



WELCOME !

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**Caregivers:
How Durable Medical Equipment and Assistive Technology
Supports Caregiving**

**Guest Speaker:
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The ALS Association

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Assistive Technology to Help Caregivers

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Welcome

- I have no actual or potential conflict of interest in relation to this program/presentation
- I have no financial interest regarding any product I am including in this presentation
- I will share my slides – email me
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Voice Recognition Devices (aka Smart Speakers)

- Amazon Echo, Google Home

Voice Control Operates

- Lights, fans, window air conditioners etc...
- Music
- Read Books
- Calendars, schedules, lists
- Control TV/DVD/Cable
- Locks/doorbell
- Will give you updates on weather, sports, etc...
- Requires WiFi



Smart Speakers with Screens

- Allow you to see the person, room, or event you want to watch
 - Can check in remotely to make sure your loved one is safe, hasn't fallen, etc....
- You can “talk” screen to screen



Environmental Controls

- Ring Doorbell
 - Allows you to see who is at the door
- Smart Locks
 - Remote locking and unlocking
 - Good for allowing access for home health aides, visiting nurses or therapists
 - » No codes, no keys
- Fans, thermostats, lights



Electronic Doorbell

- Allows the user to press a button, alert goes off on a caregiver's cell phone.
 - Caregiver can then see the person



iPhone sold separately.

Calling for Help

- The most crucial assistive technology that can be in the home
 - – ALWAYS ALWAYS have a way to call for attention
 - – What type of call do you need to make?
 - Within the home
 - In the home and also the yard
 - Call out for help (911)
- – What dexterity does the user have?
- – If user can still speak, baby monitors (especially those with video) make great call systems
 - WebCams (aka nanny cams)
- – If user has limb movement, any type of bell...cow, dinner, etc...will attract attention

Call Systems for the home

- Wired or wireless device
- – Wired device has a call bell for the PALS and an alarm which will emit a loud beep until the user releases the bell
- • Med Labs EZ Call Bell and Alarm
- • About \$155.00
- <https://www.medlabsinc.com/products/pa-1.html>



Calling for Help in the Home

- Wireless Pagers
 - Can be as simple as a wireless doorbell from local home improvement center
- – Approximately \$20.00



Adapted Wireless Pagers

- – Can be used up to 40-100 feet away
- – Either chime only or chime and vibrate
- – \$51.95-\$67.95



Calling for help outside the home -- Landline



- Emergency Alert System (monitored)
 - Two-way 24-hour a day, 365-days-a-year emergency response service designed to provide assistance and reassurance
- Monthly service charge and an installation fee
 - Installation around \$80.00
 - Monthly fee around \$50.00
- – User wears a transmitter and there is a fixed communicator unit that is placed in the home
 - Users call for assistance by pressing a small, portable, waterproof button worn around their wrist or as a pendant
 - The communicator unit, which is attached to the subscriber's current phone system, is then activated and automatically dials the service
- • Incoming calls can be answered



Switch Accessible Life Alert Systems

- Can be used if person can't press lanyard or wrist alert
- What is a switch?
 - A piece of equipment that sends a current to the machine to do something
 - Switches come in a variety of shapes, sizes, and can be placed anywhere on the body where there is muscle movement



Cell Phone Life Alert

Average monthly cost \$30,00+
GPS can be an additional feature
added (may be an additional fee)



Phone never needs charging.
Batteries last up to 7-10 years.



How to Choose a Medical Alert System

These wearable devices can help you summon assistance in an emergency

Consumer Reports:

<https://www.consumerreports.org/medical-alert-systems/how-to-choose-a-medical-alert-system>

Non-monitored Emergency Alert Systems

Affordable emergency alert devices that are easy to use

- Connect to your telephone
- Dial "911"
- Call up to 5 telephone numbers of your choice
- Send an emergency pre-recorded
- About \$225.00 or less



Senior HELP Dialer
Medical Alert - No
Monthly Fees
Medical Alert
System- HD700
\$119.77 (Amazon)



Medical Alert
System - No
Monthly Charges
by [Touch N' Talk](http://www.touchntalk.com/)
\$249.99 (Amazon)



<http://www.telemergency300.com/>

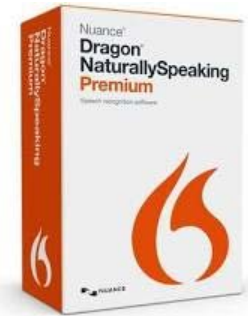
Apple Watch 4+

- Has built in fall detection
- Apple Watch Series 4 or later detects a hard fall while you're wearing your watch, it taps you on the wrist, sounds an alarm, and displays an alert
 - You can choose to contact emergency services or dismiss the alert by pressing the Digital Crown, tapping Close in the upper-left corner, or tapping "I'm OK."
- If your Apple Watch detects that you're moving, it waits for you to respond to the alert and won't automatically call emergency services. If your watch detects that you have been immobile for about a minute, it will make the call automatically.
- After the call ends, your watch sends a message to your emergency contacts with your location letting them know that your watch detected a hard fall and dialed emergency services. Your watch gets your emergency contacts from your [Medical ID](#).



