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Integrating Apps into Aphasia Therapy

Using Technology to Support
Therapy & Recovery

-Megan Sutton, MS, CCC-SLP

Learning Objectives

As a result of this continuing education activity, participants will be able to:

- Explain what makes an app appropriate to use in aphasia therapy.
- List 5 apps suitable for use in aphasia therapy to treat impairments.
- Discuss how features and built-in apps on the iPad that can help people with aphasia participate in life.

Disclosure

- Tactus Therapy Solutions
 - Owner
 - App Designer
 - Blog & Web Writer
- tactustherapy.com
 - Blog: education, tips, guides
 - Resources: links, downloads
- SLP committed to best tools, fastest recovery, evidence-based practice, and ethics

Mission

- Aphasia is my passion – therapy, intensive program, camp, groups, cruise, education
- People with aphasia do not get enough therapy, they are socially isolated, and they want to get better
- Technology can help – intensity, connection, and quality of life – not just about in-clinic therapy
- SLPs must understand the options to make appropriate recommendations
- It is NO LONGER OKAY to ignore technology – it is part of life and part of therapy and your clients deserve to know
- Thank you for taking this course!

Focus on Apple

- Apple's iOS devices: iPad, iPad mini, iPhone, iPod touch
- Android (Samsung, Google, Kindle)
- Microsoft Surface
- PC, Mac desktops and laptops
- Browser-based
- Advantages: App Selection, Ease of Use
- Disadvantage: Price

Why Use Apps on a Tablet?

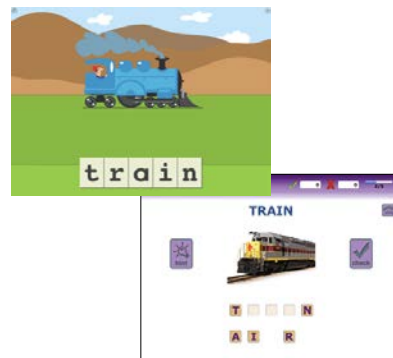
- Convenience & Portability
- Modern
- Socially Acceptable - Cool
- Interactive Feedback
- Easy to Clean
- Multi-functional (audio/video/apps)

Why Use Apps on a Tablet?

- Motivating & Engaging
- Functional for the Client
- Evidence-based
- Builds Confidence & Participation
- Accessible & Affordable
- Neuroplasticity

Why NOT to Use Apps on a Tablet

- Client Not Able – vision/dexterity/hearing
- Client Not Interested (though you can still use)
- Designed for Children
- Difficult to Use
- Crashes or Has Errors
- Violates Privacy



Why NOT to Use Apps on a Tablet

- Does not support the goals
- Not adaptable
- Advertisements or pop-ups
- Distracts user
- Gives you more time to leave patients on their own, check email, post on Facebook....

Evidence Review

“Technological advances are so rapid that evaluations of therapy technologies run the risk of being out of date soon after publication. Therefore, it is important to reflect on **general principles**. It is clear many people with aphasia find technological treatments acceptable and can master a range of tools. Such tools can help to remediate or compensate for language impairments and provide a platform for social interaction.”

-Dr. Jane Marshall, RCSLT Bulletin, June 2015

Evidence for Aphasia Treatment

- FIRST decide on an EBP TREATMENT
 - RET, ORLA, SFA, PCA, LPAA, VNeST, Scripting, MIT, Gesture, PACE, CIAT, etc.
- THEN decide on delivery TOOLS
 - Apps, flashcards, worksheets, partners, volunteers, newspapers, web, books, post-it notes, biofeedback devices, audio recording, pen and paper, video, YouTube, home practice, etc.

Evidence for Aphasia Treatment

- ASHA Evidence Map
 - <http://ncepmaps.org/aphasia/>
- Australian Aphasia Rehab Pathway
 - <http://www.aphasiapathway.com.au>
- ANCDs
 - <http://www.ancds.org/evidence-based-practice-guidelines>

Evidence for Computer-Based Treatment

- Level A Evidence: Computer-based treatment should be considered to improve receptive and expressive language and is efficacious
- Strong evidence (Level 1a) from two studies suggests that computer-based aphasia treatment can improve language skills at the impairment level.
- Limited evidence (Level 2) suggests that improvements from computer-based treatment generalize to functional communication.

