

**Aging Gracefully in Place: Important Considerations When  
Considering CAPABLE Program<sup>®</sup> Implementation**

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**FINAL IMPLEMENTATION BRIEF**

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# Aging Gracefully in Place: Important Considerations When Considering CAPABLE Program<sup>®</sup> Implementation

## INTRODUCTION

This brief uses lessons learned from “Aging Gracefully in Place: An Evaluation of the Capability of the CAPABLE Approach” (Aging Gracefully) provide useful guidance to organizations exploring CAPABLE implementation. In Aging Gracefully, four U.S. partners in urban and micropolitan<sup>1</sup> communities implemented the Johns Hopkins University (JHU) CAPABLE (Community Aging in Place-Better Living for Elders) program.<sup>2</sup> CAPABLE is a person-directed approach to both homes and the older adults living in them. The ultimate goal is to increase elderly residents’ control over their physical function and improve their housing conditions so they can remain in their homes and move more independently and safely both indoors and outdoors. Novel CAPABLE program features include:

- It is participant-directed. Individual older adult participants determine goals personally important to them, thus potentially impacting quality of life as well as function.
- It integrates occupational therapy, nursing, and home repair services. These three disciplines integrate their work in a multi-disciplinary fashion, which is known to improve health outcomes in other settings such as asthma home-based interventions.<sup>a</sup>

CAPABLE deliberately targets the home environment and the participants' functional goals through a new model of inter-disciplinary collaboration. Because 10,000 people turn 65 each day in the U.S—and in some regions the demographic change is even more pronounced—society must develop, test and implement strategies to promote safe and healthy aging in place while also decreasing cost of healthcare for older adults. The healthcare community is increasingly focused on upstream causes of disease. This focus has become stronger under the Affordable Care Act (ACA), which shifts much of the accountability for cost-effective disease management to healthcare providers. Social determinants of health, especially housing, have emerged as critical factors influencing the health of some of our nation’s most vulnerable populations, its older adults.<sup>b</sup>

In Baltimore, a team of professors, OTs, RNs, and other personnel from the JHU School of Nursing and the JHU School of Medicine, with grant funding, led the development and testing of the CAPABLE model. JHU’s first pilot was conducted about ten years ago. Since then, the CAPABLE model is expanding across the country and is currently being utilized by healthcare organizations, Habitat for Humanity, area agencies on aging, housing organizations, and visiting nurse associations at 27 sites across the U.S.<sup>c</sup> Based on their studies in Baltimore, JHU estimates that six OT visits, four RN visits, and handyman repairs cost about \$3,000 per participant over a five-month period (see text box).<sup>d</sup> Because nursing home care may average \$6,000 per month, if CAPABLE delays nursing home admission by just three weeks, it saves money.<sup>e</sup>

This unique combination of RN, OT, and home repair services based on participant's functional goals has not been studied to determine its effectiveness across a variety of settings, delivery systems and

### Basic CAPABLE Fidelity\* Guidelines

- Participation by the individual is voluntary.
- There must be an OT and RN, together with the handyman/home repair services, as the inter-professional team.
- The participant sets the goals – not the clinicians.

\* “Fidelity” means “being faithful to the elements of the program in the way it was intended to be delivered.”

<sup>1</sup> The U.S. Census defines micropolitan areas as areas having at least one urban cluster of at least 10,000 but less than 50,000 population.

<sup>2</sup> ©Johns Hopkins University. All rights reserved.

geographic locations. The National Center for Healthy Housing's (NCHH's) Aging Gracefully study helped fill these gaps. Having seen JHU's success in Baltimore, NCHH wanted to learn how the CAPABLE model could be effectively implemented by relatively smaller, diverse organizations. Funding for the CAPABLE interventions was provided by the Archstone Foundation, the Harry and Jeanette Weinberg Foundation, and the Evergreen Foundation. Funding for the Aging Gracefully evaluation of the effectiveness of these interventions was funded by the U.S. Department of Housing and Urban Development's Office of Policy Development and Research.

