☐ Office (outside the home)
 - ☐ Community (at places like a friend's house, the library, the store)
 - ☐ On the go (while going from place to place)
 - ☐ Other (specify) _____
-

G5. Body Positions

What kinds of body positions is the client likely to be in? Check the positions where the client needs access.

- ☐ Walking or standing
 - ☐ Using a wheelchair
 - ☐ Sitting in a recliner
 - ☐ Using a desk / workstation
 - ☐ Sitting or lying on the floor
 - ☐ Lying in bed
 - ☐ Other (specify) _____
-

G6. Preferences for Personal Support

For the client, how important is it to be completely independent in *setting up* their access method?
Check one.

- ☐ Not important at all
- ☐ Somewhat important
- ☐ Very important

And how important is it to be completely independent in *using* their access method?

- ☐ Not important at all
- ☐ Somewhat important
- ☐ Very important

History of Tech Use

The history section includes:

- whether the client has a current access method that they can use
- what other access methods they have tried, with what result
- what computing devices the client is familiar with

G7. Current Access Methods (if any)

Does the client currently have an access method that they use? (including low / no-tech methods)

- ☐ Yes
- ☐ No

If Yes, list any access methods that the client is currently using with their computing devices. Where relevant, include any low / no-tech methods as well, such as using a particular eye movement to indicate 'Yes.'

Current access method	How are things going with that method?

G8. Past Access Methods (if any)

What alternative access methods has the client tried in the past?

Past access method	Why is this method no longer in use?

(If there a lot of these, just enter what's been tried in the last year or so.)

G9. Device Platforms Used Before

If the client is already familiar with using specific types of computing devices, mark those here. Check all that apply.

- ☐ Windows computer
- ☐ Mac computer
- ☐ Apple iPhone
- ☐ Android smartphone
- ☐ iPad tablet
- ☐ Android tablet
- ☐ Chromebook
- ☐ Other (specify) _____

G10. Anything else related to Goals and Needs?

Forms: Evaluate Abilities

This section examines the client's key abilities, including:

- Physical abilities
- Vision
- Language and cognitive abilities
- Other user characteristics

We'll walk through these items to make sure everyone has a clear understanding of the client's abilities and limitations.

Physical Abilities

E1. Choose Possible Physical Access Sites

At a basic level, what are some possible physical access sites that the client might be able to use?

Upper Extremities

- | | |
|--|--|
| ☐ L Upper Extremity | ☐ R Upper Extremity |
| ☐ L Finger(s) | ☐ R Finger(s) |
| ☐ L Hand | ☐ R Hand |
| ☐ L Elbow | ☐ R Elbow |
| ☐ L Shoulder | ☐ R Shoulder |

Head Area

- ☐ Head
- ☐ Eyes
- ☐ Lip / tongue
- ☐ Chin
- ☐ Breath
- ☐ Facial Movements

Lower Extremities

- | | |
|--|--|
| ☐ L Lower Extremity | ☐ R Lower Extremity |
| ☐ L Toe(s) | ☐ R Toe(s) |
| ☐ L Foot | ☐ R Foot |
| ☐ L Knee | ☐ R Knee |

Speech

- ☐ Clearly intelligible speech
- ☐ Speech with some dysarthria
- ☐ Vocal sound

E2. Assessing the Possible Access Sites

From the sites you identified in E1, try to identify the most promising, the ones you want to try first.

To do that, **observe movements for each body site**, considering:

- How many different movements can be performed
- Consistency of repetitions
- Fatigue or pain during repetitions
- Ease of performing the movement
- Range of motion
- Level of control
- Amount of force generated

In the table below, list the most promising access site at the top, followed by the next-most promising, and so on.

Promising access sites	Notes (if any)
1.	
2.	
3.	
4.	
5.	

Notes: _____

Visual Abilities

E3. Basic Info on Vision

Does the client wear glasses (or any corrective lenses)?

- ☐ Yes
- ☐ No

If Yes, does the client see the computer screen better with their glasses on, or off?

- ☐ Better with glasses on
- ☐ Better with glasses off
- ☐ Not sure yet

Does the client have any other visual aids or strategies that help them see better?

- ☐ Yes (specify): _____
- ☐ No

If you have any information from a formal vision assessment, enter key points here: _____

E4. Key Vision Issues

Does the client appear to have any of these key vision issues? Check all that apply.

- ☐ Blurred vision
- ☐ Cortical visual impairment
- ☐ Double vision
- ☐ Field cut
- ☐ Tracking problems
- ☐ Other (specify) _____

Notes on key vision issues: _____

Language & Cognitive Abilities

E5. Key Features of the Client's Language and Cognition

Strengths (such as good literacy skills, ability to sustain attention): _____

Limitations (such as complex communication needs, low alertness): _____

Other Abilities

E6. Other Characteristics that Might Affect the Client's Access

Other issues (such as hearing, proprioception, sensory defensiveness): _____

Forms: Test-drive Solutions

Here we explore solutions that may meet the client's needs. We'll cover:

- Choose an access method to try
- Try it out, either using one of our activities or one of your choosing
- Rate how things went
- Decide on next steps

Choose It

T1. Considerations for the First Test-drive

Consider getting some baseline information for the client's first Test-drive. Check the option that seems to apply best to this client.

- ☐ Client has a current access method. Let's get a baseline using that.
- ☐ Client may be able to use a standard input method (like a regular keyboard or trackpad). Let's get a baseline using that.
- ☐ We're starting from scratch with this client

(This question is just to get you thinking about what you might want to try early on in the Test-drive process. Baseline information can be really helpful, if appropriate for this client.)

T2. Choose an Access Method to Try

Consider the client's abilities, as well as their priority activity and contexts of use. (These are representative items, not necessarily specific products.)

☐ Conventional keyboard Regular keyboard on laptop or desktop computer		☐ Large key keyboard Larger keys requiring less precise control	
☐ Compact keyboard Smaller footprint requiring less movement		☐ One-hand keyboard Designed specifically for one-hand typing	
☐ Other keyboard Ergonomic or other specialist keyboard		☐ Touchscreen Regular touchscreen on tablet or phone	
☐ Speech recognition Use speech to type and/or perform actions		☐ Eye tracking Eye movements plus dwell or switch to select	
☐ Mouse Regular mouse for point and click		☐ Trackpad Basic trackpad as a mouse alternative	
☐ Trackball Basic trackball as a mouse alternative		☐ Thumb trackball Designed for use with thumb	
☐ Large trackball Extra large trackball as mouse alternative		☐ Switch-adapted mouse Regular mouse with switch jacks for clicking	
☐ Joystick mouse Typically used when other pointing devices aren't suitable		☐ Head tracker Dot, often worn on the head, tracked by sensor unit	

☐ Wearable sensor mouse User-worn sensor, typically on the head		☐ Face tracker Facial features tracked by webcam	
☐ Other pointing device RollerMouse, vertical mouse, foot mouse, and others			

☐ NO TECH Body movement or action that partner can see or hear		☐ Button switch Typical button switch for hand or other body sites	
☐ Button switch (small) Smaller button switch for hand or other body sites		☐ Microlight switch A switch with lower force requirement (Microlight or similar)	
☐ Thumb switch Finger-mounted switch for minimal movement, typically activated with the thumb		☐ Plate switch Very sensitive switch, for hand or other body sites	
☐ Wobble switch Can be activated from any direction		☐ Pillow switch Soft switch for hand or other body sites	
☐ Grasp switch Typically held in the palm and squeezed to activate		☐ Bite switch Activates by biting on the soft end. Adjust position with bendable cable.	
☐ Sip and puff switch Control two switches with mouth pressure		☐ Proximity switch No force required. Activates when user's body nears the switch top	
☐ Tilt switch Tilt-sensitive switch for head, finger, or other site		☐ Other sensor switch Twitch, EMG, eyeblink, or other switch generally for minimal movement	

Set It Up

Now define the setup for the chosen access method. This includes:

- Item selection method
- Body site(s) for access
- Any control accessories
- Positioning and other notes

T3. What item selection method will the client use in this Test-drive?

There are different ways to select the item you want. Your options depend on the access method you're using – **find the category for your access method, then choose one option**, only from that category.

If your access method is: Keyboard or Touchscreen

- ☐ Direct selection
- ☐ Other (specify) _____

If your access method is a: Pointing Device or Eyegaze

- ☐ Tap
- ☐ Built-in button
- ☐ External switch
- ☐ Dwell
- ☐ Smile or other gesture
- ☐ Eye blink
- ☐ Speech
- ☐ Other (specify) _____

If your access method is a: Switch or Low / No-Tech

- ☐ Direct selection
- ☐ Scanning (activate switch or give signal when desired option is presented)
- ☐ Morse code (generate More code characters with 1 or 2 switches)
- ☐ Other (specify) _____

T4. What body site(s) will the client use to control this access method?

Choose from the priority body sites you picked earlier (question E2).

Body sites for this Test-drive	Specifics (if any)
1.	
2.	
3.	

Notes: _____

T5. Do you want to use any accessories in this Test-drive?

Not all of these will apply to your situation, but take a look just in case. Choose all that apply.

- ☐ Mount (keeps items in a functional location)
- ☐ Stylus (for pressing keys or on-screen targets)
- ☐ Universal cuff (holds a stylus for you)
- ☐ Splint (to provide support and/or protection)
- ☐ Mouthstick (to press keys using head and mouth motion)
- ☐ Docking station (to hold styluses or sticks)
- ☐ Headstick (to press keys using head motion)
- ☐ Digit isolation glove (reduces unintended contact with touch devices)
- ☐ Keyguard (to help target individual keys)
- ☐ Arm supports (to allow motion with less strength)
- ☐ Other (specify) _____

T6. Enter positioning and any other setup info

Positioning notes: _____

Other setup notes (such as product names, settings): _____

T7. Enter a name for this setup

You can give this setup a name that will help you remember it later.

Name for this access method setup: _____

Good news! You're done with setup info for now.

Now is a good time to make sure everything is set up and working properly, before you start the Test-drive activities. You can also help the client understand how to use it, if necessary.

Try It Out

Just like you can test-drive a car on different roads, an Access Navigator Test-drive can include different activities. You may only need to do one activity, but you might choose to do more.

T8. Choose the first activity for this Test-drive

In-app activities run within the Access Navigator app and provide detailed measurements. Your Own Activity can be anything you wish, such as a free exploration, a client's preferred activity, or an outside test with measurements (like a typing test).

Choose only one activity (you can more later, if you want).

In-app Activity (requires Access Navigator app to run)

- ☐ Text entry (presents text for client to copy)
- ☐ Point and click (presents targets to select)
- ☐ Switch hit (asks client to activate switch in response to a prompt)

Your Own Activity

- ☐ Specify: _____

T9. Enter observations and results for that activity

Speed and accuracy could be a measurement like words per minute, or just an overall impression – whatever seems most useful.

Activity name	Observations	Speed	Accuracy
1.			
2.			
3.			
4.			

Continue with additional activities for this Test-drive, one per row, as needed.

If you want to change the access method or its setup, first rate this one (see below), then move on to another Test-drive.

Rate It

After you've done the activities you want to do in your Test-drive, it's time for you and the client to rate how things went.

T10. From the client's perspective, how did that Test-drive go?

The client's rating:

- ☐ One star
- ☐ Two stars
- ☐ Three stars
- ☐ Four stars
- ☐ Five stars

Feedback from client: _____

T11. From your practitioner perspective, rate the client's success with that Test-drive.

Practitioner's success rating:

- ☐ Never
- ☐ Rarely (about 25% of the time)
- ☐ Sometimes (about 50% of the time)
- ☐ Often (about 75% of the time)
- ☐ Always

T12. How did that Test-drive go, in more detail?

Check any of the following difficulties that you observed during the Test-drive.