Voice Activation to Phones, Tablets, Computers

- Computer Access
 - Enables a user to have FULL access to a computer
 - Dragon Dictate – Windows and Mac version
 - Lip Surf – Windows and Mac
- Cell Phones
 - Apple
 - Hey Siri
 - Voice Accessibility
 - Android
 - Ok Google
 - Google Voice Access
- Smart Speakers
- Smart Home



Amplification

- Using an amplifier in conjunction with a microphone
 - Reduces fatigue
 - Preserves energy
 - Not covered under medical insurance



Consider for those using Non-Invasive Ventilation!

Especially if they are using Triology

Use transdermal microphone on vocal
cords or Speax device



This is ON the microphone

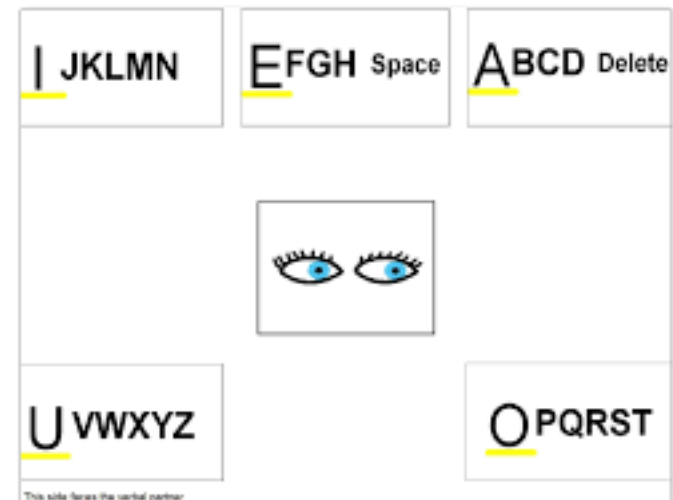
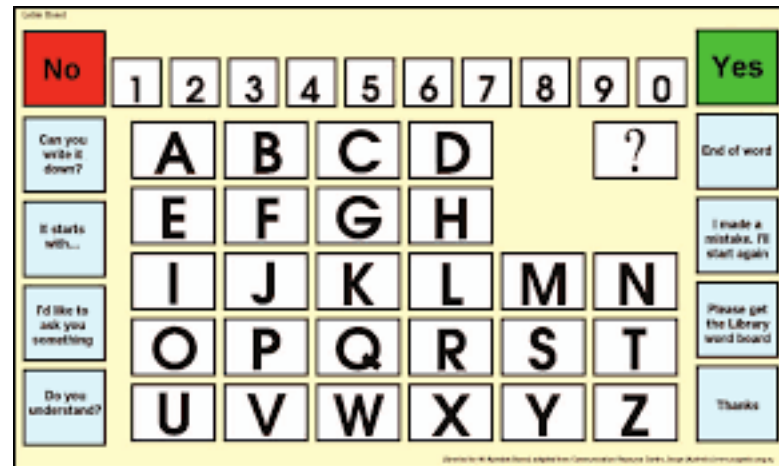


Communication Options

- No technology
 - Non-electric. Does not plug into wall
- Low technology
 - Letter or picture boards
- Mid technology
 - iPads, tablets
- High technology
 - Electronic speech generating devices
 - Eye gaze devices

Rapid Access

- Establish a yes/no and **maybe** system
 - Eye blinks—one blink equals yes, two blinks equals no
 - Look left, right or up
- Letterboards
- Picture boards
- Eye Gaze boards
 - Can be used hands free



Laser Pointers for Communication

- Use of laser pointers
 - Mounting of laser pointers on a hat or head band—letterboard placed on wall and user moves head around board to make selections
 - <http://store.lowtechsolutions.org>



iPads and Android Tablets

- Communication apps for both Apple and Android products will turn any device into a communication system



Mounts



Headmouse

- HeadMouse replaces the standard computer mouse for people who cannot use or have limited use of their hands
- HeadMouse translates natural movements of a user's head into directly proportional mouse pointer movement – move your head and the mouse pointer follows along
- Utilizes on-screen keyboard which is built in to all computers
- User wears a reflector dot on glasses, forehead, hat etc in order to interact with the headmouse camera