<http://ncepmaps.org/aphasia/tx/comp-based/>

App & Computer Articles

- Van De Sandt-Koenderman WME. (2011). Aphasia rehabilitation and the role of computer technology: Can we keep up with the times? *International Journal of Speech-Language Pathology*, 13:1, 21-27.
- **Holland, A. L., Weinberg, P., & Dittelman, J. (2012). How to use apps clinically in the treatment of aphasia. *Seminars in Speech and Language*, 33:3, 223-233.**
- Zheng, C., Lynch, L., & Taylor, N. (2014). Effect of computer therapy in aphasia: a systematic review. *Aphasiology*, (ahead-of-print), 1-34.

App Journal Articles

- Brandenburg, C., Worrall, L., Rodriguez, A. D., & Copland, D. (2013). Mobile computing technology and aphasia: An integrated review of accessibility and potential uses. *Aphasiology*, 27:4, 444-461.
- Des Roches, C. A., Balachandran, I., Ascenso, E. M., Tripodis, Y., & Kiran, S. (2014). Effectiveness of an impairment-based individualized rehabilitation program using an iPad-based software platform. *Frontiers in Human Neuroscience*, 8.
- CATCH Study – in press, Stark, B. Cambridge, UK
- **Entire Issue Devoted to Apps - (2014) *Seminars in Speech and Language*, 35:1**

Finding Apps

- App Store – search or browse
- Aphasia Software Finder
 - <http://www.aphasiasoftwarefinder.org/aphasia-apps>
- Websites & Blogs
 - <http://tactustherapy.com/resources/>
- Facebook Groups
 - Adult Rehab Speech Therapy, Aphasia Therapy, SLPs Talk Apps, Aphasia Recovery Connection

Evaluating Apps

- No magic formula - Use clinical judgment and ask questions
- **What do I want this app to do?**
 - What goals can the app be used for? Does the app add value to therapy? What does the developer's website say about the app?
- **Is it easy to use?**
 - Is it obvious what to do when you open the app? Are there instructions in the app? Will it require much training?
- **Is it suitable for me/my clients?**
 - Is the information and language accurate? Is the construct of the app valid and based on evidence? Can it be used independently or only with help? Are there settings to adapt it to various levels? What kind of feedback is given in the app, and is it useful? Is it visibly designed for children? Consider graphics, sounds, content. Can any of the childish elements be customized or turned off? Does it use errorless or errorful learning? Is the size of text/images suitable for the vision of the user? Does the sound have appropriate volume and pace for the user? What types of touch gestures are required?
- **App basics**
 - Is there a free or Lite version for me to try? Does the app crash or lose data? Does it require Wi-Fi to work? Are there privacy concerns with this app? (names, photos, sounds, data) How does the app collect and share data? Can I turn it off? Are there ads? Do the ads disappear when used in Airplane mode? Are there invasive in-app purchases or pop-up boxes?
- **What do other people think?**
 - Are the App Store reviews generally positive or negative? What negatives do people point out? Do they matter to you? Are there other online reviews or recommendations?
- These questions can be downloaded as a PDF from tactustherapy.com/downloads/

And now what you've all been waiting for...

SHOW ME THE APPS!!

Apps for Language Stimulation

- Stimuli for Skilled Therapy
- Off-label uses for apps designed for entertainment
- Add value by adding strategies, writing tasks, etc.
- Can be used at home with partner training

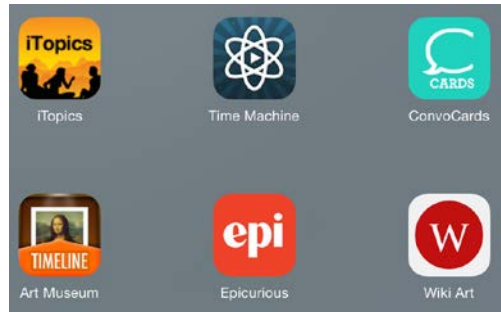
Conversation Therapy

- 300 pictures with 10 questions each
- Describe, Remember, Brainstorm, Infer, Evaluate – lots of levels & topics for adults
- Many languages, good for groups, addresses safety & problem solving