*"Sometimes you feel like as we get old that no one really cares about us. Nobody cares how we live or what happens to us. But you all showed that you all really cared. You all care about how we feel, what's going on in [my] household ... [you] want to help [me] you accomplish [my] goals."*

- [Ruby McBee, Aging Gracefully Homeowner](#)

A particular Aging Gracefully goal was to see if CAPABLE could be successfully implemented by organizations which are not large healthcare providers. The only stipulations NCHH put on partners was that they had to (1) adhere to the JHU CAPABLE tenets, and (2) enroll older adults who met Aging Gracefully's eligibility criteria, including income.<sup>3</sup> Within this framework, partners had the freedom to deliver the program in the manner that best served their communities.

**Structure of the Aging Gracefully Evaluation.** At the four partner locations, a total of 153 participants completed both the CAPABLE program and the evaluation:

- Greensboro, North Carolina (NC, population 290,222<sup>f</sup>). The primary subgrantee was Community Housing Solutions of Guilford, Inc., an affordable housing repair nonprofit organization, partnering with Cone Health and Triad HealthCare Network.
- Wilkes-Barre, Pennsylvania (PA, population 40,806<sup>g</sup>). The primary subgrantee was Catholic Social Services of the Diocese of Scranton, in the Wyoming Valley office located in Wilkes-Barre, partnering with the Luzerne and Wyoming Area Agency on Aging and Allied Services, a healthcare provider.
- South Burlington, Vermont (VT, population 19,141<sup>h</sup>). The primary subgrantee was Cathedral Square Corporation, Inc., a nonprofit housing community provider for seniors and individuals with special needs, partnering with the University of Vermont Medical Center.
- San Diego, California (CA, population 1.42 million<sup>i</sup>). The primary subgrantee was the Family Health Centers of San Diego, an FQHC healthcare organization, partnering with Rebuilding Together San Francisco.

These partners were selected through a competitive grant process. Throughout the project, NCHH served as the connection among the sites and staff at JHU and convened partners together to share experiences and lessons learned. Partner OTs and RNs were also able to contact JHU directly for technical advice. By implementing the CAPABLE model in these four communities through Aging Gracefully, NCHH and its learning community demonstrated CAPABLE's efficacy<sup>4</sup> and identified and remedied barriers to widespread implementation.

This brief outlines the steps localities may want to consider when initiating a CAPABLE program, based on the successes and lessons our Aging Gracefully partners experienced. The considerations documented here will be most pertinent for organizations located in smaller urban or micropolitan areas and serve as a guide to help such organizations exploring CAPABLE and areas of concern they need to be aware of as they do so. It also outlines the many opportunities for partnership and innovation present in the use and adaptation of the program, and the benefits for older adults living in their communities.

<sup>3</sup> Eligibility criteria were identical to those JHU used in their early CAPABLE research. See Step 5 below.

<sup>4</sup> A manuscript currently in development documents the proven health efficacy of the CAPABLE program as implemented by the four partners.

For a broader sense of how organizations can implement CAPABLE while keeping fidelity with the program, and how JHU supports organizations operating the program, we recommend reading JHU's [FAQs](#) or contacting Sarah Szanton, PhD, ANP, FAAN, at [sszanto1@jhu.edu](mailto:sszanto1@jhu.edu).

## STEP 1: KNOW THE COSTS OF INITIATING CAPABLE

The JHU structure to support CAPABLE implementation has evolved over the three-year duration of Aging Gracefully. JHU charges initiating organizations a fee to implement CAPABLE that is based on the number of people to be served and whether the organization is large or small. The fee generally covers a finite (e.g., three-year) period and includes:

- Training of any OTs and RNs hired during the three-year period;
- An interactive training manual;
- A CAPABLE implementation manual which provides tips and tools; and
- Access to live and recorded office hours and webinars for OTs, RNs, and program administrators.
- Individual technical assistance consultation about implementation.
- Work flows, sample job descriptions, examples of how to set up evaluation and other implementation support.

After the first three years of implementation support, JHU will likely charge an annual license fee which will depend on the size of the organization.

JHU reports that the per-person cost for providing CAPABLE over a five-month period is about \$3,000 (not including the JHU fees discussed above). In Aging Gracefully, our four partners were able to provide CAPABLE for a median cost of about \$2,400 per person, but costs were highly variable (range about \$400 to \$12,000 per person), mostly due to different allowable home modification costs. For example, early in their planning, NC strategically decided that accessibility modifications such as access ramps or outdoor concrete step repair at single-family homes were necessary if these modifications fit the participant CAPABLE goals of being able to move independently and safely from their home into their yards or communities. NC had a separate funding stream which allowed them to include these more expensive home modifications. Other partners who served many apartment-dwelling participants conducted fewer home modifications and focused more on durable medical equipment (DME), assistive equipment (AE) and everyday items, lowering costs.