Overall, were there challenges with:

- ☐ Inefficiency
- ☐ Inconsistency
- ☐ Fatigue
- ☐ Excessive effort
- ☐ Pain
- ☐ Keeping an active, functional posture

Motorically, did you observe:

- ☐ Insufficient range of motion
- ☐ Imprecise movements
- ☐ Extraneous movements

Possible technical issues:

- ☐ General technical problem with the equipment

From a cognitive and perceptual perspective, were there challenges with:

- ☐ Seeing well enough
- ☐ Understanding the tasks
- ☐ Maintaining attention during the tasks
- ☐ Motivation to use the access method

Note: These are general issues that could apply to any access method. The Access Navigator app presents options that are tailored to the specific type of access method you are using. The app is also able to offer suggestions based on these issues.

Other comments: _____

T13. Summarize the Test-drive(s)

Take a moment to put the key info from this Test-drive into the table below (**one row per Test-drive**). This allows you to compare different Test-drives in one place, which hopefully will help decision-making.

Date of Test-drive	Setup name	Key setup features (access method, item selection, body sites, accessories, positioning)	Activities (and results if applicable)	Ratings		Issues / Notes
				Client	Pract.	
1.						☐ Has promise, add to Picks
2.						☐ Has promise, add to Picks
3.						☐ Has promise, add to Picks
4.						☐ Has promise, add to Picks
5.						☐ Has promise, add to Picks

Include additional Test-drives, one per row, as needed, using additional sheets if necessary.

Forms: Review and Define Next Steps

If you've done at least one Test-drive, here's where you review what's happened so far and make decisions about what comes next. In this section, you will:

- Compare setups you've already tried
- Decide what to keep and whether you've found any good solutions yet
- Determine and document next steps

Make Some Choices

R1. Choose and Evaluate your Picks

Picks are access method setups that seem promising, that you plan to pursue further, either for continued trials or for actual delivery to the client.

Review your Test-drives (T13, above) and check any methods that you want to add to Picks. Then enter each Pick below, one row per Pick, with actionable next steps.

Setup name for this Pick	Needs checklist	Next steps
1.	Meets my needs to: ☐ perform my Priority Activity ☐ work with my desired devices ☐ use in my environments ☐ use in needed body positions ☐ match my desired level of independence and available support	
2.	Meets my needs to: ☐ perform my Priority Activity ☐ work with my desired devices ☐ use in my environments ☐ use in needed body positions ☐ match my desired level of independence and available support	
3.	Meets my needs to: ☐ perform my Priority Activity ☐ work with my desired devices ☐ use in my environments ☐ use in needed body positions ☐ match my desired level of independence and available support	

Comments / recommendations: _____



R2. Anything else to add?

Enter any other thoughts below. Some people like to summarize a session with a sentence or two – add the date, too, if you are likely to do multiple sessions.

[illegible]

2. Help Content within Access Navigator

This section is just a copy of all of the help content in the app. Just about every page in Access Navigator has a 'Learn More' link with more information about that page. That info follows below: first for the assessment sections of the app, then for accounts and login.

Help: Welcome Page

Common questions about Access Navigator

1. Who is Access Navigator designed for?

The app is designed for practitioners to use in collaboration with their clients. Practitioners may include: assistive technology (AT) specialist, SLP, OT, or SpEd teacher (with some AT background). The app is best-suited for practitioners who have experience with AT in general and alternative access in particular. Clients include people with some form of physical disability that makes it difficult to use the standard interface for computers, tablets, and similar devices.

2. I'm a bit rusty or new to access assessments - how will Access Navigator help me?

- Steps you through the process
- Helps you prepare for the assessment
- Helps you evaluate client abilities (including physical, perceptual, and cognitive)
- Provides ideas on access options to choose from
- Allows you and your client to try out and compare options for informed decisions
- Provides remedies that may enhance access
- Helps you structure recommendations
- Content developed by experienced therapists

3. I'm experienced at doing access assessments - how can Access Navigator help me?

- Steps you through the process if you like that, but doesn't lock you in. You can pick any section of the tool that may be of benefit.
- Provides a place to organize and summarize your access option trials and plan for upcoming assessments
- Allows you to collect objective data
- Allows you to sort potential prospect solutions and keep track of decisions on whether or not to move forward
- Provides ideas from experienced therapists on access options, tips/tricks, ideas for enhancing access
- Helps you structure recommendations
- Provides reports that can be copied / pasted or used in full form

4. Can Access Navigator help me make data-driven decisions? Yes!

- Test-drives provide metrics on some tasks
- Option for defining your own tasks

- Allows you and the client to rate the access option being trialed
- Compares ratings and performance for different access options, to aid decision-making

5. Can Access Navigator help me make access decisions for clients with emerging abilities? Yes!

- Provides a method to identify and set goals specific for these clients
- Allows for unstructured tasks during trials
- Ability to collect observational data
- Provides troubleshooting / remedy support

6. Can Access Navigator help me make access decisions for clients with sophisticated access needs? Yes!

- Provides a method to identify and set goals specific for these clients
- Provides structured tasks / metrics during test drives, or unstructured tasks if you prefer
- Provides troubleshooting / remedy support

7. Can Access Navigator help me with re-evaluations? Yes!

- Allows you to store or add-in prior history information
- Provides guidance for new or different access options
- Provides troubleshooting / remedy support

8. Does Access Navigator include the client in the evaluation process? Yes!

- You and the client run through Access Navigator together
- Client's input is included throughout, including goals, wants, needs, as well as ratings and feedback after each trial

9. What can I expect when using Access Navigator?

Access Navigator provides a structure that helps you and your team make good decisions. It is not a magic wand that "does it for you." It can't (and shouldn't) take the place of your skills, but it provides support throughout, so you can be more efficient and effective.

We've tried to design the app to:

- Make access assessments more fun for you and the client
- Take the high-stakes worry out of access assessments
- Walk you through the steps in a logical sequence
- But let you skip around if needed or desired

Help: Gather Background Info

Purpose: In this section you will gather information about your client's goals and needs, the contexts in which they will be using alternative access, and their past experiences with access AT and technology.

A strong understanding of these issues is a key part of finding a good alternative access method, and is a cornerstone of AT service delivery models such as the [HAAT model and SETT framework](#).

Goals and Needs

Intro

Purpose: Everything flows from the client's goals and activities: what do they want to do that they currently have difficulty doing? Alternative access is a means to an end, a way of achieving something that has value to the client. Knowing the client's goals is a foundation for motivation, and helps you choose the tasks in the assessment that relate to those goals.

Relative to models of assistive technology, this is the A (Activity) in the HAAT model, and the T (Task) in the SETT model.

G1. Activities: Imagine Possibilities

Purpose: Everything flows from the client's goals and activities: what do they want to do that they currently have difficulty doing? If the client's goals are still emerging or not yet well-defined, see if you can help the client choose some sort of starting point, something that they are interested in doing.

Resources: Here are a few videos that might spark some interest:

- [Consumer Highlight: Austin McNew](#). Austin has a C4 spinal cord injury and controls his iPhone and wheelchair using head switches. From the [INDATA project](#).
- [Smart Homes are Game Changer for People with Disabilities](#). Todd has a cervical spinal cord injury and controls his iPhone using speech and joystick switches. From NBC News.
- [Introduction to Brad's eye tracking device](#). Brad has cerebral palsy and uses eye tracking to control his iPad for communication and other apps. From [All Access Life](#).
- [Quadriplegic Drone Pilot](#). Chris has cerebral palsy and uses switches and head tracking. Here he shows how he pilots a drone with his setup. From [Christopher Hills](#).
- [Xbox Adaptive Controller](#). A variety of folks use alternative access to play computer games.

We're not endorsing any specific products or approaches shown in these videos, but just trying to give you an idea of some possibilities.

G2. Priority Activity

Purpose: If your client selected multiple activities, it's helpful to choose one as the priority for now. This can help focus your work together and clarify a definite starting point.

Eventually, of course, you'll want to define access solutions that support all the client's desired activities. But focusing on one activity at a time can simplify your thinking as a team. Throughout the process, you can focus on the question of whether or not a particular choice supports the priority activity.

Example: Suppose the client chooses two activities: 'play mainstream computer games' and 'write messages or documents'. The type of access solution you'd need for computer games may be quite different than what you'd need for writing. So it makes some sense to choose one as the priority activity, then come back and focus on the other, then integrate the two.

Note: If you choose a priority activity that is in the 'low/no-tech' group, you'll be on the 'low-tech' pathway. This just means that we'll try to word things in a way that matches a low-tech goal, and try not to ask you questions that relate to higher-tech situations.

Low-tech Example: In the low-tech case, if the client needs to signal yes and no, and also needs to signal for attention, you'll want to try to identify distinct physical access methods for these, for clarity. So choose one of those as the priority activity to start with, then work on the other goal when ready.

G3. Platforms

Purpose: We ask about platforms so that you'll have a heads up about whether your client needs to access a particular platform or device. Not every access method works with every platform. And there is usually some variation in available access features across different platforms.

If the client absolutely must use a specific platform for a specific reason, try to have that platform / device available to keep the assessment as close to the real-world setup as possible.

If your client doesn't know yet what platforms or devices they'll need to use, that's fine. You can just start with a device they already have, or one that you know is a good fit for the activities they want to do.

Contexts

Intro

Purpose: Context relates to the environment(s) in which the client will be using their alternative access methods. Relative to models of assistive technology, this is the E (Environment) in the SETT model, and forms the Context within the HAAT model.

We've tried to include the aspects of context that tend to be important for just about everyone. This includes all aspects of the physical environment, and the level of support from others that might be available or desirable. Note that there may be additional aspects that are important to your client, and those may also emerge from the discussion you have during this section.

G4. Environments

Purpose: Physical environments may create some challenges or constraints for an access solution. For example, if the client needs access in a lot of environments, you'll need to decide how to provide access in each location: perhaps with one highly portable solution that moves from place to place, or perhaps with a couple of separate workstations, or a combination of the two.

Certain environmental characteristics may be important for specific access methods. For example, using speech recognition in a noisy environment may be more difficult than in a quiet one. Using eyegaze in a sunny area may not always work well. For issues such as these, you may want to have a backup plan.

G5. Body Positions

Purpose: Different physical positions may affect alternative access. For example, the client may need access while using their wheelchair but also while in bed. You'll need to determine whether the basic access method will work in both positions (moving from one position to another with creative mounting), or whether it would be better to have one access method in each position.

You don't need to solve all of the issues right away, but it is good to know what issues are likely to come up in the client's real world environment.

G6. Personal Support

Purpose: Here you and the client discuss their *preferences* about how much support they receive from other people. This may help you select an access method that fits the client's preference.

Note that setup may be a bit different from usage – some people are OK with getting some help with setup, say once a day or so, but they may want to be fully independent once during usage, once setup is complete.

If complete independence is very important to the client, keep that in mind when trying out different access methods. Sometimes it may not be possible to meet the client's preferences here, but having the conversation will put you in a good position to work together on this.

Note that we don't specifically ask about how much support from others is actually available to the client. But this can be important, too, especially in cases where they may need a complex access method but not really have the support from others to get it going.

History of Tech Use

Intro

Purpose: Here we're interested in what alternative access approaches clients have tried: what's worked, and what hasn't. This can help you get ideas for what might work better. This includes experiences the client has had with computing devices: the devices they've used and how they've accessed those devices.

In the low-tech case, we won't ask about computing devices but the history of what, if anything, has been tried before is still relevant. In that context, an 'access method' would be any signal the client makes to accomplish the goal (like a particular eye movement).

G7. Current Access Method

Purpose: The current access method just means whether the client has some type of access in place already, right now. For example, a client may still be using an alternative mouse that they got 10 years ago for using their laptop, even though it's not working as well for them as it once did. Or in the low/no-tech case, a client may be trying to use a particular eye movement to indicate 'Yes'.

Talking about any current access methods helps you and the client understand what problems need to be solved. And the current access methods form a baseline that can be used for comparisons with any new access methods you decide to try.

G8. Past Access Methods

Purpose: Past access methods are those that the client has used or tried in the past but does not use currently. For example, if a client has complex needs, other AT teams may have already tried a variety of access methods, with varied results.

