

Assistive Technology Lens Evaluation Test Materials

Company & Product Context

Company: MediTrack Health

Product/Service: Patient portal for scheduling appointments, viewing test results, and managing prescriptions

Study Goal: Understand how patients interact with the appointment scheduling flow to reduce no-shows and improve completion rates

Core Input Assets

1. Participant Demographics (n=15)

ID	Age	Role	Chronic Conditions	Tech Usage	Portal Experience	Interview Type
P01	34	Working professional	None reported	Daily	2 years	In-person
P02	42	Parent/caregiver	Type 2 Diabetes	Daily	3 years	Remote video
P03	28	Graduate student	Anxiety	Daily	6 months	In-person
P04	51	Retired teacher	Hypertension	Weekly	4 years	In-person
P05	37	Small business owner	None reported	Daily	1 year	Remote video
P06	45	Healthcare worker	Asthma	Daily	5 years	In-person
P07	29	Marketing specialist	None reported	Daily	8 months	Remote video
P08	58	Accountant	Arthritis	Daily	3 years	In-person
P09	33	Software engineer	None reported	Daily	1.5 years	Remote video
P10	48	Teacher	Migraines	Weekly	2 years	In-person
P11	26	Retail worker	None reported	Daily	4 months	Remote video
P12	55	Office manager	High cholesterol	Daily	6 years	In-person
P13	31	Freelance designer	ADHD	Daily	1 year	Remote video
P14	39	Sales representative	Sleep apnea	Daily	2 years	In-person
P15	44	Nurse practitioner	None reported	Daily	4 years	Remote video

Screener Criteria Applied:

- Must have scheduled at least 2 appointments through the portal in the last 6 months
- Must be comfortable using computers or smartphones
- Must be able to participate in 60-minute session without breaks

- Must have corrected-to-normal vision (glasses/contacts acceptable)
 - Must be able to verbally articulate thoughts during think-aloud protocol
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2. User Interview Transcripts (Selected Excerpts)

Interview P01 - Working Professional, Age 34

Moderator: Show me how you would schedule a follow-up appointment with your primary care doctor.

P01: "Sure, so I log in here [clicks login button], put in my credentials. Now I'm on the dashboard. I scan down to find the 'Schedule Appointment' button—there it is, in the middle. [clicks] Now I need to select the appointment type. I'm looking for 'Primary Care Follow-up'... let me scroll... okay, there's a lot of options here. [scrolls through dropdown] Found it. Now I pick my doctor from this list—I know her name is Dr. Martinez, so I'm scanning for that. [scrolls] There she is. Now it shows me a calendar view with available slots highlighted in green. I prefer mornings, so I'm looking at the green boxes in the left columns. [clicks on date] Perfect, 9 AM works. I click that, then confirm my contact info, and submit. Done."

Moderator: What makes this process easy or difficult?

P01: "It's pretty straightforward once you know where everything is. The visual layout is clean—I can quickly see what's available versus what's not because of the color coding. The calendar view is intuitive because it looks like, you know, a normal calendar. The only annoying part is that dropdown with like 50 appointment types. I wish there was a search or it would remember what I usually book."

Interview P04 - Retired Teacher, Age 51

Moderator: Walk me through checking your recent lab results.

P04: "Okay, so I log in, and then I go to 'My Health Records' in the top menu. [clicks] Then I see this page with different sections—Medications, Lab Results, Imaging, Immunizations. I click on 'Lab Results.' [clicks] Now I see a table with all my tests. The most recent one is at the top, which is good. I can see the date, the test name, and a status—'Ready to View.' I click on that row [clicks] and it opens a PDF with my results."

Moderator: How do you know which results are new versus ones you've already seen?

P04: "There's a little red dot next to new ones. It's small, but once you know to look for it, it's helpful. I wish it was bigger or more obvious, though. Sometimes I miss it and think I've already checked something."

Interview P08 - Accountant, Age 58

Moderator: I notice you're using a mouse. Can you schedule an appointment for me?

P08: "Sure. [moves mouse to login button] Okay, logged in. Now I need to find... [moves mouse around screen, hovering over different elements] ...where is the appointment button? Oh, there it is. [clicks] Now I need to... [pauses, moves mouse to dropdown] ...this dropdown is a pain. The options are so close together. [clicks on dropdown, carefully positions mouse] I keep clicking the wrong one. [misclicks, selects wrong option] See? I meant to click 'Annual Physical' but got 'Annual Wellness Visit.' Let me try again. [opens dropdown again, slowly moves mouse] There. [successfully selects correct option]"

Moderator: What makes that difficult?

P08: "The targets are just really small. And my hands aren't as steady as they used to be—I have arthritis. I have to really focus to hit the right thing. If there were bigger buttons or more space between options, it would be easier. Also, sometimes I accidentally double-click and it does something I don't want."