Conversation Starters

- Conversation Cards
- Video Time Machine
- WikiArt – Norman Rockwell
- Epicurious or other recipe apps



What to Do with These Apps

- Find personal interests & motivations
- Practice writing, drawing, & gestures
- Train caregivers on supported conversation
- Response Elaboration Treatment (RET)
- Reminisce, share stories, & share expertise
- Reveal competence, experience, & opinions

“Virtual Reality”

- My PlayHome
- More Grillin’ & others by Maverick



What to Do with These Apps

- Following directions
- Giving directions
- Target functional vocabulary
- Create a sentence describing what happened
- 2 iPads or a screenshot – barrier game

Sanapsis

- Comprehensive aphasia therapy stimuli
- No scoring or feedback
- SLP from Finland
- Good instructions & ideas for new clinicians or those who rarely treat aphasia
- More natural photos



Apps for Home Practice

- Intensity & repetition for neuroplasticity
- Use alone or with support
- Scoring gives feedback to monitor progress
- Most based on evidence, some have new evidence to support effectiveness, and nearly all are SLP-designed or supported

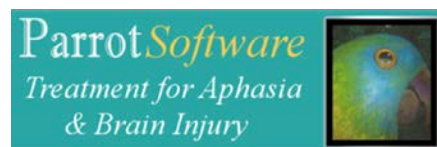
Clinician-Controlled Programs

- Constant Therapy (iOS or Android)
- Lingraphica TalkPath (web or iOS)
- Web-portal to check progress or assign tasks
- Includes cognitive tasks



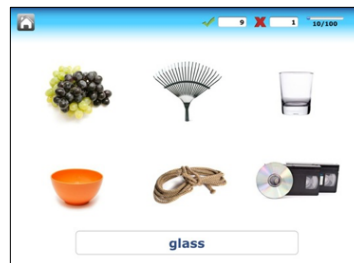
Web-Based Programs

- MoreSpeech by Bungalow
- Parrot Software
- Monthly subscriptions



Tactus Therapy

- Language Therapy 4-in-1 (Naming, Comprehension, Writing, & Reading Therapy)
- CATCH study (in press) shows 20 min a day of *Language Therapy* used independently for 4 weeks made significant changes in standardized language test scores



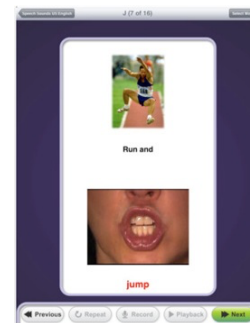
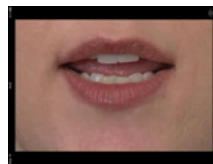
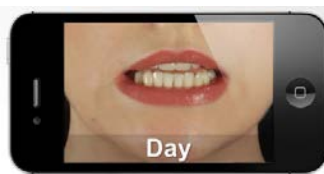
Tactus Therapy

- Question Therapy 2-in-1 (Asking & Answering)
- Category Therapy
- Number Therapy – new app
- Free Lite versions to try, no Wi-Fi required, no subscription
- Tactus Aphasia Therapy Toolkit app bundle
- Very Flexible – lots of settings, interactive audio/text, expressive/receptive tasks



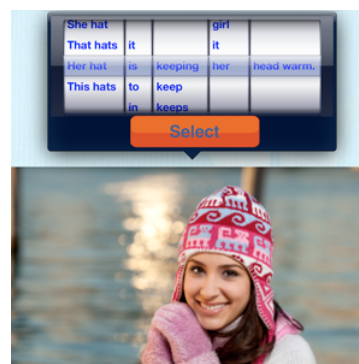
Video-Assisted Speech Therapy

- Videos of the mouth moving for APRAXIA
- VAST Songs, Keywords from SpeakinMotion
- SmallTalk apps from Lingraphica
- Speech Sounds on Cue



Other Home Practice Apps

- Keyword Understanding (comprehension)
- SentenceBuilder Teen (syntax)



More Home Practice Apps

- Lexico Cognition (comprehension)
- Talk Around It series (naming)
- Aphasia apps from Virtual Speech Center & Smarty Ears