If the client has a long history with alternative access, you don't necessarily need to include every single past access method. But it can be useful to understand things that have been tried and were not a good fit.

G9. Device Platforms

Purpose: If a client has experience with specific computing devices, you may want to leverage that experience in your assessment. If you can include a familiar device in the assessment, that will be one less new thing that the client has to deal with. If you can't, just keep in mind that using an unfamiliar device may make the tasks a little slower and more difficult.

Help: Evaluate Abilities

Intro

Purpose: In this section you will evaluate your client's abilities, including physical, visual, and cognitive. A strong understanding of these abilities is a key part of finding a good alternative access method, and is a cornerstone of AT service delivery models such as [the HAAT model and SETT framework](#).

We will help you identify potential physical access modalities and help you learn more about how to assess some of these modalities. We will also have you note key information about vision, language/cognition, and other issues that may impact access.

Physical Abilities

E1. Possible Physical Access Sites

Purpose: This is an initial screen for physical access sites. Just select body sites that seem promising and potentially effective for this client. You'll do a more in-depth assessment of these body sites in the next step.

Note: Don't feel like you have to select every single body site that the client can control. Just focus on the ones that make the most sense as potential access sites. For example, if the client has some finger / hand function, their knee function may not be that relevant for access. You can always add more sites later if you need to keep searching.

If it is challenging to identify potential body sites, consider the following options:

- Eye movements (up/down, left/right)
- Eye blinks
- Furrow brow
- Purse lips
- Raise cheek (left or right side)
- Smile
- Open mouth / jaw
- Clench teeth
- Head movement (up/down, left/right, turn, tilt)
- Shoulder shrug
- Biceps movement / triceps movement
- Forearm muscle movement
- Wrist flexion / extension
- Thumb (up/down, press down, lateral, curl)
- Fingers (up/down, press down, lateral, curl)
- Foot (lift, flex, extend, tilt)
- Toes (wiggle, curl, press)

Some of these may be particularly applicable to the low/no-tech case. Videos with more info about these are available on the Resources page at the end of this document.

E2. Assessing Physical Access Sites

Purpose: To help you identify the most promising access sites, the ones you want to try first.

Your starting point here is the list of body sites that you selected in the previous step, the ones that seemed to be worth looking into more thoroughly. Each body site in the list has its own help content, with specific tips and tricks (and sometimes video) for assessing that particular body site. To view it, just click the little info icon.

Look for more natural / intuitive methods to start with. For example, if you are looking for yes / no responses, consider working through this hierarchy: head nod / shake, then thumbs up / down, then other movements. This is just a starting point for consideration; of course the choice ultimately depends on what is most functional for the individual.

Note: Seating and positioning may be a factor in prioritizing access sites. Solid seating and positioning supports can enhance consistent movement and decrease fatigue.

With that in mind, be sure the client's positioning system is available and set up properly to maximize stability and correct alignment. Don't start assessing for access while seated unsupported at edge of a bed or mat, or while seated on the floor. Your client should be comfortable and well-supported.

A good clue for whether seating / positioning is OK is to observe the client's head. Can they support it? Is the head flopped over, or down?

If you suspect the client is struggling due to instability or other seating issues, get some help to problem-solve this. Refer to your seating/positioning specialist, an ATP (assistive technology professional), or interdisciplinary team.

Visual Abilities

Vision Intro

Purpose: This section helps you screen for vision issues that may affect access. This includes background info and a checklist of key vision issues.

Note: This screening info is basic and does not replace a formal vision assessment. In some cases, referrals to professionals with specific training in visual challenges may be needed (including certified low vision therapists, teachers of students with vision impairment, or neuro-optometrists).

Resources: For more about vision issues, see the following:

- [Matching Assistive Technology Features to Low Vision Needs](#) - a free download from PaTTAN
- [Vision Simulator](#) - simulates how different conditions impact vision
- [CVI](#) - portal for information about cortical visual impairment

E3. Basic Info on Vision

Purpose: It's important to ask about visual aids and strategies, as sometimes clients are unable to initiate requesting such items, or don't recall that they need such items to have functional vision.

Eyeglasses are a common visual aid, but keep in mind that the prescription might not be up-to-date, or may not actually improve vision for computer / device use. Other aids and strategies might include:

- High contrast
- Functional color preference
- Functional visual fields
- Spot patching

- Lighting needs
- Magnification use
- CCTV
- Guide lines

Regarding a formal vision assessment, you could ask when the client last had one. If you have information from prior assessment, or self-report from the client, consider key points such as:

- Diagnosis of Cortical Vision Impairment (CVI), along with CVI status such as color preference, functional visual fields, highlighting, underlining, etc.
- Ocular motor impairment or cranial nerve III palsy
- History of glaucoma, macular degeneration, diabetic retinopathy, cataracts
- Eye injuries
- Active infection

Note: If this background info is difficult to obtain, you may want to observe even more closely than usual during this eval to notice visual issues that may cause challenges for the client.

E4. Key Vision Issues

Purpose: All of these issues can have a significant impact on access, and they may not be obvious or even known to the client.

Here are a few indicators of vision issues, or things you might notice:

- *Blurred vision* - client squinting when attempting to look / read
- *Cortical visual impairment* - characteristics vary, but may include some combination of:
 - difficulty seeing an object in a busy background (difficulty with visual complexity)
 - use of peripheral vision when reaching for an object (may exhibit a "look, look away, then reach" pattern when grasping or selecting)
 - inconsistent response to visual cues
 - longer visual processing times
 - difficulty recognizing faces
- *Double vision* - client closing one eye, or consistently off-shooting reach to target, may report seeing double.
- *Field cut* - client is unable to locate a target, but then able to locate when target is moved to a different area. Might have difficulty with depth perception, bumping into things. Field cuts can be fairly complex, may not just be a right/left, could be in a single eye or both eyes, partial field cut(s), etc. Sometimes field cuts are quadrant based. Look up hemianopsia and note that there are several types!
- *Tracking problems* - client's eyes don't move together (all the time? or only in certain parts of the visual field?)
- *Other issues* can include complaints of eye pain / discomfort, difficulty fixating on a target, limited ability to move eyes, malalignment of eyes, and difficulty disassociating head movement from eye movement.

And a few other red flags to look out for:

Does the person seem to look away when you present an item? When they look away, is it always in the same direction? They may be using peripheral vision or they may have a very small available visual field and they need to look away in order to see anything at all.

Does the individual seem to have 'inconsistent' vision? Sometimes they report seeing things you present, sometimes they can't see anything? Do they see things when just hanging out, but can't when you ask them to look? This is a red flag.

Does the client consistently close eyes when you ask them to do something? Sometimes clients do this so they can reduce the amount of stimulation they are getting when listening to instructions, attempting to motor plan and execute a movement, etc.

Note: Remember that if visual issues seem particularly complex with this individual, consider referral to a vision specialist.

Vision and Alternative Access

Resources: For more about AT accommodations for vision issues, see the following:

- [Matching Assistive Technology Features to Low Vision Needs](#) - a free download from PaTTAN (Pennsylvania Training and Technical Assistance Network).
- [AT for Blind / Low Vision](#) - a free download from WATI (Wisconsin AT Initiative). School-focused.
- Search on "assistive technology for vision impairments" or include more specific issue such as "CVI"
- Ask a question on the [QIAT](#) listserv (a group of several thousand AT professionals)

Note: Reminder that if visual issues seem particularly complex with this individual, consider referral to a vision specialist.

Language & Cognitive Abilities

E5. Language and Cognition

Purpose: This is mainly a screening to see if there are cognitive or linguistic issues that may need additional support. Very generally, these may include:

- Attention
- Short-term Memory
- Long-term Memory
- Problem solving
- Receptive language
- Expressive language
- Literacy

Keeping tasks and displays as simple as possible can help accommodate some cognitive challenges (and is a good idea in general!).

Note: If the client has complex communication needs or significant cognitive challenges, you may need to look deeper into how to address those issues. For complex communication needs, be sure someone on the team has experience with language assessment and AAC intervention.

E6. Other Characteristics

Purpose: Here is where you can note other issues related to client abilities that haven't already been entered. Very generally, these may include:

- Hearing
- Tactile sensation
- Sensory defensiveness
- Proprioception
- Motivation / interest
- Health status / prognosis

This helps you document and consider these issues and how they may affect alternative access for this client.

Help: Test-drive Solutions

Test-drive Intro

Purpose: A Test-drive is where you try out a particular access method setup, to see if it might be a good fit for you. Each Test-drive includes one or more activities, and afterward you'll rate how things went. So these are short-term trials, sort of like when you test-drive a car that you are considering buying.

If you want to try multiple access method setups, do a separate Test-drive with each one. Then you can compare the results as a way of informing the next steps to take. For example, maybe you are comparing different types of head tracking devices. Each different device would be a different Test-drive.

Of course, you can certainly do longer-term trials as a next step after this assessment. We hope that the Test-drives will help you narrow down the options so that you make the best use of your time when doing longer-term trials.

Choose It

T1. Considerations for the First Test-drive

Purpose: This is just checking to see if you might be considering a standard input method as a possibility for this client. A "standard input method" would be something that comes with the client's device, like the built-in keyboard for a laptop, or the touchscreen for a tablet. The answer to this question won't change how Access Navigator behaves. It's just a question for you to consider as you start to sift through possible solutions for this client.

Why would you Test-drive a standard method? Using a standard input method has some advantages, in that it is simpler, always available, and has no additional cost. Some clients prefer using the same thing that "everyone else" uses. And some clients are already trying to "muddle through" with standard input methods, even though they have a motor impairment. In cases like these, it can be worth Test-driving a standard input method, as a baseline.

Note that the behavior of standard input methods can vary depending on the operating system settings. **For example**, someone who has trouble controlling the pointer with the default trackpad settings might do much better with a slower tracking speed. You could do a quick Test-drive with the default trackpad settings, to see the issues and get a sense of their importance. Then you could do a second Test-drive with a slower tracking speed, and see how much that improves things. If adjusting settings still doesn't yield good performance, you could then try out an alternative pointing device.

T2. Choosing an Access Method

Purpose: Here we get into the first main step of defining what, exactly, you are going to Test-drive. Here you'll choose the general type of access method for the Test-drive. (In subsequent steps, you'll define exactly how you are going to set up this access method.)

Your goal is to use all the information you've gathered so far, and choose something that is a good fit for the client's abilities as well as their goals and needs.

By default, this page shows all of the access methods in the app. Note that **these are not intended to be specific products** – some of the photos may show a specific product but that is just to show an example. We hope this covers anything you might try, but if you don't see what you're looking for, just select the closest thing to it.

If you want to reduce the number of options on the page, you can select the category – Keyboards, Touchscreen access, Speech recognition, Eye-gaze access, Pointing devices, Switch access.

What if your client needs more than one type of device? Some clients need a combination of access methods to make a complete solution. For example, a client might use speech recognition for most text entry, along with a trackball for most mouse functions. We suggest you Test-drive one access method at a time, to focus your decision-making. In fact, you can only choose one option at a time on this page. Later, if you want to do a Test-drive that combines multiple methods, choose the one that's primary here, and make a note in the setup section about any complementary methods.

Set It Up

Test-drive Setup Intro

Purpose: Here you can define the setup for the access method you are going to Test-drive. For example, you may be using a trackball, but that in itself doesn't give the full picture of the setup. What will you use for the single- and double-clicks? Most trackballs have built-in buttons, but perhaps those aren't very easy for the client to use. What body sites will be used to control the trackball, and how? Are there particular accessories that you'll use, like maybe something worn on the hand to enhance control?

All of these things affect the client's performance and experience with the access method, so it's very useful to keep track of them as part of your Test-drives.

There are just a few questions in this section, and you'll also be able to type in additional notes if there's something our questions don't cover.

