How to Basics of SGD Set up & Operation

Annette Stone, MA, CCC-SLP
Megan Farrell, MS, CCC-SLP
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INTRODUCTION
WHO WE ARE

Annette Stone, MA, CCC-SLP: Senior Clinical Speech Pathologist in the Augmentative Communication Aids and Systems Clinic (CASC) at the Waisman Center in Madison, Wisconsin. She has 26 years of experience as a licensed speech-language pathologist, and currently specializes in augmentative and alternative communication (AAC). Annette’s undergraduate major was in Spanish, which she currently uses today serving individuals who are bilingual and are in need of AAC. Annette has also served as Practicum Supervisor and Clinical Fellowship Year Supervisor over the years.

Megan Farrell, MS, CCC-SLP: Independent AAC Consultant & Speech Pathologist based in Iowa. In her first decade of practice, Megan served as SLP and AT Specialist in school and clinic settings in Illinois, Michigan and Iowa. In 2008, Megan joined Talk To Me Technologies, serving as a manufacturer representative and providing consultative services to SLPs, school and clinic teams across the Midwest. In May 2016, Megan retired from TTMT as their VP of Business Development & Sales. Today, Megan serves as the President of the Iowa Speech-Language-Hearing Association and serves as a volunteer SLP for the Iowa Chapter ALS-Association’s AAC Committee.

Disclosures:
All information presented represents our own opinions and views based on clinical practice and consultation. These opinions and view points are not representative of the views and opinions of present or previous employers. The presenters have no financial relationships with the products, manufacturers or resources featured in this training.
Shauna Peterson, MS, CCC-SLP:
Volunteer SLP, ALS-A Iowa Chapter, West Desmoines, IA. Shauna Sanderson has been a practicing Speech-Language Pathologist since 1996 and has provided caring and consistent services to thousands of patients over that period of time. Earning her MSc. in Speech Language Pathology from Fort Hays State University. Most recently, Shauna served as the Regional Manager of Therapy Services for Prairie Mountain Health, overseeing the only available Speech, Physical and Occupational Therapy services for a region of almost 200,000 individuals. Shauna has been on the forefront of AAC for her entire career and has been an active participant in ALS associations across the U.S. and Canada.

Jamie Flatness, MA, CCC-SLP:
Lead SLP at VA Central Iowa, DesMoines, IA. She has worked in the Veterans Health Administration for 8 years, completing her CF at the Audie L. Murphy VA hospital after graduating with her Master’s degree from the University of Northern Iowa. In her current position, she serves as lead speech pathologist, working with veterans in outpatient, acute care, telehealth and home based primary care settings. She is a member of the Polytrauma Clinic Support Steam and Spinal Cord Injury/Disease teams at the VA. She also volunteers with the ALS Association, Iowa Chapter.
INTRODUCTION

SPECIAL RECOGNITION & THANK YOU

❖ Krista Strait-Higgins, MSW, LISW: Director of Care Services, ALS Association, Iowa Chapter

❖ Elisa Green, MA, CCC-SLP: Clinical Supervisor, St. Ambrose University, VP of Continuing Education, Iowa Speech-Language-Hearing Association
INTRODUCTION
YOU – SLPs SUPPORTING pALS WITH HIGH TECH SGDs

I’M NOT GOING ANYWHERE!
• **E2510** - Speech-generating device (SGD), synthesized speech, permitting multiple methods of message formulation and multiple methods of device access. (ASHA, 2015)

• **E2599** - Accessory for speech-generating device, not otherwise specified, e.g. eye tracking camera. (ASHA, 2015)

• **Vocabulary (Vocab) file** – grouping of dynamically linked, grid based communication pages of vocabulary words, phrases and generally, an on-screen keyboard for spelling. Similar to a website, vocabulary files typically open to a ‘home page’ with button cells designating the linked pages associated with their feature, e.g., speech bubble graphic opens to a grid/page of communication topics. Terms such as page set, communication file, grid bundle/set are equivalents to the vocab file term.

• **Core words** – Approximately 100-200 of the most commonly spoken words in the English language, accounting for 75-80% of the total words used for daily communication.

• **Rate/Efficiency & Enhancement Features (REEFs)** - facets imbedded in a user’s SGD that speed up communication and cut down on the physical burden of producing messages. Examples include word prediction, core words vocabulary displays, stored phrases and abbreviation expansion. (Amyandpals, 2015)

• **Eye tracking camera** – an accessory device that works by having lights and cameras that are constantly sending and receiving information. The camera picks up light reflections from your pupils and translates the movement of your eyes into mouse cursor movements. (Inclusive Technology, n.d.)

