



Extending the Effectiveness of Home Care for Elders Through Low-Cost Assistive Equipment

A recent demonstration project in Massachusetts suggests that low-technology, low-cost assistive equipment has the potential to make traditional publicly-funded home care programs for elders more effective. The demonstration also identified implementation problems that must be addressed if public home care programs are to be a vehicle for making assistive equipment available to functionally disabled elders living in the community. The demonstration was carried out by the Gerontology Institute at the University of Massachusetts Boston in cooperation with the Massachusetts Executive Office of Elder Affairs, and was funded by the Robert Wood Johnson Foundation through its Home Care Research Initiative.

How might states benefit by offering assistive equipment through their home care programs?

- Elders' quality of life is likely to improve when they can solve daily-living problems more successfully by reducing their reliance on human assistance
- Assistive equipment is likely to be a cost-effective complement to one-to-one human assistance.
- Creative use of assistive equipment can enable agencies to make more efficient use of scarce workers.



Why are home care programs effective vehicles for distributing assistive equipment?

- Home care programs, through case managers, are able to follow up with elders to ensure that equipment is being used properly. This capability is usually absent in post-acute rehabilitative services, the usual mode of introduction for assistive equipment.
- Home care programs reach elders who have never received physical therapy or occupational therapy services because the onset of their disabilities has been gradual.

***Sock aid** Sock and stocking aids allow people with limited function to slip on socks or stockings without bending over.*

Some older people can benefit from simple equipment to help with:

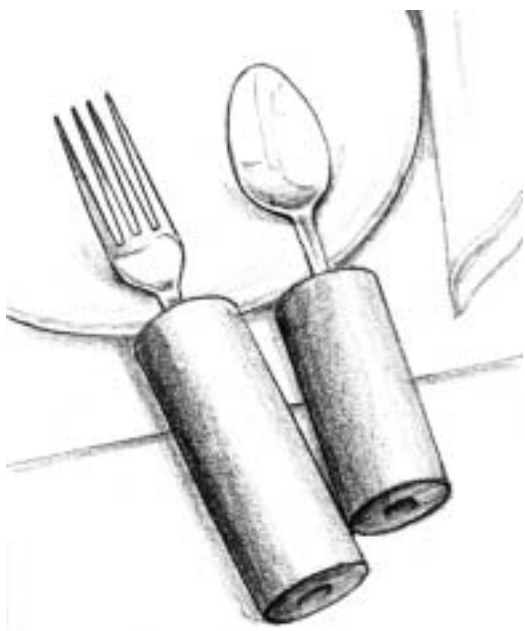
Food preparation — such as utensils with jar openers or oversized handles for easy gripping

Dressing — such as sock gadgets, clothing with Velcro closures, and zipper pulls

Bathing — such as bath seats, grab bars, or long-handled bath brushes

Mobility — such as reachers, walker baskets or rolling carts

Leisure — such as magnifiers, book holders, or spring scissors



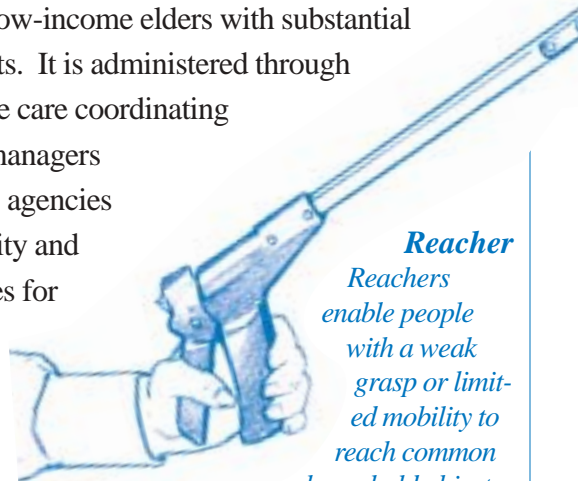
Foam padding Foam padding makes grasping small items such as utensils easier.

The Massachusetts Demonstration

This demonstration was conducted through the Massachusetts state-funded home care program, which provides personal assistance services to approximately 35,000 low-income elders with substantial functional deficits. It is administered through 27 regional home care coordinating agencies. Case managers employed by the agencies establish eligibility and authorize services for typical case loads of 100 clients. The program provides a variety of services, with service budgets of up to \$200 per month per client.

Most clients receive two or three hours of homemaker services per week, and many receive home-delivered meals. To the extent that resources permit, case managers may also authorize other services including social day care, laundry services, personal emergency response service, transportation, and grocery shopping. In general, the state-wide program has not explicitly emphasized use of assistive equipment.