T3. Item Selection Methods

By "item selection method", we mean how the client will select the item they want. **For example**, if using a mouse, a typical item selection method is to click the mouse button. But it is also possible to connect a separate switch to the mouse, to be used instead of the button, if that is easier or more efficient.

Note: The options on this screen will vary somewhat depending on the access method you've selected. If you haven't selected an access method already, you'll see all possible options. (And if you select a keyboard, you'll skip this page, since we'll know that the item selection method is direct selection.)

In the low/no-tech case, you have two basic choices. One is direct selection. An example is looking directly at the target word on a communication board. Or pressing a switch to activate a call chime. The second basic method is partner-assisted scanning. An example is where a partner points to a series of items, like letters, one at a time. The client gives a signal when the partner presents the desired letter. See [this video](#) for more about partner-assisted scanning on a letter board. The partner-assisted scanning approach can also be used for making other types of choices.

T4. Body Site Options

Here you'll choose how exactly the client will control the access method during this Test-drive. First choose the body site (or when applicable, more than one body site). Then make any comments about how the client is going to use that body site. **For example**, a client might be using a trackball with their right hand. But they are going to use the back of hand, with the forearm supinated, so you could make a note of that in the comments.

Note: If you have specified particular body sites already, in the Evaluate Abilities section, you will initially see only those body sites as options here. This is just to try to make your life simpler. If you'd rather see all the body sites, just click 'show all sites.'

T5. Accessory Options

Accessories are things that are intended to help the client use the access method. Sometimes these are called "control enhancers," as they may help accuracy as well as efficiency. They may provide other benefits such as reduced fatigue, or less pain.

We've listed a variety of accessories here, and you can learn more about them by choosing the little help icon next to each one. If there's something we haven't listed here, just enter it in the Other option.

Finally, if you want to note the specific details of the accessory, such as the specific stylus used, you can enter that in the Other Setup Notes on the next page. You could also check Other here, as well as Stylus, and enter the specific stylus in the Other textbox.

T6. Positioning and Other Setup Notes

Purpose: This helps you consider and keep track of the positioning for this setup. That way you can replicate it later if you want to. Or compare it to other Test-drives which may have used a different positioning.

Here you can make a note of the positioning for the client, the access method, and anything else that seems relevant. If there are particular mounts or mounting locations, you could enter that here as well.

Other setup notes might include: specific settings (like in the computer's accessibility settings), the particular products you're using, any additional pieces of equipment needed for this setup, etc.

T7. Setup Name

Purpose: A name for the setup is a handy label for the full access method setup (the device plus its setup) that you are trying in this Test-drive. This helps you keep track of multiple setups.

For example, suppose you do one Test-drive with a trackball, using built-in button for the click, the right hand to roll the ball, and a midline position. Then you do a second Test-drive with the same trackball, but with a separate switch on the left armrest for the click, both hands involved, and the trackball positioned midline. Both of these are “trackballs”, but their setups are quite different. You’d want to name them so that you can easily tell which is which when you compare the results later on, maybe something like “basic trackball” for the first and “trackball with left switch” for the second.

You can edit the name later on if you want.

Getting Ready for a Test-drive

Purpose: To make sure everything is set up properly to help enhance success during the Test-drive.

A little preparation can go a long way here. Focus on 3 main things:

1. Set up the access method, if it needs it. Make all the necessary connections, try it out quickly to make sure it is working properly.
2. Use the client's seating / positioning devices to get the best available stability and support in preparation for the Test-drive. Look for an active, functional, and comfortable posture.
3. Make sure the client understands the basics of using the access method.

If your access method doesn’t need any setup (like if you’re using a built-in trackpad with the default settings), you’re all set with the first goal. Otherwise, set up the access method on the computer / device you’ll use for the Test-drive. Try it out yourself to make sure it works. If you’re running the Test-drive on this computer (the same device you’re using to run Access Navigator), use the Check Your Setup feature to make sure it’s working OK. Or just try it quickly in any app that you want.

Note: If you suspect the client is struggling due to instability or other seating issues, get some help to problem-solve this. Refer to your seating / positioning specialist, an ATP (assistive technology professional), or interdisciplinary team.

Review Test-drive Setup

If you’ve gone through all the setup steps, you’ve entered quite a bit of info in this section. Take a minute to double-check what you’ve entered. None of the info is required, but it provides a handy record to let you know exactly what you tried during this Test-drive.

To make a change, use the Update button to return to that specific page.

Pro tip: After you’ve made your change, use Back or the back arrow to return here. That way you don’t have to go through all the other setup pages again.

Try It Out

T8. Choosing an activity

An “activity” is what you actually do during the Test-drive. Just like test-driving a car might involve some city driving and some highway driving, a Test-drive can include more than one activity.

In Access Navigator, we have two general types of activities:

1. The “in-app” activities are specific tasks that run directly inside the app and take detailed measurements. For example, the basic text entry task will provide a simple typing test, and measure the speed and accuracy during the test.
2. “Your own activity” is something you set up, outside of Access Navigator. This might be something like playing computer solitaire, or browsing a favorite website, or typing a text message – whatever the client might enjoy that also relates to their goals. In a low/no-tech context, this could be having the client give signals for yes/no responses, or press a switch to activate a chime.

Whatever activity you choose, try to make sure it relates to the client’s goals (including the priority activity that you chose earlier in the session) and that it is motivating and meaningful to the client.

Note: If your priority activity is low/no-tech (like give yes/no responses), the “in-app” activities are not relevant, so they will not show as options on this page.

More about the in-app activities

If you choose an in-app activity (anything except Your Own activity), you have the option of adjusting a few settings for the activity, such as the number of sentences for the text entry activity.

Another key feature is the **option to choose where to run an in-app activity**. By default, we assume you’ll run an activity on the same device you’re using to run Access Navigator. So you and the client will use the same computing device.

But sometimes you might want to run an activity on a different device. For example, you may be using your own laptop to run Access Navigator. The client has their own iPad that is mounted in a specific way for their use. You’d really like to run any activities on that iPad, to get the most realistic results.

To do that, the first step is to select ‘Another device’ here. (Make sure you are logged in.) Then once you click Start or Practice, you’ll get specific instructions on how to start the activity on another device.

Note: This choice only applies to the in-app activities (text entry, point and click, and switch). For running Your Own Activity, you can always use whatever device you want.

More about the Text Entry activity

In this activity, you type a set of sentences, one at a time. You can edit the text as usual. The activity ends after a set number of sentences (or when you click End Activity, to end early).

Results

- Speed - typing speed in correct words per minute, averaged across the whole activity. This counts the characters that are correct at the end of the sentence, then divides that by 5 to get correct words.
- Accuracy - the percent of characters that were selected correctly, averaged across the whole activity.
- Time Taken - the number of seconds required to enter the sentence. (Excludes time for the very first character and for the Enter key.)
- Raw speed - raw typing speed, not adjusted for errors. Counts all characters entered, then divides by 5 to get raw words entered.
- Correct speed - typing speed in correct words per minute. This counts the characters that are correct at the end of the sentence, then divides that by 5 to get correct words.

More about the Point-and-click activity

In this activity, a series of circle targets appear on the screen, one at a time. The client clicks on each circle to select it. The activity ends after a set number of circles (or when you click End Activity, to end early).

Results

- Speed - the average number of targets per minute selected, across the entire activity
- Accuracy - the percent of targets selected with exactly one click (i.e., on the first try)
- Time Taken - the number of seconds required to select a target
- Entries - the number of times the cursor entered the target. (The cursor must enter at least once to select the target.)
- Clicks - the number of clicks that occurred (whether by physical click or dwell, inside or outside of the circle). 1 inside click is necessary to select the target.

More about the Switch activity

In this activity, a series of prompt circles appear on the screen, one at a time. When each prompt appears, the client hits their switch in response. The activity ends after a set number of prompts (or when you click End Activity, to end early). (Note: If the switch sends a mouse click, make sure the cursor is within the gray shaded area.)

Results

- Difficulty score - an overall indicator of how well the current switch setup meets your needs: low, medium, or high difficulty.

- Switch - this shows what the switch 'sent' to the activity. It could be 'Click' for a mouse button click, or any keyboard character (like 'Space' or 'a'). This can be helpful for seeing what's going on behind the scenes when troubleshooting.
- Reaction Time - how long it took for the user to press the switch, after the prompt appeared. In seconds.
- Hold Time - how long the user held the switch down. Measured from first press to first release. In seconds.
- Trial Time - total time to press-and-release the switch after the prompt appears. Reaction Time + Hold Time. In seconds.
- Extra Hits - the number of switch hits that occurred before the prompt appeared

More about Your Own activity

Here you're doing an activity of your own choosing, outside of Access Navigator. (Later, you can always try one of the in-app activities, built-in to Access Navigator, if you want.)

So Access Navigator doesn't know what sorts of results are most meaningful for this activity. But whatever they are, you can enter them into the T9 table if you'd like.

T9. Entering Observations and Results

During a Test-drive activity, you can note any observations that seem relevant. This might include things like:

- Accuracy - the level of control that the access method provides to the client
- Ease of use
- Safety - comfortable, pain-free, stable and appropriate body postures
- Efficiency - how quickly can the client accomplish the task
- Consistency - is there a lot of variability in performance? Is it getting worse over time? Or better?
- Client's affect - do they seem to be engaged? Enjoying it? Confused? etc.

Activities within a Test-drive

Just like test-driving a car might involve some city driving and some highway driving, an Access Navigator Test-drive can include more than one activity. You can choose how many activities to do within this Test-drive. Record them all in table T9.

Keep in mind that you generally want to keep the access method setup the same throughout a Test-drive. (Just like you would only test-drive one car at a time.)

Reasons to do another activity: the first activity showed promise, but you want to explore use of this access method further. Maybe the first activity was something fairly simple, and the next one could be something a bit more complex. Or maybe the first activity was one of your own activities, and with the second one, you want to use an in-app activity to take some measurements.

Reasons to end the Test-drive: If it's obvious from the first activity that this access method setup is not a good fit, feel free to stop. Or if you've done several activities in this Test-drive, you may have learned all you can for now.

Basically, it's up to you and your client to decide how much information you need, and that will determine when to end the Test-drive. You can always run more Test-drives with an access method if you want to later.

Updating a Test-drive setup

Generally, you want to keep the access method setup the same throughout a Test-drive. (Just like you would only test-drive one car at a time.) But there may be times where you might have made changes in the middle of an activity, so that by the end of the Test-drive, the setup is a bit different than when you started.

So in the app you can enter those changes, if there were any, when you've finished the activities. This represents the access method setup that you will be rating in the next steps. You can also edit the setup name here.

If you are using paper forms, take a moment to notice if the setup changed, and if so, make a note of it. If you didn't change anything about the setup, just Continue on to the next step.

Rate It

T10. Client's Rating for a Test-drive

This is an overall rating of the client's experience during this Test-drive, using this particular access method setup. (One star being lowest, and five being highest / best.)

The feedback field allows you to enter any specific comments that the client might have. This might include the reasons for their star rating, and what they liked and didn't like about using this access method setup.

T11. Practitioner's Rating for a Test-drive

Here you as the practitioner can give your impression of how successful the client was in using the access method during this Test-drive.

You'll be able to enter additional observations and feedback in the next steps. On this page, we are just trying to keep it simple and rate one important aspect of how things went in the Test-drive.

T12. Identifying Test-drive Issues

Here you can get into more detail about what happened during the Test-drive. The checkboxes represent issues you may have observed. (Note that some of the checkboxes will change, depending on what access method you're using. For example, you won't see checkboxes about mouse movement if you used a keyboard.)

We hope the checkboxes will streamline the process of recording observations. And they may be useful prompts for thinking about all the issues that can be involved during a Test-drive. In the app, we also use your selected issues to provide you with some suggestions that might help improve things – you'll see these in the Interpret section coming up.

Finally, you can enter any other observations or comments in the Your Comments field.