• **Eye gaze** – an alternative way of accessing a computer or communication aid using a mouse that you control with your eyes. (Inclusive Technology, n.d.)

• **Dwell** – staring at a given target for a specified period of time (generally around 1 second) in order to activate a mouse click.

• **Message Banking™** – Digitally recording and storing words, phrases, sentences, personally meaningful sounds and/or stories using your natural voice, inflection and intonation. (Costello, J.M., 2017)
LEARNING OUTCOMES

1. Identify 3 key components of the SGD hardware & communication software design of SGDs presented

2. Understand the setting location for access and speech adjustments on SGDs presented

3. Identify 2 safeguards in reducing user time off of SGD due to device incapacitation

4. Develop a preparation & set-up plan for a successful initial device orientation

5. Identify 3 unique features of the AlphaCore communication software/program
CONTENT WE WON’T COVER

• Low tech/rapid access communication
• Bells & Whistles: Environmental control, Computer & Internet/Web access & distance communication (phone, text, email)
• Other Alternative access methods beyond eye gaze technology – switch scanning, head tracking, keyboard & mouse alternatives
• Consumer technology AAC options – iPads & apps
• AAC Assessment & communication interventions geared towards pALS
LEARNING CURVE
SGD RESOURCES

• **Manufacturer / Representative** – Demonstration, Evaluation & Orientation

  **support**
  • CEU courses
  • Eval Loan Program

• Remote support

• **Online Video Tutorials** – You Tube

• **User Guides** – On Device/On Line
LEARNING CURVE
SGD RESOURCES- ONLINE

Figures 1 & 2: Communicator 5 Calibrations & Tobii Dynavox Training (Tobii Dynavox Training YouTube Channel)
LEARNING CURVE
SGD RESOURCES– REMOTE SUPPORT

Figure 3: Get help with your ttmt360 speech-generating device (Talk to Me Technologies Support)

Get help with your ttmt360 speech-generating device.

877.392.2299 (Option 3)

- ttmt360 FAQ
- Send an email
- Training Materials
- Remote Help (Install Team Viewer Now)
LEARNING CURVE
IDENTIFY YOUR SUPPORTS

- Local & Nat’l
- University

- Local chapter
- ALS-A list serve

- Local Rep
- Tech Support

AAC SLPs

Advocates

ALS-A

SLP

pALS

Mfc/Rep

Other: ALS-A; OT; Nursing
7 Communication Competencies in the ALS Functional Communication Scale

1. Alerting/Emergency
2. Communication Strategies
3. Non-Voiced Communication
4. Speech Generation
5. Communication with those at a Distance
6. Independence with Set-Up and Customization of AAC Systems
7. Prepared for Future Changes
### ALS Functional Communication Scale

<table>
<thead>
<tr>
<th>Communication Ability</th>
<th>Short Term Goals</th>
<th>Baseline</th>
<th>Projected</th>
<th>Achieved Today</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Alerting/Emergency</strong></td>
<td></td>
<td>+/± +</td>
<td>+/± +</td>
<td>+/± +</td>
</tr>
<tr>
<td><strong>2. Communication Strategies</strong></td>
<td></td>
<td>-/± -</td>
<td>-/± -</td>
<td>-/± -</td>
</tr>
<tr>
<td><strong>3. Non-Verbal (Low Tech) Communication</strong></td>
<td></td>
<td>-/± -</td>
<td>-/± -</td>
<td>-/± -</td>
</tr>
<tr>
<td><strong>4. Speech Generation</strong></td>
<td></td>
<td>+/± +</td>
<td>+/± +</td>
<td>+/± +</td>
</tr>
<tr>
<td><strong>5. Communicate with those at a Distance</strong></td>
<td></td>
<td>-/± -</td>
<td>-/± -</td>
<td>-/± -</td>
</tr>
<tr>
<td><strong>6. Independently Set-Up and Customize AAC Systems</strong></td>
<td></td>
<td>-/± -</td>
<td>-/± -</td>
<td>-/± -</td>
</tr>
<tr>
<td><strong>7. Prepared for Future Changes</strong></td>
<td></td>
<td>-/± -</td>
<td>-/± -</td>
<td>-/± -</td>
</tr>
</tbody>
</table>