## STEP 2: DETERMINE THE LEAD ORGANIZATION

In addition to OTs, RNs, and home repair professionals, a CAPABLE team usually includes a team leader, site coordinator, and possibly recruiters to enroll participants. Other oversight or coordination staff may be necessary depending on the nature of the partnerships involved. While RNs and OTs may be located within the same organization (such as a healthcare system), the home repair provider will almost universally be separate; therefore, any CAPABLE program is anticipated to include a partnership between at least two separate entities.

The first step in assembling a CAPABLE team is identifying which organization will take the lead. In Aging Gracefully, the organization applying to participate in the project assumed the lead role. In general, however, several factors should be considered, including:

- Who has taken the initiative to propose the program;
- Who is providing or has acquired the funding;
- Who has the most capacity for program administration and budget oversight;
- Who has the most feasible link to potential participants;
- Who is providing the majority of staff for the program;
- How CAPABLE fits with existing programs of team organizations.

In most cases, the entity with the funding will take the lead. A healthcare organization may be the logical choice to lead as it could provide at least two arms of CAPABLE (OTs and RNs) and perhaps even three (the participant pool) of the four-armed CAPABLE system. However, it's important not to lose sight of the vital fourth arm (the home repair/modification arm) when developing a successful program (see Step 3, Assembling the CAPABLE Team). JHU reports that approximately 23% of organizations currently implementing CAPABLE are healthcare organizations, 36% are housing organizations (e.g., Habitat for Humanity, ), 36% are home visit services organizations (e.g., Area Agencies for Aging, Meals on Wheels, Visiting Nurse associations), and 5% are government agencies (e.g., Medicaid waiver program).

It's important, at this stage in the process, to budget sufficient time to develop the program and assemble and train the team. In Aging Gracefully, VT and CA, who came to the project months later than NC and PA, had to hit the ground running, missing out on valuable time needed to fully build their team and establish effective communication processes. NC, who committed to the project almost a year before full funding was in place, was able to use that year to assemble their team and determine how the CAPABLE process would work best. They held bimonthly in-person team meetings to designing their CAPABLE program. Through no fault of their own, CA and VT came on board nine months into the three-year project. The CA and VT site coordinators (whose time was paid with leveraged funds) bore the brunt of their time crunch. They had little advance time to think through implementation steps and thus had greater struggles with hiring team members, coordinating schedules, maintaining team personnel and ensuring visits occurred on time.

### STEP 3: ASSEMBLE THE CAPABLE TEAM

In Aging Gracefully, each partner assembled a team consisting of a Site Coordinators (SC), one or more Occupational Therapists (OTs), one or more Registered Nurses (RNs), and one or more Home Repair Specialists (HRs) to meet the CAPABLE service requirements (Table 1).

**Table 1. Organizations Contributing Staff to Aging Gracefully Teams**

| Staff Type       | NC                       | PA                                      | VT                   | CA                   |
|------------------|--------------------------|---|----------------------|----------------------|
| OT               | Cone Health              | Allied Services                         | Univ. VT Medical Ctr | Per-Diem Contractors |
| Site Coordinator | CHS                      | CSS, Wilkes-Barre                       | CSC                  | FHCSD                |
| RN               | Triad HealthCare Network | Allied Services                         | CSC                  | FHCSD                |
| Home Repair      | CHS                      | Local contractor                        | CSC maintenance      | RT-San Diego         |
| Recruiter        | CHS                      | CSSWB, CSS-Scranton, AAA Luzerne County | CSC                  | FHCSD                |

CHS=Community Housing Solutions. CSS=Catholic Social Services. CSC=Cathedral Square Corp. FHCSD=Family Health Centers of San Diego. AAA=Area Agency on Aging. RT=Rebuilding Together.

