The Transdisciplinary Team: Bridging the Gap between Consumer and Products in Rehabilitation Medicine

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Occupational Therapist

- Assisting people who are unable to function independently or are not functioning as independently as possible in the areas of daily living, work, play, and leisure.

- Independence is increased through functional activities that are meaningful to the individual.

- Occupational Therapists treat the whole person!
## The Transdisciplinary Team

<table>
<thead>
<tr>
<th>Role</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer</td>
<td>Computer Engineer</td>
</tr>
<tr>
<td>Family/Tutor/Caregiver</td>
<td>Occupational Therapist</td>
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<tr>
<td>Rehabilitation Counselor</td>
<td>Speech-Language Pathologist</td>
</tr>
<tr>
<td>Director</td>
<td>Assistive tech Specialist for Blind/Low Vision</td>
</tr>
<tr>
<td>Orientation Coordinator</td>
<td>Medical Consultants/Nurse Practitioners</td>
</tr>
<tr>
<td>Service Coordinator</td>
<td>Administrative Assistant/Secretaries</td>
</tr>
<tr>
<td>Fabrication/Adaptation Technician</td>
<td>Teachers/Professors/Special Educators</td>
</tr>
<tr>
<td>Training Coordinator</td>
<td>AT Equipment Venders/Employers</td>
</tr>
<tr>
<td>Physical Therapists</td>
<td>Audiologists/hearing device specialist</td>
</tr>
<tr>
<td>Prosthetists</td>
<td>Social Workers</td>
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</tbody>
</table>
Transdisciplinary Team Philosophy

- The person is what is important to the transdisciplinary team.
- Life circumstances are taken into account during the treatment process.
- The person's wants, needs and desires, for recovery are what the team will address.
- The treatment goals are developed by the rehab team in conjunction with the individual and their significant.
Expectations of Assistive Technology

- Will allow the individual to:
  - Discharge to home
  - Return to independent activities of daily living
Expectations of Assistive Technology

- Will allow the individual to:
  - Discharge to home
  - Return to independent activities of daily living
  - Mobility
Expectations of Assistive Technology

- Will allow the individual to:
  - Discharge to home
  - Return to independent activities of daily living
    - Mobility
    - Self Care
Expectations of Assistive Technology

- Will allow the individual to:
  - Discharge to home
  - Return to independent activities of daily living
    - Mobility
    - Self Care
    - Communication
Expectations of Assistive Technology

- Will allow the individual to:
  - Discharge to home
  - Return to independent activities of daily living
    - Mobility
    - Self Care
    - Communication
    - Leisure
Expectations of Assistive Technology

- Will allow the individual to:
  - Discharge to home
  - Return to independent activities of daily living
    - Mobility
    - Self Care
    - Communication
    - Leisure
    - Vocation
Levels of Assistive Technology: Some Practical, Working Definitions

- Assistive technology devices can be classified by levels of technology and life skill areas.

- Devices can also be classified by the level of technical training that the user requires to implement the equipment.
Levels of Assistive Technology: Some Practical, Working Concepts

Low tech devices: equipment that is easy to use and do not require electrical power. Users may require a short training period in order to learn how to use them. For example a non-electronic communication board.

<table>
<thead>
<tr>
<th>Levels</th>
<th>Characteristics</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-tech</td>
<td>Strategies, methods and/or techniques that rely primarily on user's ability to move or utilize various body parts</td>
<td>Sign language; finger spelling</td>
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<tr>
<td></td>
<td></td>
<td>Knocking on a door</td>
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<tr>
<td></td>
<td></td>
<td>Scooting up and down steps in modified way</td>
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<tr>
<td></td>
<td>Unaided or endosomatic</td>
<td>Eye or finger pointing</td>
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<tr>
<td></td>
<td>Can be free, no expense</td>
<td>Tapping or squeezing hand</td>
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<tr>
<td></td>
<td>Commonly transparent or translucent in use</td>
<td>Vocalizing and speaking</td>
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</tbody>
</table>
Levels of Assistive Technology: Some Practical, Working Concepts

Middle or Elementary tech devices: they include most battery-operated devices. User requires a moderate training period in order to manipulate them. Some examples of middle tech devices are visual aids such as magnification and environmental control devices.

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<tr>
<td>Middle/elementary</td>
<td>Incorporates strategies, methods, and/or techniques, as above, with relatively simple materials and equipment commonly found in living and working environments</td>
<td>Handwriting with pen or pencil</td>
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<tr>
<td></td>
<td>Can rely on off-the-shelf, inexpensive consumer technologies</td>
<td>Modified eating utensils</td>
</tr>
<tr>
<td></td>
<td>Commonly simple; transparent or translucent in use</td>
<td>Picture or symbol communication boards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adjustable or reclining chair</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elevated or adjustable countertops</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Basic wheelchair; stroller</td>
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<tr>
<td></td>
<td></td>
<td>Modified knobs on faucets</td>
</tr>
</tbody>
</table>
Levels of Assistive Technology: Some Practical, Working Concepts

High tech devices: include complex and programmable equipment, such as an augmentative communication device or a computer that can be operated by eye-gaze control. These items require specific training in order for the user to take full advantage of their capabilities.

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</tr>
</thead>
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<tr>
<td>High-tech</td>
<td>AT user integrated with complex, typically expensive electronic, mechanical, and/or hydraulic technologies to accomplish user's purposes</td>
<td>Sending a fax or e-mail</td>
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<tr>
<td></td>
<td></td>
<td>Operating a speech-output computer</td>
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<tr>
<td></td>
<td></td>
<td>Operating a motorized wheelchair</td>
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<tr>
<td></td>
<td>Complex combinations of above technologies</td>
<td>Using an electric stair lift</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modified controls and lifts for car or van</td>
</tr>
<tr>
<td></td>
<td>Commonly translucent or opaque in use</td>
<td>Voice-operated ECU</td>
</tr>
</tbody>
</table>
Steps needed to issue an assistive device

- Selection of a device for an activity
- Site and method of instruction
- Time to introduce device during hospitalization
- Reinforcement of its use
- Written justification to insurance company
Equipment suitability

- Age
- Gender
- Perception of self
- Culture
- Support
- Pre prescription home visit
Instruction in the use of the assistive device

Repetition is key

Types of instructional demonstration
practicing actual skills in hospital environment
written
video
Reinforcement

Transition of skills to community/home environment

Follow-up

Support groups

Refresher training may be necessary
Who pays?

- User
- Insurance
  - Private
    - managed care
    - fee-for-services
  - Medicare
- VA
Other factors associated with non-use of assistive devices

- Too many devices!
- Change in habits to make ADLs easier
Access to equipment and rehabilitation services

(Bingham and Beatty, 2003)

>50% needed assistive equipment in last 12 months
  30% were unable to get needed equipment

40% needed rehab services in last 3 months
  >50% did not receive those services