The growing population of older adults will change many aspects of health care. One change will be an increase in the number of people who experience a disabling condition and consequently need to use assistive technology. Assistive devices are typically first introduced in the hospital, out-patient or home care setting primarily to enhance independence in self-care. During in-patient rehabilitation, an older adult will receive an average of eight devices to use in the home for mobility, dressing, seating, bathing, grooming and feeding. Those living in the community with a functional impairment report an average of 14 devices in the home, including those for hearing and vision. Although older adults can benefit from devices that enable continued participation in leisure and work pursuits, they have limited access to and knowledge of these types of aids.

Do Older Adults Use Assistive Devices?

Older adults with functional limitations who live in the community do report using a wide range of aids. Surveys also indicate that older adults express a need and desire for more equipment than they currently have access to or knowledge about how to obtain. There is no evidence to suggest that older adults use assistive devices less so than young adults, but it is not known whether there is greater reluctance among the elderly to use high-technology vs. low-technology solutions. A number of research and service programs are currently evaluating the willingness of older...
adults to use high technology, such as computer systems to increase communication and social integration and smart house arrangements to increase safety and function.

At this time, there is no evidence that the elderly will accept or reject high-tech aids more or less in comparison to other populations. On the other hand, low-tech devices do tend to be underutilized, abandoned or used ineffectively. Survey results suggest that about 15 percent to 30 percent of devices may be underutilized. Use rates vary depending on the devices considered, the individual's impairment and the time of onset of the impairment.

While the elderly rate most devices as useful, there are a number of reasons why underuse and inappropriate application of devices occurs (see Table below). First, many adults do not receive adequate information about and instruction in the use of a device. Although instruction may be provided in the hospital setting, older adults often require reinforcement of appropriate use at home. Some report forgetting how to use a device or being unsure how to use it to accomplish a specific activity in their home. Also, a technique taught in the hospital environment may not fit the home context and, thus, relearning is required after the client returns home. Unfortunately, few therapists offer written instructions with diagrams for future reference.

Second, older adults do not know how to replace lost or broken devices, and they receive little or no information on how to purchase other devices as new needs arise. Older adults are often not even informed they can obtain basic information and funding options at their rehab facility or out-patient clinic.

A third contributing factor to underuse is that the needs of older adults can change following hospitalization. Although therapists may issue devices for immediate and short-term use on return home, as the client’s function improves, he or she may no longer need it. Thus, its abandonment is appropriate from a clinical point of view. However, since most hospitals and communities do not have a lending service or mechanism for recycling devices, the nonuse of the devices represents a cost to the health care system and is reported as abandonment.

Fourth, older adults may select to use a device for one activity and have personal assistance to accomplish another, often after trying several options. That is, a client may be a successful device user to accomplish one form of self-care, yet choose a different approach to carry out other daily routines. Thus, one reason for underutilization is the personal preferences of older adults to perform activities in such a way that a device may not be necessary.

Fifth, some people may feel embarrassed about using a device in public. Mobility devices, for example, are visible symbols of functional loss and dependency and can be stigmatizing.

A sixth reason for underuse is that devices prescribed during hospitalization, such as for mobility, may not fit the physical structure of the home.

Finally, underutilization may occur when devices issued during hospitalization are not immediately brought home on discharge. Therapists report that patients frequently forget to take their devices home or are unclear that the devices provided in the hospital are incorporated into their billing and are for home use.
and recognize the need for and value of devices. Also, people with a physical impairment, such as an amputation, appear to be more willing to accept a device.

Successful users among the elderly are those who view devices as tools to achieve participation in desired activities, who are flexible to experiment with different ways of handling a disabling condition, and who do not feel stigmatized and embarrassed or that their personal identity has been compromised. To use a device effectively, the older person must learn how to accommodate to the change in physical or cognitive status and embrace a vision that an assistive device will facilitate continued participation in lifelong activities.