**Home Repair/Modification Personnel.** An organization's choice of home repair specialist may depend on several factors, including funding, decisions about the type of home repairs and modifications to be considered part of the CAPABLE program, and the type of participant homes to be served (e.g., single-family versus multi-family housing). Several partners noted the home repair arm of CAPABLE was a big draw for older adults, who were attracted to the idea that home hazards would be fixed. This means it's important to choose the correct home repair specialist to fit the home repair plans for the implementing organization's CAPABLE program.

As a nonprofit housing repair organization, NC already had their own home repair professionals, all of whom are certified Aging-in-Place Specialists (CAPS) through the National Association of Home Builders (NAHB) (See Step 4: Train the CAPABLE Team). This was in keeping with NC's CAPABLE program design, which went beyond handyman repairs JHU considers customary.<sup>j</sup> As noted in Step 1, NC decided to include accessibility modifications in its CAPABLE program and used separate funding to pay for these relatively more expensive tasks.

The VT team leader used maintenance staff they already had on hand, paying them separately for CAPABLE-related work. Both PA and CA contracted with independent contractors (a private handyman in PA; Rebuilding Together, San Diego in CA) to provide home repairs. About half the PA and VT participants lived in apartments, which tended to mean they were more in need of DME and AE than home modifications; therefore, the decision to use handymen/maintenance staff rather than construction companies made sense. CA originally planned to work in single-family homes and therefore hired Rebuilding Together San Diego for home repairs; however, about half of CA's participants actually ended up coming from two multifamily buildings. Rebuilding Together charged an administrative fee for each participant to help compensate for the reduced scope of work.

Implementing organization should carefully consider the culture and expertise of housing repair organizations to fill this role. Not all housing repair professionals may be suited for working with an aging population. In its training, NCHH included advice on how to work in partnership with the clinicians and with the older adults, building their trust and ensuring the work meets client CAPABLE goals.

**Registered Nurses.** Some Aging Gracefully RNs feel that RNs with previous home health nursing experience are best suited for CAPABLE work since home health nurses are used to working with participants in home settings. They noted, however, that home health nurses still have to shift their focus to working on participant-identified goals instead of the more common follow-up goals based on after-care for acute incidents. One CA nurse, whose prior experience had been in clinics, rather than in home health noted, however, that she thrived in the CAPABLE work: "It's been a really rewarding experience . . . It has opened my eyes to how hard it can be for people to come into a clinic. I know our director wants to see if we can use this pilot to bring home health into our clinic work."

RNs noted that having multiple nurses with flexible work schedules is an asset, because the workload is easier to share. Because Aging Gracefully was a demonstration project, all RNs got permission from their supervisors to fit CAPABLE work into their normal work routine. RNs working in a full CAPABLE implementation setting may be assigned to work exclusively on CAPABLE.

VT used staff nurses to provide CAPABLE services. These VT nurses were already working with other residents on Cathedral Square Corporation's "[Support and Services at Home \(SASH\)](#)" program and were therefore experienced in home health work. CA also utilized staff nurses; however, these nurses were used to working in clinic settings. In keeping with CA's strategic decision to focus on older adults who find it difficult to visit the clinic, CA decided to use a nurse practitioner for CAPABLE. PA and NC contracted with healthcare organizations for RN services, PA with Allied Health and NC with Triad HealthCare Network. VT, PA, and CA both generally had one or two RNs on the project at a time, while NC had three RNs on the project throughout the duration. Regardless of these personnel decisions, all the partner models helped their clients. Ultimately, Aging Gracefully RNs used words like "rewarding," "refreshing," and "positive" to describe their CAPABLE work.

*"[I've] worked in acute care, inpatient rehab, home health, and outpatient rehab, so [I've] done the gamut and this is the first time that [I've] been able to work with the patient, make recommendations, see the recommendations be fulfilled, and work with the patient, on a consistent basis. 95% of the time [in routine work], I think my recommendations don't come to fruition."*

- [Beth Murray, NC OT](#)

**Occupational Therapists.** As with the nurses, some Aging Gracefully OTs reported that being experienced in home health or skilled nursing facility work helped the transition to CAPABLE work with older adults. A VT OT, whose routine work was in a hospital setting working with patients who had acute brain injuries, said, "[I'd] never done home health, [CAPABLE is a] good learning experience. We're used to being the leaders, with them [patients] as a 'captive audience' staying overnight. Another challenge is that we [usually] have a specific timeframe in which we work with people—two weeks, a month—and then they go home, so shifting to six visits [over five months] is challenging because [I'm] used to

dictating the time of care . . . not a bad shift, just different. It is nice to see things followed through, just more deliberate than we're used to."