T13. Summarize the Test-drive(s)

Take a minute to double-check the ratings and observations you've entered. None of the info is absolutely required, but it provides a handy record of how this Test-drive went and lets you compare results from different Test-drives.

If you want to change anything here, use the Update button to return to that specific page.

Pro tip: After you've made your change, use Back or the back arrow to return here. That way you don't have to go through all the other setup pages again.

If you are using paper forms, take a moment to put the key info from each Test-drive into table T13 (**one row per Test-drive**). This allows you to compare different Test-drives in one place, which hopefully will help decision-making.

Interpreting Test-drive Results

Here we try to give you some ideas that might inform your next steps.

Under General Suggestions, you'll see some ideas that apply to basically any type of situation and access method. Use the help links provided to get more details.

The Specific Suggestions section depends on the issues you selected earlier. For example, if you checked the box for 'Maintaining attention during the tasks' when rating the Test-drive, you'll see some suggestions related to that here. Some of these also have help links with more details, including videos.

Note: We know that there are usually no simple solutions to these issues, and we don't want to pretend that any app can "know" what to do. But we hope that the ideas and prompts here will help you and the team come up with some useful next steps.

We've also included all the remedy ideas in one place, in the Appendix of this document.

Next Steps after a Test-drive

Your basic choice here is whether or not to do another Test-drive now.

Why would you do another Test-drive? The main reason would be that you haven't yet found an access solution that seems to be the best fit for this client. In your next Test-drive, you could first adjust the current access method setup, then Test-drive the revised setup to see if it works better than what you've tried so far. Or you might want to try a completely different access device.

Why would you decline another Test-drive? Maybe you've landed on an access solution that really seems to fit the client's needs. In that case, you don't need to keep test-driving at this point. Or maybe you have some ideas for another test-drive, but you're just out of time for today. You can always come back and do more Test-drives later.

Help: Review and Define Next Steps

Intro

At this point, you've generally completed a couple of Test-drives (or more). Maybe you've started to think about next steps. The Review section helps you consider what you've done so far and talk through what comes next.

Perhaps you've found a solution or two that really seem like a good fit for the client's needs. Or perhaps you still want to try out some more possibilities. You can document all that here.

A couple of terminology notes:

- **Prospects** are access method setups that you've tried and are still considering. As soon as you start a Test-drive with an access method, that access method automatically becomes a Prospect.
- **Your Picks** are access method setups that you've chosen out of the Prospects. These are access methods that seem to have the most promise out of those you've tried so far. They represent access methods that you are going to pursue further, either for continued trials or for actual delivery to the client.

Compare

Comparing Test-drives

Here you can specifically compare results from all the Test-drives you've done. This may not be something you need in every case, but it's here if you want it. (Or just hit Continue to skip to the next step.)

To get a side-by-side comparison, click the Compare checkbox for each one you're interested in, then choose Compare Selected Test-drives.

This step gives you a talking point to review what's happened with the client and any other team members, to see if any access methods in the Test-drives so far show promise for meeting the client's needs.

Make Some Choices

Sorting Prospects and Picks

Purpose: Here you can review Your Prospects to see if you want to move some into Your Picks.

The criteria you'll use for this is up to you, but here are some guidelines.

If an access method shows promise, you may want to Add to Picks. You would definitely do this for something that you are going to recommend for the client, but it could also be appropriate for anything that you want to pursue further, for example something that you want to try out for a longer time period. This is a bit like adding something to a Favorites list - it lets you separate out the things that you're most interested in.

If you do add some Picks, we'll ask you some questions about them in the Next Steps section, to help you move forward with next steps.

R1. Evaluating your Picks

If you've gone through the Gather Info section, then you've entered a lot of info about the client's goals and needs. Here you can think about whether each Pick you've chosen really does meet those identified goals and needs.

This is a chance for you and the client to talk these over and decide together (along with any other team members). We've tried to keep things simple with a checkbox (rather than rating the extent to which the need is met), although we realize that in some cases it can be hard to know for sure.

You can always add comments that give the reasoning behind your responses here, or add any other context to the decision-making that seems important.

This information will be included in the report at the end of this section.

Note: You'll only see this step if you have chosen any Picks so far. Also, if you see 'None entered' anywhere, it simply means that you didn't enter information for that item, so we have nothing to display.

Possible Next Steps for a Pick

Purpose: Document some clear next steps, so you and the team know where to go from here.

At this point, you've selected at least one access method as a Pick. A Pick is just a method that you've tried and that has some promise.

Possible next steps here could vary quite a bit, depending on how well this Pick performed for the client and how far along in the process you are.

Here are some example scenarios and corresponding next steps:

Scenario 1. We know for sure that this Pick is a great fit -- let's go with it!

Next steps might be:

- Recommend this method for purchase and implementation. Consider the entire system and services that will be needed for success.
- Order the device and any associated accessories. (Find funding would be a step in some cases, too.)
- Deliver the system
- Do initial training and set up a schedule for practice and learning
- Establish criteria for successful onboarding

Scenario 2. This method has some promise, but we're not quite sure yet.

Next steps might be:

- Document the reasons why we're still unsure and define a plan to address those reasons
- Provide client with a loaner device to use and practice with
- Establish a specific schedule for practice and learning, and criteria for success
- These are just examples, and your real next steps would probably be more specific and actionable. But we hope that conveys what we're getting at with this screen.

This information will be included in the report at the end of this section.

Note: If you need to coordinate next steps with other team members or bring in someone to assess seating / positioning, that would be a good thing to add in Next Steps.

Next Steps

Next steps and reporting

At the end of the Review section, we've provided a couple of common next steps here for you to choose from.

Choose a new Priority Activity. This will send you to the Gather Info / Choose Activities page, so you can modify the client's goals as needed and then choose a new Priority Activity. Usually, you would do this when you are ready to focus on a new Priority Activity: perhaps you've found a solution for accessing the current Priority Activity, so you're ready to move on. Or maybe the current Priority Activity has proven to be challenging, and you want to try a different activity that might yield some success.

Create a report. The report includes:

- All of the info you entered for the client's profile (like goals & needs, as well as abilities)
- A summary of the Test-drives

- A summary of decision-making: this lists the Prospects still under consideration, as well as Picks that you've identified for next steps.

In every section of the report, you can add a note, if you want. You can also print the report to a PDF file or a printer, using your browser's print function. (Eventually we hope to improve this, but for now it provides basic printing functionality.)

Help: User Accounts and Admin

Signing up for an account

Why create an account? You must be logged in to an account to save data. That allows you to do things like resume a session without losing your work, or review previous sessions. (If you aren't logged in, the data is available in the browser tab but will be erased when you refresh the tab or restart your browser.)

We require a username and password to create an account.

We also recommend supplying your email address. This is how you will receive a password reset if you happen to forget your password.

The Preferred Name is just a short name for you - it gets displayed in the upper right corner when you are logged in. Many people use their first name for this, but you can enter anything you'd like.

Why a username AND an email? To allow you to protect your information, we do not **require** an email address for accounts. If data privacy is important to you, please note that if you do fill out the email field, it is stored in encrypted form. If you include both a username and an email address in your account, you can then use your email address to login, if you prefer. Finally, you can also enter your email address in the username field, if that's preferable.

Accounts are currently intended for AT practitioners. Clients / students that you work with are associated with your account.

Note: Once you've created your account, you can change the Email and Preferred Name, but you won't be able to change the Username.

Logging in

If you've already set up an account in Access Navigator, just enter your username and password to login.

To stay logged in, check 'Remember me.' This will login to your account automatically the next time you run Access Nav.

'Forgot password?' allows you to receive a password reset link via email. Enter your username, then click 'Forgot password?' **Note:** This only works if you have entered an email address for your account.

Why login? You must be logged in to save data. That allows you to do things like resume a session without losing your work, or review previous sessions with a client. (If you aren't logged in, the data is available in the browser tab but will be erased when you refresh the tab or restart your browser.)

Why a username? To allow you to protect your information, we do not require an email address for accounts. If you included an email address in your account info, you can use that instead of a username for logging in, if you prefer. (You are also free to enter your email address as your username when creating your account -- we just did not want to require you to do that.)

Practitioner page

The practitioner page has two main purposes:

First, it lets you **select the client you'll be working with for this evaluation**. To store the data for a client evaluation, you first need to select the client - that's how Access Nav will know whose data it is and how to store it.

If you've got some clients stored already, you'll see a list of those here to choose from. Or if it's your first time using Access Nav with a client / student, you can create a new client.

Note: If you just want to use the app without saving any data, you can just Continue from here without selecting a client.

The second main purpose is to let you **change your account info** (the Email and Preferred Name for your account).

Another Note: All of the above assumes that you are logged into your practitioner account. If you aren't logged in, you'll see a message on this page to that effect, with suggestions on what to do next.

Create a new client

To store the data for a client evaluation, you need to select the client first - that's how Access Nav will know whose data it is and how to store it.

So if it's your first time using Access Nav with a client / student, you'll need to create a new client. From the practitioner page, you can create a new client.

The only required info here is a Client Username. This must be unique (we'll tell you if it's not).

The Preferred Name and Pronouns allow Access Nav to personalize some of the instructions, which can make things more friendly and clear. If you omit these, we'll use 'the client' and 'they / them' as defaults.

If complete privacy is a concern, you may want to avoid identifiable names when creating the client.

Note: Once you've created the client, you can change the Preferred Name and Pronouns, but you won't be able to change the Client Username.

Requesting access to another client

From the practitioner admin page, you can request shared access to an existing client. For example, you may have a colleague who has already worked with a particular client within Access Navigator. Now you want to work with this same client, and share the data with your colleague. To do that, you would request access to that client from your colleague. Once your colleague receives and confirms the request, that client will then appear in your list of clients.

The Client Username is the client's official username within Access Navigator. Get the client's username from someone who already has access to this client.

Note: Be careful to enter the client's username correctly. Access Navigator won't be able to tell if the username is incorrect until your colleague tries to confirm the request.

The Current Provider Email is used to email a current provider and request access to the client. This person will receive an email with the link to approve your request for access. This field is optional, as there are other ways to request access instead of email.

Hit Continue to view and share the request. There are actually 4 options for how to share the request:

1. **Share:** This opens up the sharing options in your device. For example, on an iPad, tap the Messages option to open up a text message that includes the request. Then send the text message to your colleague.
2. **Copy Full Request:** This copies the full request message onto your clipboard. From there, you can paste it into an email, text message, or other app to send to your colleague.
3. **Copy Link Only:** If you want something more streamlined, this copies only the request link onto your clipboard. From there, you can paste it into an email, text message, or other app to send to your colleague.
4. **Email Request:** This opens your email app (if available) and sends the request message to the email address you supplied.

Mainly what you need is to send the link in the request message to your colleague, in whatever way you prefer. They in turn need to click that link to execute the request.

Changing client info

You can change the info for the current client.

The Preferred Name is just a short name for the client - it gets displayed in the upper right corner when this client is selected. Many people use a first name for this, but you can enter anything you'd like. If you leave the Preferred Name blank, Access Nav will just show 'the client' in the upper right.

Pronouns are adjustable in an attempt to make little phrases like 'her goals and needs' seem friendlier. (We realize that we are only providing some of all possible choices for pronouns, but we hope that this partial list is at least somewhat helpful.)

Hit Continue to save the changes.

Note: currently you cannot change the client's username.

Changing your account info

You can change the info for your practitioner account.

The Email address allows you to receive a password reset in the future, if you need one. You can also use this email address instead of your username when you login, if you prefer.

The Preferred Name is just a short name for you - it gets displayed in the upper right corner when you are logged in. Many people use their first name for this, but you can enter anything you'd like. If you leave the Preferred Name blank, Access Nav will just show 'you' in the upper right.

There's also a button here to let you change your password.

Hit Continue to save the changes.

Note: currently you cannot change your account username.

Changing your password

You can change the password for your practitioner account.

You'll need to enter your account Username and Current Password. So we know it's you.

Then enter the New Password that you want to use from now on.