GlassOuse



Eyegaze

- Allows user to operate computer via eye movement
- Insurance may entire portion or some portion for these systems
- Can't be ordered in advance—has to be a current medical need



Wheelchairs

Ultralightweight Transport
Chair – 17 pounds



Featherweight
13 pounds



Seat Elevators for Wheelchairs

- Allow Independent Safe Meal Preparation
- •Allow Independent / Less Assisted Transfers
- Aides for Daily Living (ADL's) --shopping
- Independent Home ADL's (Housekeeping, Access)
- Vocational Requirements
- Social Interaction
 - Gets the user to eye height of others
- Not covered under Medicare
 - Considered caregiver convenience
 - Check your DME policy if you have private insurance



Wheelchair controls

- With progressive neurological diseases, wheelchair controls will change throughout time.



ECU Control on Power Wheelchairs

- ECU control on power wheelchairs allows the client to use their joystick, single switch, or head array to access a communication device, computer, or cell phone
- Complex power wheelchairs that have multiple seat functions have basic ECU functions
 - Mouse emulators
 - More advanced could be Bluetooth enabled
 - Enables access to AAC, computer, phones, and tablet
 - Android and iOS based programming for wheelchair electronics
- Check with the client's wheelchair vendor for ECU information (may be included or an upcharge)



Transfers

- Different techniques depending on how much PALS is able to help
 - PALS needs to be able to assist to prevent caregivers from getting hurt



Patient Transfer Lifts

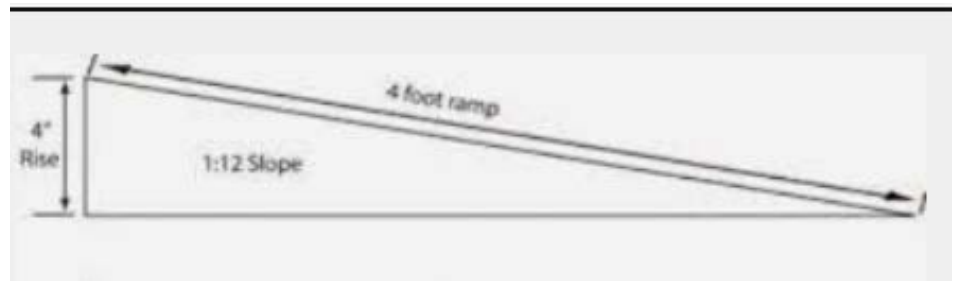


Wood versus Steel/Aluminum ramps

- Wood ramps are permanent
 - Can be more costly than steel/aluminum
 - Need a permit
 - Can reduce value of home
- Steel/Aluminum
 - Temporary
 - Can be easily removed



Ramps

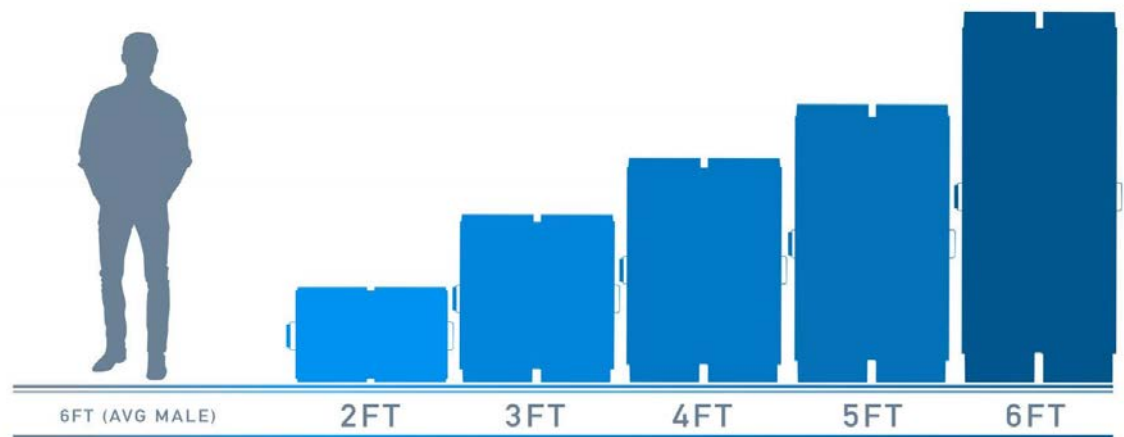


- Is my house rampable?
- For all ramps, whether permanent or temporary, the legal requirement is 1 to 12
 - For every inch of height in grad change, 12 inches of ramp length is required
 - Some areas in the US are allowing 1 to 7
- Ramp length should not exceed 30 feet of landings
- Ramp should not rise more than 30 inches
- Minimum width of a ramp is 36 inches
- Landings at top and bottom need to be as wide as the ramp (36")
- Need level/steady surface for exit of ramps