A CA OT noted this work made her realize the big difference between acute care and home health. In acute care, she said she spent a lot of time "putting in her two cents" on what she thought the patient should be doing. Learning that the participant should lead and made better progress if they led was eye-opening. Another OT commented that CAPABLE was more work than she expected and was too difficult to manage when working another full-time OT job.

All partners struggled to acquire and retain OTs, due to OT shortages and high demand. NC, which chose to hire OTs on their own time rather than through a contract with a healthcare partner, needed at least six months to hire. And the OTs were hired through a lucky encounter: The NC leader just happened to mention the project to staff at the Cone Health Foundation, who were intrigued and referred him two OTs. NC ultimately hired three OTs.

CA experienced a six-month delay in being able to acquire any OTs due to a severe regional shortage, with one or two contractor OTs on the project at a given time. VT decided to hire two OTs, but finding contract OTs with sufficient time availability for the lengthy OT visits was difficult, partly due to a general OT shortage in region. PA was the only location to contract with a healthcare organization for OT services.

Based on these partners' experiences, CAPABLE-implementing organizations should plan for a possible lengthy hiring period to find OTs, particularly for pilots or demonstrations. OT-hiring difficulties reflect Lin et al's findings, who reported that, based on current trends, demand for OT services will outpace the OT supply, with shortages expected to increase for all 50 states through 2030, and CA, FL, and TX expected to have the largest OT shortages. Northeastern states are projected to have the smallest shortages whereas states in the south and west are projected to have the largest.<sup>k</sup> In discussing issues surrounding OT shortages (e.g., aging of the U.S. population and insurance reforms in the ACA)<sup>l</sup>, Sandstrom (2017) noted that, while the typical user of OT and PT services are generally persons who have good access to healthcare, his study projects a growth in need for these services among historically underserved populations (e.g., persons of color living in low-income and near-poor households). A shift from hospital-based care to home-based care may help with this shortage as more OTs will be looking for jobs in the community. Also, as reported by many of the Aging Gracefully OTs, the work is rewarding. Organizations implementing full-fledged programs may find it easier to hire OTs to do this gratifying work.

**Purchasing Agents for DME, AE, and Other Products.** Implementing organizations may be unused to purchasing this type of equipment, particularly the everyday, non-medical home products such as cabinets and storage boxes for home organization and fall prevention, nightlights, and stepstools. It's important to plan in advance who and how these products will be purchased, stored, and delivered to either the home, the OT, or the RN. The CA OT reported that purchasing had to go through the clinic accounting department and took a long time; therefore, in the beginning of the project, by the time of the third OT visit (when OTs should begin training participants in how to use the equipment), home repairs hadn't been done and needed products hadn't yet been delivered. It slowed the CAPABLE process down, but they were able to work with JHU to create a smoother process.

The VT partner reported that as visits progressed and overlapped, it became evident that there was insufficient space at the partner's workplace to store bulky items like toilet risers and storage cabinets. Adequate advance planning can help alleviate this situation.

**Site Coordinator(s).** In Aging Gracefully, site coordination was provided by the primary subgrantee. For PA and VT, the project leader also acted as the site coordinator; for NC and CA, this was a separate position combined with recruitment or evaluation. All partners noted the vital importance of a Site Coordinator to help the team manage the CAPABLE process, resolve specific participant issues, and help



the team strategize together. For example, at a NC team meeting convened with the Site Coordinator, an OT said she had an issue in which a husband and wife were enrolled. The husband was highly engaged in the process, but the wife would constantly “shut him down.” The nurse had discovered a way to engage the wife, shared the strategy with the OT, which helped the OT better work with both participants.

If the OT, RN, and home repair specialist are employed by different organizations, the Site Coordinator position is crucial in ensuring adequate communication among the team members and convening in-person meetings to check participant status and work through pressing issues. Several clinicians noted that instant-messaging systems could have made communication between team members much easier. NC noted, even with meeting as a team every other month, there was a “steep learning curve” to figure out the best ways to communicate. Having a pilot program could help work out these types of kinks before full implementation. NC noted that “the value of this project is the follow-up and the working collaboratively to make the outcome more successful and sustainable.”

