

Bridging the Gap Between Consumer and Products in Rehabilitation Medicine

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Occupational Therapist

- Assisting people 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

Computer Engineer

Family/Tutor/Caregiver

Rehabilitation Counselor

Assistive Technology Specialist

Service Coordinator

Fabrication/Adaptation Tech

Training Coordinator

Audiologists

Nurse Practitioners

Social Workers

Occupational Therapist

Speech-Language Pathologist

Prosthetists

Medical Consultants

Teachers/Special Educators

AT Equipment Vendors

Hearing Device Specialist

Physical Therapists

Expectations of Assistive Technology

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 - **Discharge to home**
 - **Return to independent activities of daily living**

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 - 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 Technology Devices

- **Equipment that is easy to use and do not require electrical power. May require a short training period.**
- **Strategies, methods and/or techniques that rely primarily on user's ability to move or utilize various body parts in modified way**
 - ❖ **Finger spelling**
 - ❖ **Knocking on a door**
 - ❖ **Scouting up/down steps**

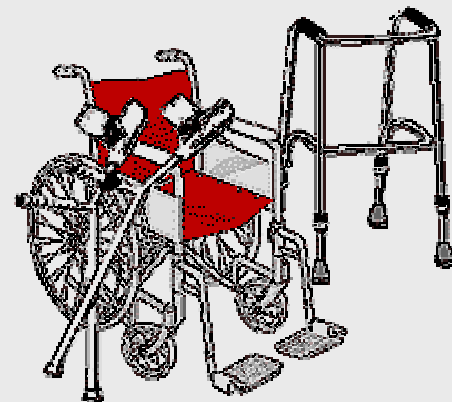


Levels of Assistive Technology: Some Practical, Working Concepts

Elementary Technology Devices

- **Include most battery-operated devices. User requires a moderate training period.**
- **Relatively simple materials and equipment commonly found in living and work space. Off-the-shelf or inexpensive.**

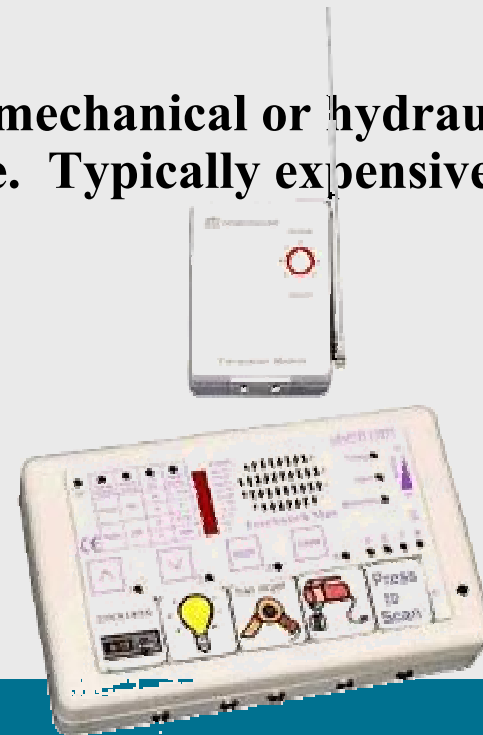
- ❖ **Basic wheelchair/walker**
- ❖ **Built-up pen**
- ❖ **Modified faucet handle**
- ❖ **Modified eating utensils**



Levels of Assistive Technology: Some Practical, Working Concepts

High Technology Devices

- Include complex and programmable equipment. User requires specific training in order for the user to take full advantage of their capabilities.
- User integrated with complex electronic, mechanical or hydraulic technologies to accomplish user's purpose. Typically expensive.
 - ❖ Voice operated ECU
 - ❖ Electric lifts
 - ❖ Modified car/van controls
 - ❖ Motorized wheelchair



A Continuum of Considerations for Assistive Technology for the Mechanics of Writing

Regular pen or pencil

Pencil or pen with adapted grip

Adapted paper (e.g. raised line, highlighted lines)

