Considerations When Choosing a Mounting Device

BlueSky Designs, Inc.

Mounting systems help to optimize access to technology and more. With the wide variety of mounting options available, it is important to be familiar with feature considerations to determine the best mounting recommendation for the client's functional independence, well-being and quality of life.

Initial Considerations

What do they need to access?
What do they want to do? What else do they want to do? Think outside the box.
What mount and position do they presently use? What works – what doesn't?
Will they be using multiple devices? How easy is it to switch out devices?
Where does it need to be mounted? Wheelchair and/or table or other?

Usage

Emerging technologies: tablets, laptops, mobile phones, MP3's
Communication Devices: Dynavox, Tobii, PRC
Unique needs: eating, vocational, social, hobbies, book rest

Considerations

Does it need to be repositioned for different uses and at different times (i.e. when driving, communicating, eating)?
Does the device require a heavy or a light duty mount? Consider device weight and access force.
How heavy and secure does it need to be?

Physical Access Considerations

How do they access their device: direct select with body part, eye gaze, head switch, single/dual switch?
Or do they use a combination of these?
What is their most reliable access method?
Where do they need it for optimal access?
Do they need to access device when in and out of wheelchair?
Evaluate client's physical strength, spasticity and ROM.
Do they have a reliable motor movement for access?
Can they move it independently? If not, who will move it?
If moved out of primary position is device still accessible? (i.e. when driving, eating, watching TV)
Does access method change when moved to bed, wheelchair, table or floor?
Do they need more than one operational and locking position?
How do they get it there?
Consider ease of use for the user and the care givers. If device needs to be moved, can it get into consistent locking positions?
Does it have the ability to adapt and change as individual's ability changes (ALS, MD)?

Visual Access Considerations

Where is it best positioned for visual access of device?
Do they need it at a specific angle?
Does device obstruct vision when driving, communicating, watching TV or in school?
For outdoor use the mount should have the ability to change tilt due to glare on device from light.

Eye Gaze Considerations

Custom lock positions and consistent placement of device are essential for eye gaze users. As positioning changes throughout the day, so must the mount.
Mount must have the ability to adjust height, distance and tilt for optimal device placement.
Consider: Will they need to rotate device for head tilt? Will it need to face downward?

Device Attachment Considerations

Will they use more than one device?
Will there be a need to use devices in combination and/or separately?
Can they be easily swapped out?

Safety Considerations

Decrease tipping hazard by keeping device closer to the wheelbase of chair when moved out of the way.
Avoid obstructing vision when driving.
Static mounts may impede transfers or access.
Need the ability to move quickly out of the way in case of emergency (aspiration, seizure), without removing the device.
How secure is the device from theft or damage?

Health Benefits of Optimal Device Placement

- Proper positioning improved ergonomics; less pain
- Better head control due to device positioning (height and tilt)
- Less fatigue with ability to recline
- Ability to exercise without restrictions
- Access to a moveable mount can increase range of motion
- Proper positioning and use of device can improve fine motor dexterity
- Improved access to use a sink and toilet (hygiene)
- Improved ability to eat (up to a table or positioning of tray)

Evaluation and Assessments

Systems that are flexible and customizable with ability to move and lock easily are preferred. For the therapist, a moveable mount can be quickly attached to a variety of surfaces, easily moved, and provide a stable set up for evaluation. It is best to pull together a team to participate in the evaluation process. The team should include: the individual, family member, therapist and vendors of related technology – ie speech devices, wheelchairs, mount manufacturers.

Warranty and Manufacturer Support

When choosing a system, consider how the product will be supported. Customer service and warranty policy should be evaluated.

Funding

When investing in a system consider if the mounting system will grow with the individual as they grow. Can it be transferred to a new wheelchair if they grow out of current chair? Look for mounts that can be adapted to accommodate changes in the individual's physical abilities (ALS, MD). This may eliminate the need to invest in a new system later on.

Rationale and justification for choosing a mount includes features, benefits and medical necessity. Arguments to be made for medical necessity might include the following features and functions: Safety, improved visual access and customization.

Options for funding:

- Some communication device vendors and wheel chair companies bundle a mounting system with a new AAC device or wheel chair in their funding requests.
- Private insurance, Medicare and Medicaid, and the VA**.**
- Rehabilitation center, seating clinic, durable medical equipment suppliers and wheelchair vendors. Vocational Rehabilitation programs and employers may fund assistive devices to enable someone to carry out essential job functions or complete coursework.
- Schools have provided mounting systems for students to provide improved and more independent access to educational activities, communication, computer access, reading, writing and art activities.
- Waivered Services and county programs may have funds available for assistive devices.
- Programs such as the MDA, ALS and MS Societies.
- Private pay, trust funds or fund raising (Make-A-Wish, GoFundMe, Kickstarter).

Functional and Psychosocial Research Study

"Outcomes Research Study finds Mount provides Functional and Psychosocial Benefits"
Mount'n Mover Mounting System , Study by Ithaca College OT Department 2013

- Increased: Happiness, Usefulness, Productivity, Competence, Quality of Life, Ability to participate, Ability to adapt to activities of daily living, Ability to take advantage of opportunities
- Reduced: Frustration, Embarrassment, Confusion

The Psychosocial Impact of Assistive Devices (PIADS), a self-report questionnaire with reported reliability and validity, measured changes in functional independence and psychosocial impact of the intervention. The Canadian Occupational Performance Measure (COPM), a standardized outcome measure, was used for interviews. Ten people responded to the survey and 4 participated in the interviews. Results indicated that half of the participants used the device for mounting speech-generating devices among other things. **Results from the PIADS indicate that overall competence, adaptability and self-esteem have increased as a result of using the device.**

Additional Resources:

1. Determine optimal placement, for all environments, switch interfacing, EADL's: Michelle Lange http://www.atilange.com/
2. Head rests, switches, supports: Adaptive Switch Laboratories, BodyPoint, Stealth, AbleNet
3. Mounting Manufacturers: BlueSky Designs – Mount'n Mover, Daessy, Rehadapt, CJT, AbleNet, Loc-Line, BeyondAdaptive