#### STEP 4: TRAIN THE CAPABLE TEAM

On seven occasions over the course of Aging Gracefully, JHU trained a total of 13 OTs and nine RNs. Over the course of two years, for example, CA lost three OTs and four nurses. When project first began, JHU conducted a two-day, in-Baltimore training for OTs and RNs. JHU later began offering an eight-hour online training at a negotiable cost. JHU training now consists of five hour-long online modules, at least three home visit simulations, white board videos, training manual review, and webinars.<sup>m</sup> Together these take about 12 hours of training. In addition to the training materials, JHU offers open office hours, the opportunity to review work orders, and connection to other CAPABLE sites (see JHU [FAQ](#) webpage for more information). Recognizing that staff turnover will occur, JHU no longer charges for training on a per-clinician basis over the usually three-year implementation support period.

JHU does not currently offer a CAPABLE handyman training course. For Aging Gracefully, NCHH conducted a one-hour course. Implementing organizations may want to explore options to provide CAPABLE training for home repair professionals, including how the participant and OT identify goals and the handyman work supports those goals. The handyman uses the OT scope of work (developed through brainstorming with the participant) to develop work specifications and conduct the work. Home repair specialists accustomed to assessing homes, identifying issues, and developing scopes and costs need to be educated in this change. Other training may also be pertinent: As previously noted, NC’s home repair professionals are all Aging-in-Place certified through NAHB. This training is a \$500 per person, three-day training in how to install accessibility modifications for older adults living at home. Other possible home repair training could educate housing professionals on how to work effectively with clinical systems.

To maintain the confidentiality of enrolled individuals’ private data collected during this project and in compliance with the Health Insurance Portability and Accountability Act (HIPAA) regulations, personnel with responsibility for health data collection and data management completed the three modules of the U.S. Department of Health and Human Services Office of Health Research Protections online Human Subject Assurance Training prior to initiating the project.<sup>n</sup>

## STEP 5: DECIDE ENROLLMENT CRITERIA

In Aging Gracefully, because we wanted to be able to compare our outcomes with those that JHU had found in previous research, we used almost identical enrollment criteria (see textbox). Some partners were

### Aging Gracefully Enrollment Criteria

1.  $\geq 65$  years of age;
2. Difficulties with  $\geq$  one ADL *or*  $\geq 2$  IADLs;
3. Household income  $\leq 80\%$  of annual median income (AMI), w/majority  $\leq 50\%$  AMI;
4. Cognitively intact based on a Short Portable Mental Status Questionnaire (SPMSQ);
5. Able to stand with or without assistance;
6. Not been hospitalized overnight  $\geq 4$  times in the past 12 months;
7. Not currently receiving in-home OT, RN, or PT services;
8. Not currently receiving outpatient PT services for balance or muscle strengthening (PT for post-surgery recovery within past 3 months was ok);
9. Not currently receiving active cancer treatment;
10. Planning to stay in his/her current home in the next year;
11. Comfortable speaking English (at the time, CAPABLE materials and evaluation forms were available only in English); and
12. Not residing in assisted living or other facility w/direct service medical care.

frustrated with these criteria. PA reported many people between the ages of 60 and 65, who had difficulties with several ADLs, likely could have benefitted from CAPABLE but could not participate due to these criteria.

In part due to the regions participating in Aging Gracefully, participants were primarily white women living alone in apartments in micropolitan areas. CAPABLE-implementing organizations may want to conduct a community needs assessment to identify the demographics of the older adult population before identifying appropriate eligibility criteria. Several Aging Gracefully communities chose to add their own requirements or focus on specific communities. In NC, participants had to be homeowners because this is a requirement of the home repair service provider. CA did not add criteria but did strategically

decide to focus on older adults living in San Diego housing for the formerly homeless, many of whom, for one reason or another, find it difficult to visit their clinics.

Because the evidence base has proven CAPABLE's effectiveness with participants who meet the criteria shown in the text box; implementing organizations should perhaps start with these criteria, then adjust as necessary according to the findings of their community needs assessment.