The home care coordinating agencies and case managers were key intermediaries in the demonstration. Based on the premise that case managers have already established relationships with their clients and are knowledgeable about their needs, the demonstration explored the hypothesis that case managers could serve as effective change agents for assistive equipment by:



Reacher
Reachers enable people with a weak grasp or limited mobility to reach common household objects.



- increasing client knowledge about equipment options,
- encouraging use of equipment,
- assisting with acquisition and installation of equipment,
- training clients in the use of equipment,
- following up with clients regarding additional equipment needs,
- incorporating equipment-related activities as part of their routine client reassessment visits with the investment of little additional time.

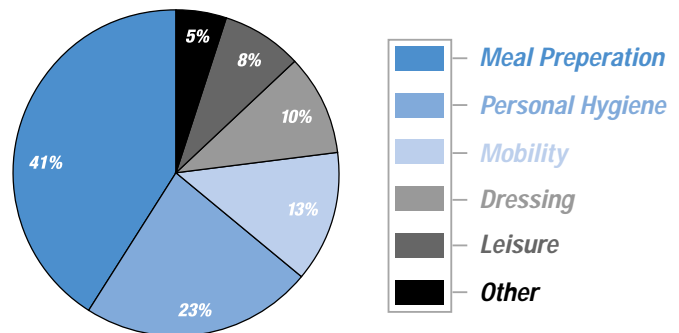
A key component of the demonstration was training, which was received by 38 case managers from the two participating home care coordinating agencies. In-service training was provided by a team of occupational therapists from a rehabilitation hospital that emphasized services for the elderly, and was designed to motivate case managers about the project and assist them in selecting and distributing appropriate devices. Case managers identified 196 clients who they believed would be particularly good candidates for assistive equipment.

During home visits, case managers worked with their clients to decide which specific items should be ordered. Selection of equipment items was based on a combination of case managers' assessments of clients' needs and clients' willingness to try out devices. The project allowed for an average of \$150 worth of equipment per client.

The home care coordinating agencies established their own procedures for ordering, tracking, and monitoring equipment. Each home care coordinating agency assigned an equipment coordinator to place orders, track the status of orders, and coordinate scheduled

follow-up calls to monitor clients' use of and satisfaction with the equipment.

Assistive Devices by Activity



Demonstration results

The demonstration led to modest increases in assistive equipment use by clients. However, case managers nominated substantially fewer clients and purchased less equipment than had been anticipated. Not until the end of the demonstration did many recognize the potential uses and benefits of assistive equipment. Thus, measurable impacts of the demonstration were few.

- On average, participating clients increased their use of equipment from seven to eleven items.
- The additional four items cost on average a total of \$76.
- Nearly half the items distributed were associated with meal preparation.
- Other items were associated with personal hygiene (most clients already used some bathroom safety items), mobility, dressing, and leisure.
- 90% of clients reported satisfaction with their equipment.
- 60% of clients found their devices “very helpful” and 70% reported using them regularly.

Clients Report Satisfaction with Equipment Use.

A client who received a wall-mounted electric can opener was thrilled. This was the first time since her stroke she could “do anything” without asking someone to help her.

A woman recovering from hip replacement surgery received a rolling cart that allowed her greater independence in managing her meals.

Elders receiving reachers reported: “I’m able to pick up things on the bathroom and bedroom floors,” and “It is now in constant use for putting items away and taking items off my shelves.”

Implications of the demonstration

The most important outcome of the demonstration was the identification of implementation issues that must be addressed if home care programs are to be effective vehicles for distributing assistive equipment.

Case managers need consistent training. Case managers need solid training to understand the potential benefits of assistive equipment for their clients and learn how to screen clients and recommend appropriate equipment items. They should also understand that, if needed, additional support is available under Medicare and Medicaid for assessments by certified professionals.

Training cannot be done in one or two short sessions; it should be ongoing, with hands-on demonstrations of equipment items as well as diagnostic tools to assist with assessing clients for equipment. High rates of case manager turnover mean that train-

ing about assistive equipment must be part of the basic preparation of newly recruited case managers.

Staff should include an equipment expert or mentor. Having a staff member dedicated to assistive technology issues in a home care coordinating agency is critical to ensuring that case managers have the support they need to address clients’ equipment needs competently. Ideally, one case manager could become a technology “expert” who would train new case managers and serve as a consultant to others. This could be a nurse or occupational therapist who has prior equipment experience or a case manager who has demonstrated comfort and enthusiasm with a range of equipment items. The ready availability of professional consultation from a rehabilitation hospital is also critical.