#### Total Functional Communication Score

<table>
<thead>
<tr>
<th>SeverityModifiers</th>
<th>3/7</th>
<th>5/7</th>
<th>0/7</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH</td>
<td>C</td>
<td>C</td>
<td>C</td>
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**Notes:**
- **ALS:** Amyotrophic Lateral Sclerosis
- **AAC:** Augmentative and Alternative Communication
- **CH:** Chair, **K:** Keyboard, **EN:** Environment

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**Figures 4, 5 & 6:** ALS Functional Communication Scale, 2014 (AmyandpALS ALS Functional Communication Scale)
LEARNING CURVE
TOOLS TO PREPARE & GUIDE

This is Navigating ALS, a comprehensive tool intended to raise awareness about ALS by offering information and guidance related to the many aspects of this disease. It is designed to provide an overview of what to consider when ALS has touched your life, personally or professionally, and to provide answers to questions that may arise. You’ll find articles, infographics, useful links and more among the available resources.

Get started by selecting one of the six sections below or view the index on the next page to find more specific topics.

Symptoms and Symptom Management
ALS shares common symptoms with a wide range of medical conditions, diseases and disorders. If you are experiencing any symptoms or behavior that you feel could be associated with a neurological condition, you should consult with a physician immediately. This section is designed to address the management of symptoms for those living with ALS.

Each of the six categories below provides in-depth detail about a specific set of symptoms, physical changes that you might expect, and ways in which to manage the process. Each person’s disease progresses differently, so there is no predetermined order in which symptoms occur.

- Changes in Muscles
- Difficulty Swallowing
- Difficulty Speaking
- Difficulty Breathing
- Changes in Thinking
- Emotional Lability

Figures 7 & 7.1: Navigating ALS, 2016 (ALS Association IA Chapter Navigating ALS)
Overview
A Note From the Director
Meet Our Team
Protocol of Assessment Considerations
Speech Strategies
Partner Training
Voice Amplification
Letter and Topic Cuing
Massage Banking
Quick Access and Low Tech Tools

Speech Generating Devices

There are many different speech generating devices (SGD) available with new technologies being released regularly. A thorough assessment following a feature matching process must be conducted as communication and physical access needs become evident.

Contact the ALS Augmentative Communication Program
781-216-2209

"The feature matching process focuses on identifying the strengths, skills and needs (current and future) of a person who is a candidate for augmentative communication and matching the features of available (or potentially available) augmentative communication tools, devices and strategies to that person."

- Shane and Costello, 1994
“I’d be lost without this” – Dennis O.
Insert Video of Denny here
DEVICE ORIENTATION ROADMAP
STAIRSTEPS TO UNDERSTANDING

- Hardware
- SGD Set Up
- Vocab File & Features
- Eye Gaze Access
• Safeguards
  • Check that device serial # and tech support #s are listed on back of device AND Write it (include hours)
  • Ensure Battery Life longevity
    • Discuss device charging plan

• Common hardware issues
  • Secure cable connections
  • Proper positioning – device height & distance
  • Interference w/ camera (e.g., hand, bi-pap, dirty glasses, sticky note, other?)

• Windows operating system updates
• Insert VIDEO of Tobii – I15 Hardware Tour here
Tobii-Dynavox I15 Hardware Key Points:

• SGD and eye tracking camera are encased into one system
• I series systems available in 12” and 15” screen Does NOT require table mount
• Offers 3 programmable hardware buttons
• No table mount needed – stands alone
DEVICE ORIENTATION ROAD MAP
TOBII DYNAVOX I15 – SET UP

Hardware

SGD Set Up

Vocab File & Features

Eye Gaze Access
SGD SET UP
POWER ON - SOFTWARE INTEGRATION

Tobii Dynavox I15

- WIN 8 OR 10 Operating System
- Communication Software – Communicator 5
  - w/ Tobii Gaze Interaction
- Text to Speech Page Set: Communicator
INSERT TOBII DYNAVOX I15 SET UP VIDEO HERE
Tobii Dynavox I15 Basic Set Up:

1. Open Quick Menu (3rd hardware button)
2. Select Advanced Settings
   • Select Add or Change User
3. Select NEW USER and name
   • Select Voice
   • Select Input Method (eye gaze?)
4. Choose Communication Level
   • Select Text Communication
   • Communicator Vocab File
5. Select Add or Change User
   • Select your User
   • Set as “Start Up User”
INSERT TOBII DYNAVOX I15 VOCAB FILE & FEATURES
User & File Features