Suitcase and Roll Up Ramps



• SUITCASE AS SIZE CHART •



Threshold Ramps



Exterior Stair Lifts



Stair Climbers



Hazards of Bathrooms

- Most common location for fall injuries in the home was the bathroom, including when people are hurrying to the bathroom
- A National Institute on Aging statistic states that 80% of falls in the home happen in the bathroom
- Do not do transfers in the bathroom
 - Use rooms with space like living room/bedroom
- Try to avoid the bathroom at night, when alone, or when it is unsafe for person with ALS or their caregiver
 - Use a bedside commode, urinal (female and male) or condom catheter



Bathrooms

- Ideal is to have an open concept bathroom



European Style (aka Wet Bath) Bathroom



Rolling Shower Chair



Toilet Assistance

NO NO NO NO



EZ-ACCESS Tilt Toilet Lift Single Motor
Elongated Seat

Elevated Toilets and Toilevator



Bidets

- Can be added to existing toilets
- Not covered under insurance
- Approximately \$400+
- HUGE quality of life device

Bidets
can't be
used
with
>>>>



The Bidet: How It Changed My Life with ALS by David Rayl, a person with ALS

- *The biggest surprise to me was the benefits of adding a bidet during the master bathroom remodeling.*
- *My biggest focus for the master bathroom remodeling was to replace the existing tub and stand-up shower with one larger curbless shower and no tub. The everyday task that I dreaded the most in my old house was using the bathroom. This would be the worst part of my already hard ALS day. In my old house, using the toilet would require all my available energy and I would be exhausted for the next few hours. After my family and I moved into the new house, my most dreaded part of my day became very pleasurable. This was because of the new bidet feature added to the toilet. I had very low expectations and no clue on what to expect before using the bidet. I am surprised and amazed on how much cleaner I feel and how much less effort is required to use the toilet. The specific bidet features that I found to be most useful are adjustable water and drying temperatures. The cost of a very good bidet may be cost prohibitive for some (ours over \$500), but I feel that all the benefits it provides are worth the investment. I would recommend highly that every household has at least one bidet.*

Retractable Grab Bars



<https://www.wingits.com/>

Stander Pole



Starts at \$180.00

Tub Transfer Bench/System



Portable Showers



Fawssit



Shower Bay

Stair Glides—Inside

- Are only SAFE when someone has trunk support



Curved stairs require a custom stairglide -- start price of \$8,000



Straight shot stairs start at \$3,000

Interior Stair Lifts/Elevators



Feeding Assistance



Drinking Assistance

- Lack of hydration
 - Increased secretions
 - Constipation
 - Hospitalization
 - Inglis \$65.00
 - Extra long straws



Hospital Beds



Commercial Adjustable Beds



Transportation

- Can the individual still transfer into a car?
 - If using a car, the PALS needs to use a companion or manual wheelchair that can be folded and put into trunk
 - Power wheelchairs can NOT break down and are not transportable in a car
 - Need specialized van



Handicapped Accessible Vans/Paratransit

- Can be used to transport a person in a wheelchair without them getting out of the chair
 - Can be rented, purchased, or leased
 - Approximate price (new) \$45,000



Paratransit – Available if you have Public Transit in your area

- Paratransit is a shared ride public service intended to serve as a “safety net” for individuals who, because of their disabilities, are unable to ride the ADA compliant RTS fixed route bus for some or all their travel
- Comparable to our fixed route bus service and required by the ADA
- For people whose disabilities prevent them from using fixed route
- Available on the same basis as that provided to people using fixed route systems
- Complements the fixed route system
- Curb-to-curb by default (*it is never door-through-door*)
- Costs the same as bus fare

Emergency Evacuation Aide



Emergency Evacuation Chair



Go Bag



Content suggestions

- Copy of your Medical Insurance Cards
- Medical Card with ALS specific information
- Written list of phone numbers: doctors, pharmacy, and family contacts
- Written list of medications
- 7 days worth of medication
- Written directions on how to communicate with the person with ALS
- Letterboard
- Enteral Nutrition (for those with feeding tubes)
- Advance Directive
- Style/Serial number of medical devices
- Water
- Hand Sanitizer
- Wipes
- Sanitary Products
- Adult Diapers/Urinals
- Phone Charger / Ear Buds
- Socks
- Energy Bars
- Pen and paper
- Cash

Resources

- National ALS Association
 - www.als.org
- Alisa Brownlee, ATP, CLIPP, CAPS, WSP
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