Note: If you can't remember your current password, go to the Login page and use the 'Forgot password?' link.

Resetting your password

If you can't remember your current password, go to the Login page and click the 'Forgot password?' link.

You will then receive a password reset link in an email sent to the address associated with your account.

Before clicking on that password reset link, make sure that Access Nav is not running in any browser tabs. (It can only run properly in one browser tab, and will give an error if you try to run it in a second tab.)

After opening the password reset link successfully, enter the New Password that you want to use from now on, and hit Continue.

3. Resources for you!

This section is just a copy of [the Resources page](#) in the Access Navigator app.

Videos within Access Navigator

Demo video

[View the demo video](#). A short video to get you going with Access Navigator (2min 30sec)

Videos for evaluating abilities

Here are a few videos we made with tips for assessing physical abilities.

- [Head movement](#)
- [Facial movement](#)
- [Hand and fingers](#)
- [Elbow access options](#)
- [Knee / leg movement](#)

Videos for improving access

These videos may give you some ideas that can improve an individual's access, after observing their performance in a test-drive.

- [Head tracking tips and tricks](#)
- [Issues with accurate mouse clicks](#)
- [Common switch issues](#)
- [Importance of switch stability](#)

Other Resources

Perspectives of people who use alternative access

These include videos of presentations from the [The Future of AAC Research Summit](#) held in May 2024, and articles from a special free-access issue of the AAC Journal, based on the summit.

- [Pancho Ramirez' \(2025\) article](#) describes his evolving use of AAC, including laser pointers, an air mouse, and his participation in clinical trials with a brain computer interface.
- Patrick Regan's [presentation](#) and [AAC journal article](#) on “access challenges that I have experienced as someone who uses AAC, how my team and I have resolved them, and what challenges I face now.”
- In Tim Jin's [presentation](#) and [AAC journal article](#), Tim relates his four decade journey with AAC, and the importance of AAC adapting “to the user, rather than the user adjusting to the device.”

Software tools for access assessment

There are a few other software-based tools, besides Access Navigator, that may be of interest.

- [SIFTS](#). A web-based tool to assist AT team match a person's needs to AT features.

- [KPR software](#). Includes Compass software as well as free tools to support alternative access. From Access Nav team member Heidi Koester.

Assessment frameworks and practices

A non-exhaustive list of references that describe AT assessment processes, and provide support for following those processes.

- WATI guides and forms. Three collections of materials on AT service delivery, mainly in school-based settings. Wisconsin, USA.
 - [AT consideration to assessment](#)
 - [Assessing students' needs for AT](#)
 - [Student information guide process forms](#)
- [Quality Indicators for Assistive Technology Services \(QIAT\)](#). A collection of resources and an email forum to support the development and delivery of AT services.
- [Assessment: Guiding the Assistive Technology Process](#). A Powerpoint deck reviewing Cook, Hussey, and Polgar's HAAT model of AT assessment, from the University of Pittsburgh, USA.
- [General AT assessment frameworks and tools](#). A list of resources and links on AT assessment, from OCALI in Ohio, USA.

Alternative access AT

- [Supporting effective alternative access for individuals with physical disabilities](#). Review article (2025) written by the Access Nav team.
- [Alternative access module](#). Free online learning from the AAC Learning Center / RERC on AAC.
- [Alternative access](#). A nice overview from CALLScotland.
- [Access methods: Switches, keyboards, and eyegaze](#). Another nice overview, this one from Communication Matters in the UK.
- [AT for access to computers](#). A WATI resource that covers assessment (using the SETT framework) as well as specific implementation tips and product features.

Appendix: Suggestions for Improving Access

Here are some ideas for remedies and next steps that can address issues you might observe during a test-drive and potentially improve access for an individual. Not all will apply to your situations, but hopefully you'll find something helpful here.

General Suggestions

Consider whether things might be expected to improve, perhaps after a learning period with a new access method, or after additional recovery from a medical condition.

Try one of the Basic 3 remedies:

1. Adjust the setup of the current access method

You might try keeping the same type of access method, but adjusting it to be more tailored to the user.

Adjustments to consider include:

- Position. Bring device closer to the user. This needs to be balanced - it can be so close that they have neck/eye strain from looking at it.
- Settings. Review any settings in the access method to see if any of them might benefit the user.
- Body Site. Support the current body site for better function. Change how the body site is being used (like using a typing cuff instead of direct keypress). Or try a different body site.

In the low/no-tech case, if there is a partner involved who is trying to observe the user's signal, consider whether the partner's participation could be 'adjusted', perhaps by changing position or increasing attentiveness.

2. Adjust the seating / positioning system

The goal is to be able to maintain an active, functional, and comfortable posture. Some ideas to consider, where applicable:

- Bring target closer to the user (switch, keyboard, communication board, etc.). This needs to be balanced - it can be so close that they have neck/eye strain from looking at it.
- Does the user rely on upper extremity support to be accurate with reaching? Work with your seating and positioning specialist, ATP, and/or vendor to explore ways to increase trunk stability in order to free up arms for functional tasks.
- Try using a pillow or towel roll to help stabilize an upper extremity when using small hand movements or to offload the hand to ease hand movements.
- Consider a lap tray to support the upper extremities.
- Is the user a candidate for mobile arm supports? Reach out to OT/PT or your seating vendor for help on this.
- Try adjusting the wheelchair tilt position (when available and tolerated). Sometimes a slight change in gravitational pull can change how successful, or not successful a movement/activation attempt will be.

For more info: [Wheelchair positioning, Shepherd Center](#)

3. Try a different type of access method

Consider trying a different access method if:

- Performance with the current method is poor and seems unlikely to improve.
- Motivation with the current method is low.
- There's at least one obvious alternative that seems to have potential. (Example: client is struggling with hand-typing, but has good head control.)
- Client is interested in exploring other options.

It's not always easy to know when to stick with the current method and keep trying to improve vs when to pivot to a new access method. Here are some considerations that may help you think through this decision:

- Does the client need or want some type of functioning access right now? If there's an urgent need, try the "simplest thing that could possibly work" approach, and get going with something that provides some initial success.
- With the current method, is performance improving steadily? Or has it plateaued at a less-than-fully-successful spot?
- How much time and effort (on the part of the client/family/caregiver) can be dedicated to practice and learning?
- Is there a mismatch between performance and desire to use a method -- i.e., they want to use a particular access method but are not doing well with it, or vice versa? In this case more objective data on a range of access methods might be beneficial.
- What are the other potential access methods that this client might be able to use?
- Do you anticipate that the client can successfully learn / use the new access method (think about the variety of contexts and environmental barriers that may play a role)?
- Does the client seem genuinely motivated to try a new access method?
- How long do you anticipate the client will need to use the access method?
- Will the access method be impacted by health decline, degenerative conditions, or other changes?
- Consider whether the method requires optimal set-up and conditions to be used successfully -- is that sustainable?
- Does the client tolerate shifting focus easily? If not, be careful about bouncing back and forth between access methods.

Keep in mind that this is not necessarily an either / or question. It might make sense to get something for now that works (a 'quick and dirty' solution), while also working toward a method that might be better long term but will require more practice.

With respect to seating / positioning, do what you can right now to facilitate an active, functional, and comfortable posture. Reach out to OT / PT or your seating vendor for help as well.

Specific Suggestions

These are listed by the specific issue you observed in the client during a test-drive. We start with issues that may occur with any access method, such as fatigue, along with suggestions for addressing the issue. We then present issues associated with particular access methods (such as key repeats for keyboard).

Issues for any access method (including no-tech)

Fatigue

- Set expectations that building up a tolerance for using the access method may be necessary. Give permission and encourage time for breaks. Have a backup plan in place that the user can switch to when they need a break.
- Consider basic ergonomics: neutral position for viewing the screen or communication board, input device in an easily accessible position, and comfortable body posture
- If you are working on low/no-tech communication, and the user is experiencing significant fatigue, consider starting with a binary signalling system (like yes / no to make choices). More complex methods like partner-assisted scanning require several minutes of physical and mental effort. You may need to wait to progress to this method until the individual has sufficient cognitive / attentional abilities and stamina.
- Excessive fatigue could be a red flag. A fatiguing access method is usually one that will not be used very often. And if the user has a degenerative condition such as ALS, fatigue while using the access method is a particular red flag and might be a contraindication.

Pain

- Pain could be a red flag. Ideally there should not be pain when using any access method. If the user has chronic pain or a repetitive stress condition, using the access method should not make the pain worse.
- Is there a pattern to the pain? Does it occur only when they are using the access method? Or does the access method make existing pain worse?
- Does the pain calm down once the user stops using the access method?
- Consider pulling in other professionals such as a physiatrist, OT, or PT to problem-solve.

Keeping an active, functional posture

- Consider adjusting the seating / positioning system
 - Refer to interdisciplinary team, ATP, seating/positioning specialist for help if you suspect the user is struggling due to instability or other seating issues.
-

General technical problem with the equipment

- Sometimes poor performance occurs simply because the tech equipment just isn't working properly. It's hard to give very specific suggestions, but you might try the following:
 - Double-check connections and setup. Try to find documentation to help, where applicable.
 - Try to contact the manufacturer for help, or colleagues with experience.
 - Use the equipment yourself -- or have someone else try it -- to see if the same issues occur.
-

Seeing well enough

- Review what you found in the visual abilities section for clues about why vision might be creating a challenge.
 - Also consider that some users need to be able to see the input device and the activity at the same time. If that's the case you need to make sure everything is in the line of sight.
-

Understanding the tasks

- Consider how many layers there are to the activity itself. Is the activity you are asking the user to do too complicated? Are there ways to simplify it?
 - Consider the complexity of using the access method to perform the activity. Are there ways to better match the task requirements to the user's abilities?
 - Especially with a new access method, it may help to give the user time to explore the access method itself before using it to do functional tasks.
-

Maintaining attention during the tasks

- Can you reduce distractions in the environment?
 - Is the activity itself a source of distraction? If you are setting up your own activities, try to choose things that are motivating and interesting, but not too distracting for the user.
 - Does the user need to split their attention between doing the activity and using the access method?
 - If you are working on low/no-tech communication, and attention is challenging for the user, consider starting with a binary signaling system (like yes / no to make choices). More complex methods like partner-assisted scanning require attention and physical effort for several minutes. You may need to wait to progress to this method until the individual has sufficient cognitive / attentional abilities and stamina.
-

Motivation to use the access method

- Try to choose activities that are motivating, age-appropriate, and interesting to the user. Or at the very least, choose something that relates clearly to a larger goal that the user has.

- Is the user getting enough feedback from the activity and the access method to know how they're doing? Can they see / hear / feel the feedback sufficiently? (With partner-assisted scanning, is the partner giving clear feedback to the user?)

Physical keyboard issues

Hitting multiple keys at once, by mistake

- To help isolate key presses, consider:
 - Repositioning the keyboard, perhaps to a more vertical plane
 - Stylus or a control accessory like a typing cuff
 - Keyguard (sits on top of the keyboard and creates a physical guide around each key)
 - A large-key keyboard

Difficulty holding down two keys at once, for combos like CTRL + C

- Turn on the Sticky Keys feature, in the keyboard accessibility settings built-in to your device.

Keyboard accessibility settings are features built-in to Windows, Apple, and other devices. If you haven't used Sticky Keys before, a quick internet search should get you going (example: 'Sticky Keys Windows').

On a Windows computer, try the [free Keyboard Wizard program](#) to determine what keyboard accessibility settings are right for you. It sets them for you, as well!

Difficulty releasing keys quickly enough to avoid letter repeats

- Use the keyboard accessibility settings to adjust the key repeat speed and add a key repeat delay.