Slant board to create slanted writing surface

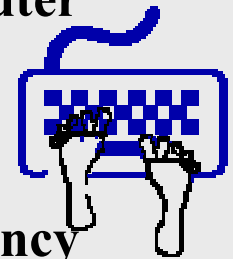
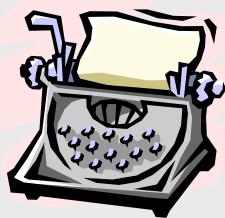
Typewriter

Portable note taker that interfaces with computer

Computer with word processing software

Word prediction/abbreviation expansion software for efficiency

Voice Recognition software



(Adapted by ATTO from WATI, 1998)

Equipment Suitability

- **Age**
- **Gender**
- **Perception of self**
- **Culture**
- **Support**
- **Pre prescription home visit**

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**

Instruction in the Use of the Assistive Device

- **Repetition is key**
- **Types of instruction:**
 - ❖ **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**

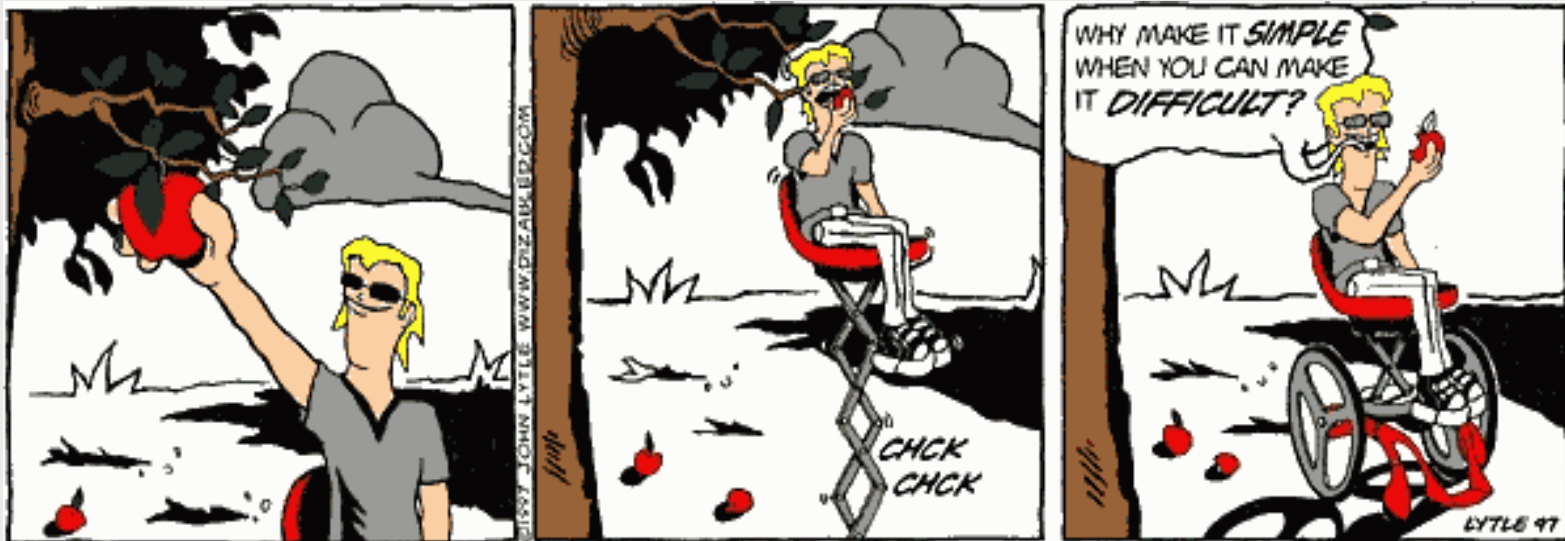
 - fee-for-services**

 - 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 rehabilitation services in last 3 months
>50% did not receive those services