- Read/Speak words and sentences
- Keyboard Options
  - Qwerty, alpha, large keys or split
  - Dwell Free keyboard
- User operational controls
- Rate/efficiency enhancement features
  - Word & phrase prediction
  - Message storage and retrieval
- Message banking
  - Storage – mytobiidyanvox
  - auto import & categorize
  - Relocation of important buttons
  - Edit home page
DEVICE ORIENTATION ROAD MAP
TOBII DYNAVOX I15

Hardware

SGD Set Up

Vocab File & Features

Eye Gaze Access
SGD EYE GAZE ACCESS
TOBII DYNAVOX I15 – GAZE INTERACTION SETTINGS

INSERT TOBII I15 CALLIBRATION AND EYE GAZE SETTINGS VIDEO HERE
Eye Tracking Settings
(Gaze Interaction)

• Tracking status hardware button
• Moveable onscreen pause graphic
• User access to control camera
  • Pause
  • Sleep / wake
  • RE-calibrate
  • Increase / Decrease dwell
• Add errorless learning page
  • Bubble wrap
• Insert VIDEO of Eyespeak Hardware Tour here
TTMT Eyespeak 12 Hardware Key Points:

- The SGD is called the Zuvo 12 the camera is called the Eyespeak eye tracking camera.
- The SGD is available in a 12” and 18” screen.
- Includes removable Bluetooth amplifier.
- Offers a USB hub which powers eye tracking camera and affords 3 more USB ports for other accessories (e.g., keyboard).
DEVICE ORIENTATION ROAD MAP
TTMT EYESPEAK 12

- Hardware
- SGD Set Up
- Vocab File(s) & Features
- Eye Gaze Access
SGD SET UP
POWER ON - SOFTWARE INTEGRATION

**TTMT Eyespeak 12:**

- WIN 10 Operating System
- Communication Software
  - Grid 3
  - w/ Eyespeak Camera
- Text to Speech Page Set:
  - OnWord QWERTY
  - AlphaCore
INSERT EYESPEAK SYSTEM AND VOCAB FILE SET UP VIDEO HERE
TTMT Eyespeak Basic Set Up:

1. Open Menu (tap top of screen)
2. Select User titled “TTMT VOCAB SETS”
   - Under **START UP** choose vocab file
   - OnWord Text Qwerty or Alpha
3. Select Access
   - Select Eye Gaze and adjust settings
4. Select Speech
   - Select Voice & adjust speaking options
5. Select Computer
   - Select ON to launch launch Grid3 w/ Windows start up
   - Select OK
INSERT ONWORD PAGE SET FEATURES & EDITING VIDEO HERE
User & File Features

- Keyboard Options
  - Qwerty or Alpha layouts
- User as Operations Manager via settings
- User as Editor
  - Add / Delete phrases
- Call chime /alert on home page
- Rate/Efficiency enhancement features
  - Word & phrase prediction
  - Message storage & retrieval – chat history
- Edit location & access to important buttons
  - Drag & Drop OR Copy & Paste

Figure 9: OnWord QWERTY PLUS User Guide, 2018 (Talk To Me Technologies Guides & Tutorials)
Welcome to AlphaCore Communicator!

The AlphaCore text-to-speech app helps to speed and facilitate communication for literate people with a wide variety of access needs like those with ALS/MND.

Developed by a speech pathologist, AlphaCore incorporates features proven effective by research and inspired by the day-to-day experiences of patients and caregivers.
Message Banking App

- Easy integration of banked messages into GRID 3 & AlphaCore vocab file
  - Imported message sync with text
- Predefined categories & Phrases
- Create custom messages

Figure 11: Message Banking App screen shot, 2015. Microsoft Store Message Banking App Description
SGD VOCAB FILE & FEATURES
ALPHACORE – CORE WORDS & TRANSITIONAL KEYBOARDS
SGD VOCAB FILE & FEATURES
ALPHACORE & MESSAGE BANKING APP

INSERT ALPHACORE & MESSAGE BANKING APP VIDEO HERE
INSERT EYESPEAK 12 CALLIBRATION AND EYE GAZE SETTINGS VIDEO HERE
EYE TRACKING SETTINGS
(Eye Gaze Input Method)

- User Access to Control Camera
  - Pause / Rest button cell
  - Sleep / wake
  - Re-calibrate
  - Increase / Decrease dwell
- Errorless learning feature
  - Inbuilt into Input Method TEST
WRAP UP

Identify your resources

Develop a SGD orientation road map

Know that technology will continue to change

Know that it is collaborative effort driven by the individual
However difficult life may seem, there is always something you can do and succeed at. It matters that you don’t just give up.

- STEPHEN HAWKING
REFERENCES


REFERENCES