Difficulty seeing the keys for hunt/peck typing

- Try a keyboard with high-contrast keys. Example internet search: 'keyboard yellow keys' or 'low vision keys'

Touchscreen issues

Difficulty isolating one digit

- Use a stylus (a basic passive stylus that works with any touchscreen)
- Try a digit isolation glove, to reduce the amount of skin that contacts the touchscreen. Options include:
 - Cut the index finger tip off a pair of gloves
 - Try gloves with capacitive finger tips made for touchscreen devices

- Search the web for “digit isolation glove”
- Anchor the fingers on the edge of the screen, and type with the thumb



This is a basic passive stylus that will work with any touchscreen. Inexpensive and available wherever regular tech stuff is sold. For more ideas, search the web for “stylus for accessibility” or “adaptive stylus.”



Use the edge of the screen as an anchor for the fingers, as shown in the photo.

This keeps the fingers out of the way, and allows typing with a more isolated thumb.

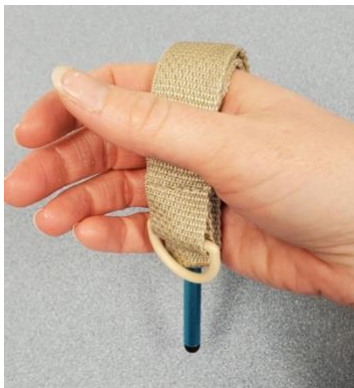
Shift the hand around the screen edge to reach other areas of the screen.

Stylus slips out of hand when trying to tap

- Build up the stylus or attach to hand



Building up the stylus can make it easier to hold. Use Coban wrap, red / blue foam, or the like to make the stylus “fatter” and softer.

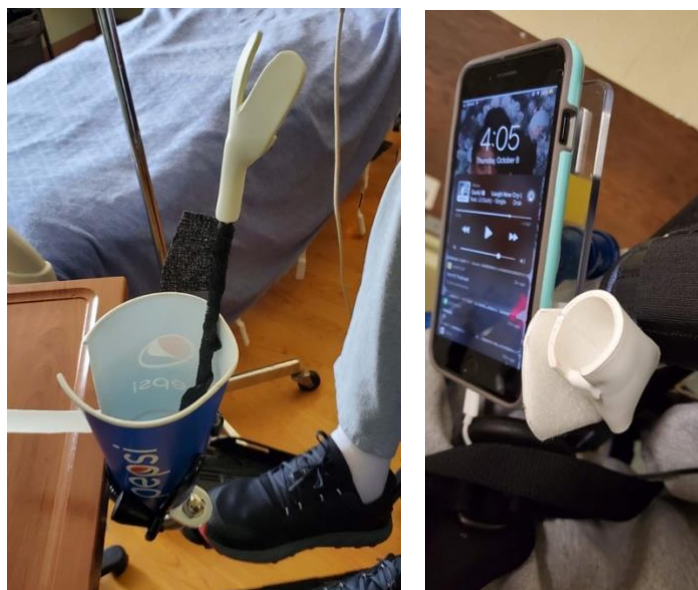


You could also attach the stylus to the hand, using a universal cuff.

Can't pick up stylus after putting it down

- Change the stylus shape or how it's held.
 - Be creative. Observe what is happening when the user attempts to retrieve the stylus. Adjust as needed. This could be a very individualized solution.
 - Choose a stylus with a different shape (possibly larger diameter)
 - Add anti-slip material or build up stylus diameter to be "fatter" and softer
 - Try a universal cuff to attach the stylus to the user's hand (with or without a right angle pocket)
- Consider a docking station option, to provide a place to put the stylus and allow the client to readily pick it up again. Especially important for mouth stylus users. (See photos below)
- A box or tray for the stylus might help. You could custom-make this if needed or check off-the-shelf pen trays / holders / troughs. Be sure the work surface has a space for the tray.
- A piece of velcro could do the trick. Play around with the velcro surface area to adjust the strength of the 'hold'.

If you've tried all of this, and it's still not working well, it may be time to reassess whether or not a stylus is an appropriate access method. Discuss with your team and/or refer to occupational therapy.



Trouble reaching all areas of the screen

- Change position of the device, try different angles, or offset the device toward the user's strong side.
 - Some devices have a 'one-handed' setting (or equivalent) that will shift targets to one side of the screen.
-

Touchscreen interprets a drag instead of intended tap

- Look at ways to increase stability, such as:
 - Add more support for the upper extremity.
 - Cue the user to anchor their arm before attempting to tap.
 - Try a laptray to offer more surface area to anchor or support the arm.
 - Try a digit isolating solution, to allow the user support their arm directly on the touchscreen without activating it.
 - Check the device's accessibility features. There may be a setting for a timed hold to lock in the target and ease lift-off. (In iOS, these settings are in Touch Accommodations.)
-

Lots of inadvertent taps

- Help set the user up with as much stability as possible, including:
 - Appropriate positioning in a chair, wheelchair, or specialized seating system
 - Try an arm support to provide more surface area to stabilize on
 - Try a digit isolation glove so user can stabilize their hand directly on the screen when making a selection
 - Check the device's accessibility settings for options to change how the screen interprets multiple quick taps:
 - There may be an option to ignore repeat taps.
 - See if there's an option to set a required time before the touchscreen will interpret a tap.
 - If the inadvertent taps occur frequently and severely limit performance (e.g., user makes a mistake, then makes 10 more mistakes trying to correct the first mistake), consider a different access method. (For example, a switch-adapted joystick mouse instead of direct touchscreen access.)
-

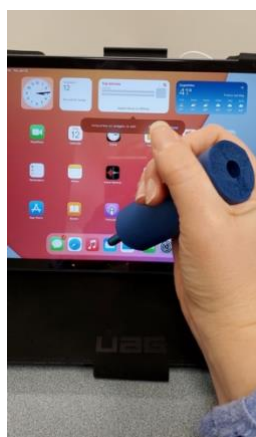
Touchscreen interprets a long press instead of intended regular tap

- Check the accessibility settings for your device. There may be options for adjusting the long press time or turning it off completely.
 - There may also be an option for how long you must touch the screen before a touch is recognized. Sometimes this setting also changes the long press behavior.
 - Unfortunately it is hard for us to give specific advice, since there are many platforms and they change frequently. A web search may give you instructions for your device.
-

View of screen blocked by hand / stylus

- Using a stylus or a cuff for typing can help with control, but it may have a side effect -- the hand may block the view of the screen, making it difficult to see exactly what you're trying to tap. If that happens, here are a couple of things to try:
 - Try offsetting the touchscreen (photo below).

- Try a universal cuff with right angle pocket (photo below).
- Try putting the stylus on the back of the hand (photo below).



At left, we've angled the tablet to allow the user to see around their hand. You could also try angling the forearm to achieve this. The basic idea is to adjust positions so you can see the stylus tip easily.



Use the right angle pocket to reposition the stylus to the side of the hand, between the thumb and index finger. This may give better vision of the screen, and possibly greater comfort and control in some cases.

(A right angle pocket is an accessory for the universal cuff. Search on "right angle pocket universal cuff" for more info and sources. Also called a "utensil holder.")



Use the universal cuff to position the stylus along the back of the hand (instead of the typical palm position).

Then tap with the hand in a palm-down position, as shown in the photo.

This tends to keep the hand below the level of the stylus, so it can be easier to see the stylus tip.

Can't find a position that allows both seeing and reaching

- This is a particular type of positioning challenge: when the user can see the screen, he / she can't reach it. And vice versa.
- If you're not able to find a position that allows seeing and reaching, direct touchscreen access may not be the right solution for the user, at least at this time.
- Assess the user for a different access method to use until they gain strength, head control, and vision to see and interact with the touchscreen at the same time.

Pointing device issues

Moving the mouse pointer

- Try to get more specific about what sort of trouble the user is having when moving the mouse pointer. Revisit the issue checkboxes for ideas, and check any that apply.
- For head tracking, this [short video on head tracking tips and tricks](#) may also give you some ideas.

Clicking (making a selection)

- Try to get more specific (if you haven't already): is it trouble with clicking the button? clicking without intending to? keeping the pointer still while clicking? Revisit the issue checkboxes for ideas, and check any that apply.
- Keep in mind that there are a few ways to click, including physical button on the pointing device, dwell, and external switch. One of these may work better for your client.

Difficulty reaching all parts of the screen

- Increase mouse sensitivity via accessibility settings
- Try a different style / brand of pointing device, as some have different scaling depending on the style
- When using head controls: Cue user to over-reach past the side of the screen that they CAN reach. This helps reset the mouse pointer to then reach farther in the opposite direction. This [short video on head tracking tips and tricks](#) may also give you some ideas.

Accessibility settings are features built-in to Windows, Apple, and other devices. If you haven't used them before, a quick internet search should get you going (example: 'Mouse accessibility settings').

On a Windows computer, try the [free Pointing Wizard program](#) to determine what pointing accessibility settings are right for you. It sets them for you, as well!

Overshooting target with lots of corrective movements

- The snap-to accessibility feature can be useful for dialogue boxes, but you have to choose if you default to "ok" vs "cancel"
 - Adjust mouse sensitivity via accessibility settings (usually lower in this case)
 - Increase size of target items when possible, through accessibility settings
 - Use a different access method, such as voice, for access to smaller targets that are too difficult to land on
-

Missed target because pointer moves when clicking

- Consider a device with more separation between the select buttons and the pointer movement (like a trackpad, trackball, or joystick)
 - If that doesn't help, consider using a separate switch to do the clicking
 - Assess access to the switch for clicking. Can the user be positioned in such a way that they don't move when activating and releasing the switch? If not, explore different switch sites. If no other switch sites are available, consider dwell clicking or voice-activated clicking with speech recognition software (built-in or third party).
 - Would user be much more accurate or less fatigued using the right-click button for the primary click function? If so, activate this in the accessibility settings.
 - View the [video on Issues with accurate mouse clicks](#) with ideas for making it easier for user to click successfully. Issues with accurate mouse clicks.
-

Difficulty lifting off the pointing device without moving the pointer

- If using a mouse, consider a pointing device that is more stationary, like a trackpad or trackball.
 - With a trackball, try limiting contact with the trackball to one single point (like a single knuckle, side of the hand, stylus, etc). Keep the fingers from dragging across the ball.
 - With a trackpad, try having a single point of contact with the trackpad (like a single knuckle, stylus, etc.). It may also help to change position of the trackpad to be closer and angled more vertically.
 - With a joystick, consider a different type of handle -- a goalpost, T-handle, long and vertical, ball-shaped, etc.
-

Difficulty with double clicking

- Try adjusting the double-click speed in accessibility settings
 - Reduce the need to double-click (in your operating system settings)
 - If that doesn't help, consider mouse emulation software (such as Dragger, Point-N-Click)
-

Difficulty with right clicking

- Consider a device with a different layout of the buttons, such as a trackball

- Consider a separate switch for right-clicking
 - Can use a switch interface to achieve a right click (such as Swifty)
 - Sip and puff would provide 2 switches (click and right-click) from a single access point
- Consider mouse emulation software (such as Dragler, Point-N-Click)
- You might try voice-activated clicking with speech recognition software (built-in or third party)

Locating the mouse pointer on the screen

- Adjust pointer to be larger, higher contrast, or visually more interesting
- Add a trail to the pointer to increase visibility when the pointer moves (in settings)
- Set the option to use Ctrl key to show location of pointer (in settings)

Tracking the mouse pointer as it moves

- You can try enlarging the pointer, and/or adding a trail to the pointer (in settings)
- When using head controls: some users have trouble dissociating eye movements from head movement. Some may need to initiate head movements by first moving their eyes in that direction. If practice doesn't improve things, you may need to explore other access options.

Issues with switches

Difficulty pressing the switch

- Adjust the switch position [[video on Common Switch Issues](#)]
 - Try supporting the extremity and position the switch vertically
 - For trouble with release, turn the switch upside down so gravity can help
 - Remind the user to relax into a resting position before placing a switch
 - With head movement, observe the direction of the head movement (true lateral flexion? anteriolateral flexion? or is it more rotation? We are trying to capture this movement, so position the switch accordingly. Try to make contact with bony prominences.
- Stabilize the switch [[video on Importance of Switch Stability](#)]
 - Especially if the switch is placed on a soft surface, it may squish further into the soft surface instead of activating.
 - Same goes for squishy body areas versus bony prominences.
- Try a more isolated movement and support the extremity. This can help the user not have to look at their body part to hit the switch. It can provide more proprioceptive input to help the user better understand where they are in space.
- Can the user generate the movement to activate the switch only when looking at their extremity and the switch? If so, keep the activity very, very simple in the hopes of not distracting the user while attending to the activity and also generating a movement.