**Guidelines for Instructing in Device Use**

With shortened hospital stays and briefer exposure to occupational and physical therapy, the need for efficient and effective instruction in assistive device use becomes that much more important. Although there may be fewer opportunities to work with patients for an extended time, some specific actions can maximize instruction in the hospital and home. In addition, asking the elderly client some specific questions will help assess need and potential use (see box below).

**Use Valued Activities:** An older adult may have difficulty transferring or applying the learning in one context (the hospital) to that of another (the home). To maximize the potential for effective use, an assistive device should be introduced using an activity that the client values. This activity can then serve as a bridge to enable other, equally important utilization. Asking clients which self-care activities they expect and want to do when they return home and introducing devices for those activities increase their chance of use.

**Facilitate Experimentation:** There may be more than one way to use a particular device. Older adults need to feel empowered and comfortable with experimenting with device use and ways of handling functional limitations. Being flexible and experimental will enable a person to make ongoing adaptations within the context of the home and over time as other changes and needs emerge.

**Involve Family:** Family members rarely participate in therapy sessions involving device instruction, but their participation is critical. Family members can help reinforce the importance of a device and its safe and appropriate use in the home. And in the case of the severely disabled elderly person, the familiarity of the family member who is primary caregiver with the device is essential to its use. Also, family members can help project their impaired relative’s future needs. Thus, their participation in the process can assist the therapist in refining a treatment strategy.

**Engage in Active Listening:** Listen carefully to how a patient or family member perceives the devices that are being offered. Their words are clues as to their state of readiness to actually use the device. People who express feeling embarrassed, awkward, fatigued or “changed” as a consequence of using a device may be experiencing personal dissonance and discomfort with having to use the device. These clients will need more time to acclimate to their situation and the role of assistive devices. On the other hand, clients who visualize device use in the home or who can describe a particular situation for which the device will be helpful are actively considering using the device after returning home. Therapists can help patients visualize how to use the device at home by exploring with them the specific activities in which they will be engaged.

**Provide Home Follow-Up:** The home is the preferred environment for instruction in assistive device use because the therapist can evaluate the specific self-care needs of the older adult and introduce assistive devices that fit the context. For many older adults, tool use represents a new skill acquisition that requires repeated opportunities for practice in the environment or context in which it will be used. Also, once in the home, older people have a more refined sense of their limitations and what they need to carry out daily routines. Thus, device instruction in this context becomes part of real-life issues for that person.

**Provide Repair Information:** Whether instruction occurs in the hospital or home, it is important to provide oral and written information about how to repair equipment, where to purchase or learn about other devices, and potential funding sources. This information enables older people and their family members to actively control assistive device use and expand their repertoire of aids as the need arises.

**Use Short and Repeated Training Sessions:** Older adults learn new skills best when instruction is brief and there are repeated opportunities for practice. This is particularly the case for people with a cognitive impairment. Although patients with mild to moderate cognitive deficits can learn to use assistive devices, these people will require more instruction time and practice opportunities. Only one to two devices should be offered during one treatment session and instruction should be graded to fit the cognitive ability of the individual. For example, modeling, providing two-step commands, verbal cueing and reinforcing each step as the patient tries the device can be effective.

With shrinking health care resources, it is critical to match therapist time with patient need and make equipment selections that effectively fit the individual. These guidelines can be used to maximize assistive device use among older adults.

---

**Helpful Questions**

1. Do you expect to use this device in your home?
2. How will you use this device at home?
3. Do you feel any pain using the device?
4. Is the device awkward to use?
5. Do you get tired of using the device?
6. Do you think this device will enable you to do what you want to do at home?

---

Laura Gitlin, Ph.D., is associate professor in the Department of Occupational Therapy and director of research in the Community and Home Care Research Division at the Center for Collaborative Research, Thomas Jefferson University, Philadelphia. She can be reached at 130 S. Ninth St., Suite 810, Philadelphia, PA 19107-5233; 215/955-2896.

Ruth Schemm, Ed.D., O.T.R./L., is assistant dean of Health Sciences in the Department of Occupational Therapy at the Philadelphia College of Pharmacy and Science.