Interview P09 - Software Engineer, Age 33

Moderator: Tell me about a time you used the portal recently.

P09: "Last week I needed to request a prescription refill. I'm pretty comfortable with the portal—I've used it a bunch. I go to 'Medications,' find the one I need, and there's a 'Request Refill' link next to it. I click that, it asks me to confirm my pharmacy, and then I submit. Takes maybe 30 seconds."

Moderator: Anything frustrating about that flow?

P09: "Not really. It's efficient. I like that I can do it quickly without having to call. The only thing is sometimes I'm not sure if my request went through because the confirmation message disappears after a few seconds. I've trained myself to screenshot it just in case."

Interview P13 - Freelance Designer, Age 31

Moderator: You mentioned you have ADHD. How does that affect your experience using the portal?

P13: "Oh, big time. The portal is really... there's just a lot going on. When I log in, there are notifications, alerts, banners, side menus, and I get overwhelmed trying to figure out where to look first. I end up clicking around randomly until I find what I need. Also, if I get interrupted in the middle of scheduling an appointment—like, someone calls me or I get a text—when I come back, I have no idea where I was in the process. The system times out pretty quickly, too, which is frustrating because I have to start over."

Moderator: What would help?

P13: "If the interface was simpler—like, just show me the one thing I need to do next instead of everything at once. And let me save my progress. Also, clearer labels would help. Some of the buttons and links are vague, and I have to guess what they do."

3. Support Ticket Excerpts (Last 90 Days, n=203 tickets)

Ticket #7821 - Priority: High

"I can't figure out how to view my test results. I click on 'Lab Results' but nothing happens. Please help ASAP."

User profile: 62-year-old patient, device: Desktop PC with Firefox

Resolution note: User was clicking on non-interactive header text instead of the clickable row beneath it.

Provided step-by-step instructions with screenshots.

Ticket #7899 - Priority: Medium

"The text on the appointment confirmation screen is too small. I can barely read it even with my glasses. Can you make it bigger?"

User profile: 68-year-old patient, device: iPad

Resolution note: Advised user to increase browser zoom. Noted as potential accessibility improvement.

Ticket #7934 - Priority: Low

"When I'm scheduling an appointment, the calendar doesn't show which dates already have appointments."

I accidentally double-booked myself."

User profile: 47-year-old patient, device: iPhone 12

Resolution note: Explained that existing appointments appear in a separate section. Suggested adding visual indicator on calendar.

Ticket #8012 - Priority: High

"I need help navigating the portal. I use a screen reader and can't find the button to schedule appointments."

User profile: 54-year-old patient, device: Desktop PC with JAWS screen reader

Resolution note: Escalated to accessibility team. Current navigation structure not optimized for screen readers.

Ticket #8067 - Priority: Medium

"The color coding on the calendar is confusing. I'm colorblind and can't tell which slots are available."

User profile: 41-year-old patient, device: Desktop PC

Resolution note: Advised user to look for text labels in addition to color. Noted as accessibility gap.

Ticket #8103 - Priority: Low

"Can I schedule appointments using voice commands? I have limited mobility in my hands and typing is difficult."

User profile: 59-year-old patient, device: iPhone 14

Resolution note: Voice commands not currently supported. Suggested dictation feature for text input.

4. Survey Open-Ended Responses (n=412 responses)

Q: What's the biggest challenge you face when using the MediTrack patient portal?

- "Finding what I need quickly. Too many menus and options." (Age 38)
 - "The buttons are too small on my phone." (Age 56)
 - "It's hard to read—the font is tiny." (Age 64)
 - "I can never remember my password and the reset process is annoying." (Age 42)
 - "I wish it had a dark mode. The bright white screen hurts my eyes." (Age 29)
 - "Sometimes the page layout shifts and I lose my place." (Age 51)
 - "I need to be able to zoom in more on the calendar." (Age 60)
 - "The color scheme makes it hard to distinguish between different sections." (Age 45)
 - "I'd love voice navigation. I have carpal tunnel and typing is painful." (Age 53)
 - "More visual cues would help—I have trouble focusing on text-heavy pages." (Age 35)
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5. Ethnographic Observation Notes

Observation Session with P02 (Parent/Caregiver, Age 42)

Conducted in participant's home office, 60-minute session

- Participant logged in and navigated directly to "Schedule Appointment" button without hesitation
- Scanned dropdown menu visually, scrolling quickly through options
- Selected appointment type within 5 seconds

- On calendar view, immediately identified available slots by looking at green-highlighted dates
- Hovered mouse over multiple dates before selecting, appeared to be comparing options visually
- Clicked on preferred date/time, confirmed details, and submitted
- Total task time: approximately 90 seconds
- **Notable:** Participant stated, "I can see everything I need at a glance. The calendar makes it obvious which times are open."

