Center for Technology and Aging

Organizational Adoption:
Implementing New Technologies to Optimize Medication Use Among Older Adults

In 2010, five health services organizations received grants from the Center for Technology and Aging to demonstrate how technologies could help improve medication use in older adults with chronic health conditions. Each project involved the use of one or more technologies in a coordinated effort with patients, families, and caregivers – such as pharmacists, home health agency staff, and physicians. The two-fold goal was to help improve the independence of the participating older adults while enabling them to avoid medication-related issues that potentially result in harm, hospitalization, or higher health care costs.

In this **Practice Brief**, the five grantees share their hard-won lessons in order to help other organizations more quickly and effectively implement similar technologies that help optimize medication use among older adults. The grantees were the American Society of Consultant Pharmacists Foundation, Caring Choices, Connecticut Pharmacists Foundation, Veterans Administration Central California Health Care System, and the Visiting Nurse Service of New York. More detailed information about the grant program and each grantee is available at http://www.techandaging.org/MedOpAbstracts.pdf.

Lessons from the Trenches

→ **Site champions are essential to the success of the project:**

"A site champion would have helped tremendously . . . we needed a person who continued to promote this."

- Champions must work extensively on the project before it begins, remain committed to it throughout its duration, and plan for its sustainability after initial funding ends.
- Champions must have positive influence within the organization, be enthusiastic, and have excellent planning and implementation skills.

→ **Multiple stakeholders must be committed to the project:**

"You have to make people feel like they have ownership."

- An influential clinical leader must be able to articulate the project's importance to the organization.
- Project buy-in is needed from the ground-up, and participants must have "ownership."
- Engagement of primary care physicians is essential.

→ **Organizational commitment and adoption is easier if the technology project is:**

"You have to get buy-in from the ground up."

- Aligned with the organization's goals and mission.
- Complementary to the staff's normal workflow, and requires relatively small behavior changes to implement.
- Clearly perceived as bringing clinical benefits to patients so that staff are motivated to adapt or change behaviors.

Practice Brief

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Lessons from the Trenches (cont)

→ Planning is crucial:

"What would have helped is if we would have planned . . . and tested better."

- Realistic, step-by-step planning at the implementation-staff and site level facilitates success and overcoming challenges.
- Previous hands-on experience with the target audiences and knowledge of their needs enables organizations to anticipate and avoid barriers for success.
- From the outset project planning should consider current practices within the organization in recording, dispensing, reviewing, or administering medications.
- Planning should include intentional strategies that support the unique roles of patients, physicians, and families in optimizing medication use.
- Goals and objectives should be developed jointly by the leadership and implementation teams.

→ Technology training, experience, and selection are important:

"Selecting the right technology can make a big difference in the program. For example, in order to establish eye-to-eye contact when videoconferencing with patients, the camera needs to be embedded in the computer screen, not attached separately."

- It takes considerable time to train staff and patients on technology to the point of proficiency. Staff who implement need substantial time to plan, install, and test the technology.
- Technology should be chosen after careful study of cost, user-friendliness, and effectiveness in similar environments with similar staff and patient populations. The availability of local technology infrastructure, such as availability of broadband, must be confirmed before the project begins.
- Healthcare and social service staff need education and support to maintain their clinical roles, supported by technology rather than diverted from these roles by using technology.
- The technology should be seen as one part of a larger toolkit to help patients.
- Success will be easier for organizations that have:
- Tech-savvy staff, easily accessible technical support, and experience with addressing resistance to new technology.
- The ability to integrate medication information (medication lists, prescription refill records, alerts, vital signs, etc.) with existing electronic health records (EHRs).

Lessons from the Trenches (cont)

→ Scope of practice, licensing, and regulatory issues must be considered:

"Ambiguity of telemedicine and interstate licensing impedes diffusion of technology."

- Account for regulatory variation across states, localities, and professions around issues such as what constitutes medication "administration" and who may fill medication dispensers.
- Multi-state programs need to consider license reciprocity when planning to use consultants, such as pharmacists.
- Be prepared to provide extra encouragement for professionals that may resist stepping outside of their normal practice -- due to regulatory standards or professional standards pertaining to scope of practice or licensure.
- Facilities and professionals often fear that taking on new roles, such as filling or programming medication dispensers, will create new risks and liabilities for their licenses. These issues should be cleared with licensing authorities so that cutting edge practices can be pilot tested.

Grantee	Program Description
American Society of Consultant Pharmacists Foundation	A web-based medication assessment tool that analyzes an individual's medication regimen for geriatric related problems was introduced to six pharmacy-oriented organizations that care for older adults.
Caring Choices	A computerized medication dispenser was introduced to two home health agencies and two senior living organizations.
Connecticut Pharmacists Foundation	Videoconferencing, EHRs, and spoken format technologies were utilized by pharmacists to provide virtual medication therapy management to older Cambodian-Americans with complex health needs.
Veterans Administration Central California Health Care System	Remote monitoring technologies, coupled with medication utilization algorithms, were utilized by the primary care clinic to help patients with chronic heart failure to better self-manage their condition at home.
Visiting Nurse Service of New York	Medication complexity algorithms, counseling support tools, and EHRs were utilized by home health nurses to help cognitively impaired older adults, and their caregivers, better manage complex medication regimens at home.

The Center for Technology and Aging (www.techandaging.org) supports more rapid adoption and diffusion of technologies that enhance independence and improve home and community-based care for older adults. Through grants, research, public policy involvement and development of practical tools and best practice guidelines, CTA serves as an independent, non-profit resource for improving the quality and cost-effectiveness of long-term care services. CTA was established with funding from The SCAN Foundation (www.thescanfoundation.org) and is affiliated with the Public Health Institute (www.phi.org) in Oakland, CA.

555 12th Street, 10th Floor • Oakland, CA 94607

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