Case managers should be allocated time for tasks associated with assistive devices. Attention to clients’ assistive equipment needs takes time, which should be built into case managers’ assessment and reassessment schedules. Case managers who devote significant time to managing assistive equipment may also need to have other responsibilities reduced or have their case load reduced. Moreover, case managers can interest clients in assistive devices more readily if they bring devices with them to demonstrate than if they simply describe or show clients pictures of devices, and such demonstrations take time. By allowing a client to practice with an item, case managers may also be able to determine whether a particular item is suitable for a client or whether another item for the same purpose may be needed. (In the demonstration, case managers did not carry sample devices with them.)

Agencies must develop systems to order and deliver equipment. At the agency level, a system is needed for ordering, delivering, installing, and monitoring equipment distribution. In the demonstration, the challenges associated with tracking, delivering, installing, and following up with clients were underestimated. A number of strategies may help home care coordinating agencies manage the process:

- Developing a computerized system to keep track of the status of items ordered.
- Keeping a supply of commonly-used equipment on hand for immediate use.
- Establishing working relationships with local suppliers willing to deliver at no or low cost.
- Engaging well trained volunteers to assist with delivery of equipment, installation of devices, training of clients, and following up to determine client satisfaction.

Funds should be allocated for assistive equipment. An initial commitment of special funds for equipment items from the authorizing agency may be needed until the potential benefits of assistive equipment are fully realized within a home care coordinating agency. In this demonstration, a modest amount of earmarked funding (\$150 per client) was sufficient to encourage case managers to consider equipment needs. When case managers become accustomed to addressing these needs, earmarked funding will become unnecessary as they become willing to draw on the general resources available for home care to meet assistive equipment needs.

Demonstration follow-up activities

The demonstration produced an assistive equipment resource manual geared to case managers of home care coordinating agencies. The manual is available on the Gerontology Institute web site (<http://www.geront.umb.edu/current/assistequip/reports/resourcemanual.pdf>) and has been distributed throughout Massachusetts to improve use of assistive devices.

The Promoting Assistive Equipment Resource Manual for ASAPs (Aging Services Access Points) includes:

- An overview of assistive equipment
- Suggestions on administrative and operational issues
- Guidelines for identifying potential candidates for assistive equipment
- Assistive equipment legislation and resource information

The manual was produced by a task force that used the experience and outcome of the Massachusetts demonstration to develop policies and resource materials to assist home care coordinating agencies statewide with assistive equipment services. The task force included an occupational therapist with experience in assisting elders with low-cost assistive equipment, directors of several home care coordinating agencies, policy makers from the Massachusetts Executive Office of Elder Affairs, and the research team.

Publications related to this study:

Caro, F.G., and Gottlieb, A.S. (2001). "A field experiment in aging services: Opportunities and obstacles in the pursuit of internal and external validity." *Evaluation and Program Planning*, 24(3), 249-256.

Caro, F.G., Gottlieb, A.S., and Safron-Norton, C. (2001). "Performance-based home care for the elderly: The quality of circumstance protocol." *Home Health Care Services Quarterly*, 18 (4), 1-48.

Fritz, C. (2001). *Diffusion of Low-Tech Equipment as a Component of Case Managers' Role*. Doctoral dissertation, University of Massachusetts, Boston.

Gottlieb, A.S. and Caro, F.G. (2001). "Providing low-tech assistive equipment through home care services: The Massachusetts Assistive Equipment Demonstration." *Technology and Disability*, 13(1), 41-53.

Gottlieb, A.S. (2000). *Promoting Assistive Equipment Resource Manual for ASAPs*. The Gerontology Institute, University of Massachusetts, Boston.

Gottlieb, A.S. and Caro, F.G. (1999). "Extending the effectiveness of home care through low-cost adaptive equipment." *The Public Policy and Aging Report*, 10(1): 13-15.

WEB SITE

Extending Home Care Effectiveness through Expanded Use of Low-cost Adaptive Equipment: A Research and Demonstration Project

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http://www.geront.umb.edu/proj_adaptive.htm

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**THE HOME CARE RESEARCH
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The Home Care Research Initiative, a program of The Robert Wood Johnson Foundation, was established to support research and analysis that will improve the knowledge base underlying home care policy and practice. It is based at the Center for Home Care Policy and Research at the Visiting Nurse Service of NY.

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