- A mismatch between movement and attention can be difficult. Like when an activity is in front of you and to the right, but you need to move away from the activity and to the left to activate the switch. Try positioning the switch so the user is engaged in the activity and moving toward the activity when activating the switch.
- Make sure the user can experience the resulting feedback when a switch is activated. Especially if vision may be questionable, choose something that provides auditory or tactile feedback.
- Consider adding some extra cues to help the user activate the switch. This can help users who don't have a good sense of their position in space or how much they are moving.
 - Consider using a mirror for feedback.
 - Provide verbal cues, such as 'feel it' to cue the user to make skin contact with the switch, then 'push it' to activate the switch and 'release it' to cue a release.
- Give lots of wait time, especially for new users or those who have had strokes or TBIs.

Difficulty releasing the switch

- Adjust the switch position [[video on Common Switch Issues](#)]
 - Try supporting the extremity and position the switch vertically
 - For trouble with release, turn the switch upside down so gravity can help
 - Remind the user to relax into a resting position before placing a switch
 - With head movement, observe the direction of the head movement (true lateral flexion? anteriolateral flexion? or is it more rotation? We are trying to capture this movement, so position the switch accordingly. Try to make contact with bony prominences.
- Sometimes users get tight after a few repetitions of activating the switch, making it hard to release. You could try giving them a little stretch to see if that helps. If it does, watch this very closely - if it doesn't resolve, you may want to avoid this movement to reduce the risk of contractures. Consult with an OT for more guidance.
- Consider adding some extra cues to help the user activate the switch. This can help users who don't have a good sense of their position in space or how much they are moving.
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 - Provide verbal cues, such as 'feel it' to cue the user to make skin contact with the switch, then 'push it' to activate the switch and 'release it' to cue a release.
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Too much force

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- Consider using a mirror for feedback.
- Provide verbal cues, such as 'feel it' to cue the user to make skin contact with the switch, then 'push it' to activate the switch and 'release it' to cue a release.

Knowing the switch location

- Does the user need to be able to see the switch and the activity at the same time? If so, make sure the switch and activity are both in line of sight. (If you're not sure, watch the user's eyes: do they bounce to the switch when they intend to move, then back to the screen after movement?)
- Can the user generate the movement to activate the switch only when looking at their extremity and the switch? If so, keep the activity very, very simple in the hopes of not distracting the user while attending to the activity and also generating a movement.
- A mismatch between movement and attention can be difficult. Like when an activity is in front of you and to the right, but you need to move away from the activity and to the left to activate the switch. Try positioning the switch so the user is engaged in the activity and moving toward the activity when activating the switch.

Speech recognition issues

Poor recognition accuracy

- Follow the fundamentals of successful speech recognition (double-check!)
 - Use full phrases instead of word-by-word dictation
 - Speak clearly, and articulate a clear beginning and end to each word in a phrase
 - Make sure you have a decent microphone and it is positioned to pick up your voice
 - Be sure the microphone is not touching your face
 - Protect your voice profile
- Don't stop with just one brand / application for speech. Try others. (see below)
- Set up efficient mouse access to make corrections and edits. This can be faster and less frustrating than using voice to make corrections.

Sometimes one type of speech recognition will work far better than another, for the same user. On most devices, like laptops, tablets, and smartphones, you have some built-in (free) options. For example, Windows 11 includes voice typing, and if you use Google Docs, you also have access to voice typing within Chrome.

You could also consider installing paid software such as Dragon. If you haven't had much success with the built-in options, you might give Dragon a try.

Do you need to spend money purchasing speech recognition software such as Dragon? It depends on what you want / need the software to do. There are built-in / free versions available via Microsoft, Google, Apple, etc. But Dragon may give better recognition for some people. We also recommend reading up on the features of the free software and comparing with paid software to understand what features are available. If you want / need those additional paid features, you might try the paid software on a trial basis to see if it gives you good recognition.

Note: Features can change quickly, so check periodically to see what's new in both free and paid software.

Here are a couple of resources for more info:

- [Speech recognition pages provided by CALL Scotland](#). They seem to do a good job of keeping things pretty well up to date.
- [Speech Recognition as AT for Writing](#) - excellent guide written by Dan Cochrane and Kelly Key

Inconsistent accuracy despite consistent speech

- If recognition accuracy is low, even though the user has consistent voice quality, enunciation, and volume, the problem might be the microphone.
 - Be sure to use the same microphone with each use.
 - Make sure the microphone is positioned in the same place each time.
 - If using a built-in microphone, try a good headset mic. [CALL Scotland](#) recommends the Andrea NC 181 USB.

Need to use one microphone on two different devices

- You may need to use a single microphone for two functions on two separate devices, like for speech recognition on your computer AND for phone calls on your cellphone.
- It's possible to use a single microphone / headset for two functions, but can be tricky.
- There are products that can be switched between the two functions by activating a button on a headset hub. See [this article on HeadSetPlus](#) for some ideas. Keep in mind that technology changes quickly, so you may have to do some additional research to get the latest info.
- Check that the user can activate that switching button successfully.

Difficulty activating microphone button

- Check if your recognition systems allows you to control the microphone by voice, e.g., by saying 'Wake up'.
- Make sure you are using the correct wake command ('Voice access wake up' is different than 'wake up!').

Difficulty putting on / taking off headset independently

- If the user needs to be fully independent:
 - Consider a desk-mounted microphone or label microphone.
 - Also consider the pros / cons of wireless headsets.
-

Poor recognition accuracy due to user's accent

- Speaking English with a specific accent (such as British, or Spanish) may affect recognition accuracy. See if your recognition software has the option to change the accent, or try software that does give this option.
 - Note, too, that some recognition software can handle languages other than English.
-

Trouble remembering the speech commands

- It may help to make a visual aid / list with the most important, frequently used commands. Over time you may be able to fade out visual cues and/or expand to other less frequent commands.
-

Forgetting to speak the 'right' way

- It may help to add a visual cue.
 - Also consider starting with a task that uses short commands (e.g., opening programs, dictating short search terms) instead of lengthy dictation.
-

Not noticing recognition errors

- If the problem is *forgetting* to look for errors, it may be helpful to add a visual cue / reminder.
 - If the problem is *seeing well enough* to proofread for errors:
 - Increase contrast and/or font size
 - Some software has the ability to select text and read it back
 - Use built-in grammar / spell check tools to help identify errors
-

High frustration using speech recognition

- Start with tasks that have a lower cognitive load. For example, just dictating into a blank document, to get the feel of how the software listens and how to speak to it.
- Practicing commands such as turning on and off the microphone can also decrease overall errors.
- Break the learning down into small chunks and focus on tasks that might give immediate success.

Eyetracking issues

Resources for implementing eyetracking

Implementing eyegaze can be tricky, so it can be helpful to get guidance from trusted sources. You can seek info from the eye tracker manufacturer, blog posts, other colleagues, etc.

Here are a couple of resources to get you started:

- See [the GazeHelp site](#) by OT Charlie Danger for some ideas. He's included an eye tracker decision tree and a table of eye tracker properties.
- [CALL Scotland's eye gaze page](#)
- A variety of [resources about eye gaze](#) in the always-useful Praactical AAC blog
- Try these search terms: "eye tracker access", "eyegaze access"

As always, keep in mind that technology changes quickly, so you may have to do some additional research to get the latest info.

Lots of accidental selections

- Slow down the tracker's dwell time. (Careful not to set it too slow, as it then becomes much harder to hold eyes still enough and long enough to elicit a click.)
 - Try a non-dwell activation method, such as a switch or a blink.
 - Try spacing active areas on the screen further apart.
 - Provide a 'rest' button on each screen.
 - Expect accidental activations when learning a new screen layout. It takes time to learn a new layout well enough to anticipate where the intended target is, quickly and easily.
-

Eye tracker is not very accurate when making selections

- If possible, calibrate. If calibration isn't possible for this user, you could try calibrating yourself or someone else, placed in a similar position. Sometimes just getting past the calibration step, even with a different person, helps get things going.
- Check positioning in the eye tracker window. If the eye dots flicker, try repositioning the device.
- Dry eyes are harder to track. Consider natural tears drops or consult eye doctor regarding chronic dry eye.
- Observe the user's eyes as they make selections. Are the eyes consistently working together to make selections, or do the eyes struggle to make coordinated movements and stay focused on the same target?
 - If coordinated eye control is a struggle, eyegaze access will likely be difficult. Consider consulting an eyegaze expert or vision specialist. Control might improve with time and practice. In the meantime, be sure to consider other access approaches.
- If one eye has weak muscles, it may not be able to 'reach' to certain areas of the screen. Try changing the settings to track only the strongest / neurologically intact eye and see if that helps.

- For cognitively intact users, try to teach them to compensate, especially if the inaccuracies are related to particular parts of the screen. For example, when trying to select targets on the left side, the eye tracker consistently undershoots. In that case, work on teaching the user to overshoot their targets. Note: this will take some practice, and might not be successful for some users.
- Some users have neurological deficits that may prevent successful use of eye tracking. An example is when the user's best eye changes depending on which side of midline the target is in. Consider consulting an eyegaze expert or vision specialist. Control might improve with time and practice. In the meantime, be sure to consider other access methods.

Eye tracker not consistently picking up the eyes

- Restart the device (a classic remedy that sometimes works!)
- Make sure the eye tracker is plugged in and active.
- Clean the eye tracker
- Bring up the tracking window on the device. This is a feature that helps direct the setup of the eye tracker, and it gives clues for why the eye tracker is not tracking. Try to get more info from the manufacturer of your eye tracker.
- Reposition the device using the tracker window for feedback and guidance.
- Look at the user. Are their eyes open? Is anything occluding their eyes?
- If the eye tracker is positioned lower and the user needs to look down, sometimes the eye tracker interprets that as eyes closed. Try moving the eye tracker up, to encourage wider eye opening naturally. This also can be useful if the eye tracker performance suffers when the user accesses the lower part of the screen, but is doing fine with the upper part.
- Are you outdoors or in direct sunlight?
 - Sometimes this interferes with the tracker's ability to pick up the eyes. Some trackers do better than others outdoors. If there's a need to consistently use eye tracking outdoors, research several eye trackers to find one that will work best. (See [the GazeHelp site](#) by OT Charlie Danger for some ideas, specifically the spreadsheet he's put together comparing different eye trackers.)

Trouble selecting any item with eyegaze

- If possible, calibrate. If calibration isn't possible for this user, you could try calibrating yourself or someone else, placed in a similar position. Sometimes just getting past the calibration step, even with a different person, helps get things going.
- Check positioning in the eye tracker window. If the eye dots flicker, try repositioning the device.
- Dry eyes are harder to track. Consider natural tears drops or consult eye doctor regarding chronic dry eye.
- If currently dwelling to select, consider decreasing the dwell time. Sometimes that helps, but the user needs to be able to handle the quicker dwell (lots of practice may be needed).
- Try a non-dwell activation method, such as a switch or a blink.

Uncoordinated eye movements

- If coordinated eye control is a struggle, eyegaze access will likely be difficult. Consider consulting an eyegaze expert or vision specialist. Control might improve with time and practice. In the meantime, be sure to consider other access approaches.
-

Trouble seeing eyegaze targets clearly

- Increase the size and/or color contrast of targets on the screen.
- Determine whether text, symbol, or both is easier to see and interpret.
- Increase size of cell contents.
- Note that most of these suggestions apply mainly when you have control over the targets on the screen (like using eyegaze on an AAC device).