Word Game Apps

- Semantic & phonological stimulation
- Fun & motivating
- Red Herring
- Apps by Jay Bacal
- Word Shaker
- 7 Little Words



Apps for Social Interaction

- Facebook
 - Friends and family
 - Aphasia Recovery Connection for support
- Instagram
 - Minimal language requirements, share experiences while recording events
- Video Calls – Skype, Oovoo, Facetime
- Social Games – Words with Friends

Other Apps

- Self-Monitoring
 - Track'n'Share for tracking behavior or health
 - Day One journal for daily reflections & writing
- Mindfulness/Stress Reduction
 - Buddhify for meditations
 - Breathing Zone for deep breathing
- Advocacy
 - YouTube videos can help spread the word

AAC Apps

- Most AAC apps are NOT designed for aphasia
- Garrett & Lasker AAC assessment
<http://cehs.unl.edu/aac/aphasia-assessment-materials/>
- Think more “pre-stored messages” than single words organized by category or part of speech
- Goals of telling stories, supporting natural speech, gesture, and writing
- A book may be better than an app, but do a complete assessment to consider all needs and abilities & start augmentative communication early in therapy

AAC Apps

- Visual Scene Display
 - SceneSpeak, Chattable, Compass, TouchChat
- Talking Photo Albums
 - Pictello, Little Story Creator, Talk’n Photos
- Text-based
 - SpeakIt!, ClaroCom, Predictable, HandySpeech
- Topic Board
 - AlphaTopics for first-letter and topic support

Augmentative Tools

- Whiteboard & Notepad apps
 - Bamboo Paper (iPad) - notebook
 - Whiteboard Lite
- Message banks
 - Copy and paste into email or text messages
 - Store in Notes or use WordBoard keyboard
- Third-Party Keyboards
 - Emojis ☺, Squiggly, WordBoard, LocateMe, MyScript, ABC Keyboard (see blog post on Tactus site for details)

Native Apps

- Great for supporting communication
 - Maps
 - Photos & Camera (stills & videos)
 - Reminders
 - Calendar
 - Contacts
 - Safari
 - Weather

Accessibility Features

- Speak Selection
 - Turn on in Settings – General – Accessibility
 - Select text, choose “Speak”
- Dictation
 - Turn on in Keyboards, requires Wi-Fi or 3G
 - Types what you say when you touch the microphone icon on the keyboard in any app
 - Useful for biofeedback on speech intelligibility
- Word Prediction
 - Now built-in on the keyboard

Allows people with aphasia to read and write to connect to books, the news, Facebook, email, & SMS if speaking & comprehension are stronger

Setting Clients Up For Success

- Teach, observe, teach again
- Do not assume anything
- Include all steps in using the device
 - Charge, turn on, find app, open, use, close
 - Buying apps, changing settings, opening files
- Train family and friends to support use
- Observe family supporting use
- Encourage independence as early as possible

Setting Clients Up For Success

- Homework
 - Give varied routines with instructions, like a personal trainer
- Different instructions for independent use vs. supported use for more verbalization
- Include how to do MORE than just the obvious exercises
 - Copy the word on paper, Write a sentence using the word, Read the sentence aloud, Repeat 5 times
 - Turn Auto-Advance off, change word/syllable length, change response mode, add personal targets

Home Programs

- How many apps at once?
- How long to use each one?
- When to adjust the difficulty?
- Can the client self-monitor accurately?
- Adapt to client interests, motivation, & abilities

Key Points

- Use apps to support evidence-based therapy
- TEACH apps to use at home for IMPAIRMENTS and PARTICIPATION to increase intensity and decrease isolation and boredom
- Think “outside the app” for how to use an app not intended for speech therapy, and also for how to get MORE out of a therapy app

Further Resources

- Getting Started with Apps in Speech Therapy
 - <http://tactustherapy.com/getting-started/>
- Making Cognitive Connections
 - Book or E-Book for learning to use iOS8
 - <http://id4theweb.com/mcc-books/>
- Aphasia Recovery Connection
 - <http://www.aphasiarecoveryconnection.org>

Questions?

- Please share what works for you so we can all use and share with others.
- megan@tactustherapy.com
- THANK YOU!!