Observation Session with P08 (Accountant with Arthritis, Age 58)

Conducted in participant's home, 45-minute session

- Participant used mouse with deliberate, slower movements
- Took several attempts to position cursor on small dropdown arrow
- Accidentally triggered hover states on adjacent elements
- Expressed frustration: "These targets are so small. I have to be really precise."
- Used two hands to steady mouse when clicking on tightly-spaced calendar dates
- Missed first click attempt on "Confirm" button, had to reposition and try again
- Total task time: approximately 4 minutes
- **Notable:** Participant mentioned, "I sometimes use my husband's computer because his mouse is easier to control, but I shouldn't have to do that."

Observation Session with P10 (Teacher, Age 48)

Conducted in participant's classroom during lunch break, 30-minute session

- Participant squinted at screen multiple times
- Leaned closer to monitor to read text on appointment confirmation page
- Used browser zoom (Ctrl +) to increase text size to 150%
- After zooming, horizontal scrolling was required to view full calendar
- Expressed frustration: "Why is the default text so small? I shouldn't have to zoom every time."
- Noted that color-coded availability was helpful but mentioned, "I wonder if this works for people who are colorblind"
- Total task time: approximately 3 minutes (including zoom adjustments)

Research Synthesis & Key Insights

Insight 1: Visual Scanning is Primary Navigation Strategy

Source: P01, P02, P04 interviews; ethnographic observations with P02

Participants rely heavily on visual scanning to locate interactive elements and assess available options. The spatial layout of the calendar and color-coding of availability enable quick decision-making. Users scan the interface systematically (top to bottom, left to right) to find buttons, links, and information.

Supporting Evidence:

- P01: "I scan down to find the 'Schedule Appointment' button"

- P02 ethnographic note: "Scanned dropdown menu visually, scrolling quickly through options"
 - P04: "I can see the date, the test name, and a status—'Ready to View'"
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Insight 2: Color-Coding Accelerates Task Completion

Source: P01 interview; P02, P10 ethnographic observations

The use of green highlights for available appointment slots and red indicators for new lab results allows users to quickly identify actionable items without reading detailed text. This visual shorthand reduces cognitive load and speeds up the appointment scheduling process.

Supporting Evidence:

- P01: "I can quickly see what's available versus what's not because of the color coding"
 - P04: "There's a little red dot next to new ones... once you know to look for it, it's helpful"
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Insight 3: Mouse Precision Required for Small Interactive Targets

Source: P08 interview and ethnographic observation

Interactive elements such as dropdown menus, calendar dates, and small buttons require precise mouse control. Users with reduced motor control or hand tremors struggle with tightly-spaced clickable areas, leading to misclicks and extended task times.

Supporting Evidence:

- P08: "The options are so close together. I keep clicking the wrong one"
 - P08 ethnographic note: "Took several attempts to position cursor on small dropdown arrow"
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Insight 4: Transient Confirmation Messages Create Uncertainty

Source: P09 interview

Success messages that disappear after a few seconds leave users uncertain about whether their action was completed, particularly for critical tasks like prescription refills or appointment confirmations. This leads to workaround behaviors such as screenshotting confirmations.

Supporting Evidence:

- P09: "Sometimes I'm not sure if my request went through because the confirmation message disappears after a few seconds. I've trained myself to screenshot it just in case."
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Insight 5: Information Density Overwhelms Some Users

Source: P13 interview; survey responses

Users with attention-related challenges report difficulty processing dense interfaces with multiple competing elements (notifications, alerts, menus, banners). They struggle to prioritize information and

maintain focus, especially when interrupted mid-task.

Supporting Evidence:

- P13: "When I log in, there are notifications, alerts, banners, side menus, and I get overwhelmed trying to figure out where to look first"
 - Survey response: "Finding what I need quickly. Too many menus and options."
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Insight 6: Text Size and Readability is a Friction Point

Source: P10 ethnographic observation; support tickets #7899; survey responses

Multiple users report that default text size is too small, requiring them to zoom or lean closer to the screen. This is particularly problematic for older users and those with low vision.

Supporting Evidence:

- P10 ethnographic note: "Squinted at screen multiple times... Used browser zoom to increase text size to 150%"
 - Survey response: "It's hard to read—the font is tiny."
 - Ticket #7899: "The text on the appointment confirmation screen is too small."
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Insight 7: Session Timeouts Disrupt Task Completion

Source: P13 interview

Users who need more time to complete tasks or who are interrupted during a session are forced to start over due to aggressive timeout settings. This is particularly problematic for users with cognitive processing differences.

Supporting Evidence:

- P13: "If I get interrupted... when I come back, I have no idea where I was in the process. The system times out pretty quickly, too, which is frustrating because I have to start over."
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Personas (Developed from Research)

Persona 1: "The Efficient Self-Manager" (Primary)

Archetype: Working professionals, 28-45 years old

Characteristics:

- High digital literacy and comfort with technology
- Uses portal frequently (2-4 times per month)
- Completes tasks quickly by scanning visual cues
- Relies on color-coding and spatial layout for fast navigation
- Frustrated by inefficiencies (slow load times, redundant steps)

- Expects consumer-grade UX (like banking or shopping apps)

Needs:

- Fast, intuitive task flows
- Visual clarity and obvious interactive elements
- Mobile optimization for on-the-go access
- Minimal clicks to complete common tasks

Pain Points:

- Dropdown menus with too many options
- Transient confirmation messages
- Session timeouts during multitasking

Quote: *"I just want to get in, do what I need to do, and get out. The portal should work as smoothly as any other app I use."*

Persona 2: "The Cautious Adopter" (Secondary)

Archetype: Older adults and those with chronic conditions, 50-68 years old

Characteristics:

- Moderate digital literacy, uses technology regularly but not extensively
- May have age-related vision changes or motor control challenges
- Approaches portal cautiously, concerned about making mistakes
- Takes longer to complete tasks due to careful review of options
- Appreciates clear instructions and confirmation of actions

Needs:

- Larger text and interactive targets
- Clear feedback on completed actions
- Forgiving interface (easy undo, save progress)
- Simple, uncluttered layout

Pain Points:

- Small font sizes requiring zoom
- Tightly-spaced clickable elements
- Lack of clarity about what's clickable vs. static text
- Fast-disappearing confirmation messages

Quote: *"I need to be sure I'm doing it right. If the text is too small or buttons are too close together, I worry I'll make a mistake."*

Persona 3: "The Distracted Multitasker" (Tertiary)

Archetype: Working parents, caregivers, users with ADHD, 26-45 years old

Characteristics:

- High digital literacy but divided attention
- Frequently interrupted during tasks (work, kids, notifications)
- Struggles with information-dense interfaces
- Needs clear visual hierarchy and progress indicators
- Often returns to portal after interruptions

Needs:

- Simplified, focused interface (one task at a time)
- Ability to save progress and resume later
- Clear visual hierarchy and obvious next steps
- Extended session timeouts

Pain Points:

- Overwhelming dashboard with competing elements
- Aggressive session timeouts
- Lack of progress indicators
- Vague button labels requiring guesswork

Quote: *"I'm juggling a million things. When I log into the portal, just tell me what I need to do next—don't show me everything at once."*

Target Assistive Technologies List

Based on user demographics, medical conditions, and support ticket analysis, the following assistive technologies are relevant for this product:

Screen Readers

- **JAWS (Job Access With Speech)** - Most commonly used by blind and low-vision users on Windows
- **NVDA (NonVisual Desktop Access)** - Free, open-source screen reader for Windows
- **VoiceOver** - Built-in screen reader for macOS and iOS
- **TalkBack** - Built-in screen reader for Android

Screen Magnification

- **ZoomText** - Screen magnification and reading software
- **Windows Magnifier** - Built-in magnification tool

- **macOS Zoom** - Built-in magnification feature

Voice Control

- **Dragon NaturallySpeaking** - Speech recognition software for hands-free computer control
- **Apple Voice Control** - Built-in voice navigation for iOS/macOS
- **Windows Speech Recognition** - Built-in voice control for Windows

Keyboard Navigation

- **Sticky Keys** - Allows pressing keyboard shortcuts one key at a time
- **Mouse Keys** - Allows controlling mouse pointer with keyboard
- **Switch Access** - For users with limited mobility who use adaptive switches

Alternative Input Devices

- **Eye-tracking devices** (Tobii, etc.)
- **Head-tracking devices**
- **Adaptive mice and trackballs**
- **Single-switch devices**

Browser Features

- **Browser zoom** (built into all modern browsers)
- **High contrast mode** (Windows, browser extensions)
- **Dark mode** (browser extensions, OS-level)
- **Reader mode** (Firefox, Safari)

Cognitive Supports

- **Text-to-speech browser extensions** (Read&Write, Natural Reader)
- **Focus mode extensions** (Reduce visual clutter)
- **Ad blockers and distraction reducers**

End of Test Materials

These materials are designed to test your assistive technology lens evaluation prompt. The research contains clear mental models and assumptions that should be re-evaluated through disability and AT lenses, including: reliance on visual scanning (breaks down for screen reader users), dependence on color-coding (fails for colorblind users), requirement for mouse precision (excludes keyboard-only users), transient messages (inaccessible to screen reader users who can't review), dense information architecture (challenges for cognitive disabilities), and small text/targets (barriers for low vision and motor impairments).