## STEP 6: RECRUIT CAPABLE PARTICIPANTS

NC, VT, and CA carried out their own participant recruitment. PA partnered with another branch of their larger organization and a local Area Agency on Aging. Partners needed an average of 10 months to reach their enrollment goals, which varied by site from 30 to 50 participants. Partners were particularly successful in enrolling extremely low-income older adults, with over 50% having incomes less than 30% AMI. Innovative recruitment strategies are summarized below.

**Local Area Agencies on Aging** (AAA, specific names may vary) (PA).<sup>o</sup> AAAs are public or private non-profit agencies designated by the state to address the needs and concerns of all older persons at the regional and local levels. They coordinate and contract with local providers to deliver services such as meals, disease prevention, health promotion, transportation, and in-home services. Most AAAs are direct providers of information and referral/assistance, case management, benefits/health insurance counseling and family caregiver support. AAAs were formally established in the 1973 Older Americans Act as the "on-the-ground" organizations charged with helping vulnerable adults 60 and over live with independence and dignity. In 2016, there were 622 AAAs, located in virtually every U.S. community. While AAAs face stagnating funding and stretched staff, limiting the amount of staff time they could contribute to this endeavor, 41% of AAAs serve in rural areas,<sup>p</sup> meaning they may be a good way to locate persons in need

in a scattered housing areas. AAA may be found by zip code via the Eldercare Locator website ([www.eldercare.org](http://www.eldercare.org)) or by speaking with an information specialist at 800-677-1116.

**Senior Day Centers, Libraries, and Other Senior Centers (NC, CA).** This was CA's primary recruitment strategy and included two housing complexes dedicated to low-income, formerly homeless seniors and Serving Seniors, a local non-profit providing meals and community space to low-income older adults. Other community partners programs could recruit through programs such as Meals on Wheels or through congregational nurses and worship centers.

**Physician referrals:** CA tried to use this strategy, but despite several meetings/training with staff physicians, they got few if any referrals from doctors. NC, on the other hand, received the largest number of referrals from a gerontologist formerly with Cone Health. This physician sent fliers to a physician practice predominantly serving the elderly, and these physicians paved the way for older adults to enroll.

**Patient records (CA, NC).** Two healthcare organizations planned to primarily recruit through patient records. Early on, CA wanted to recruit participants from the clinic's patient base and did not plan to look outside the clinic at all. Because of the nature of their clinic's low-income population base, most have MediCAL and therefore would easily have met the income requirements. CA did comprehensive assessments of the clinic's older adults, screening out patients who were already receiving OT/RN/home care. If data indicated the patient could benefit from CAPABLE, they informed the provider, so he/she could speak with the patient about the program. As they implemented this plan, however, they encountered difficulties: providers often did not initiate CAPABLE conversations with patients, or the patient was reluctant to enroll. In addition, many clinic patients were not comfortable speaking English and therefore could not participate. Based on this experience, CA changed their recruiting strategy to focus on formerly homeless older adults.

NC originally wanted to recruit people who "fell off the map" with respect to follow-up care after hospitalization; however, the NC field person reported that, when she met with these older adults, they often reported no health or physical function issues and therefore did not meet the ADL/IADL eligibility criteria. NC attributed this to a general fear among their older adult community that "they're going to get reported to adult social services and they're going to be pulled out of their house and made to live where they don't want to live . . . .So there is a trust factor."

**Recruitment Fliers (NC).** As noted above, NC found great success in using recruitment fliers, particularly among physicians who care for older adults.

During recruitment, NC noticed that caregivers (often children of the older adult), not the older adults themselves, often in response to recruitment fliers. In these cases, the older adult often proved ineligible, e.g., due to dementia or other mental health struggles. Caregivers often tried to answer questions for the older adult. Partners worked with JHU and each other to carefully address these situations with caregivers, who were often desperate to get help for those in their care.

**Buildings Affiliated with Implementing Organization (PA).** PA was already providing social services in several public housing buildings and chose to recruit older adults from these homes. This proved efficient, but PA noted that these apartments were in good shape and needed little if any handyman work.

**Existing Implementation Organization Programs (PA).** Federal funding which Catholic Social Services (the PA partner) received from HUD's Resident Opportunities and Self-Sufficiency (ROSS) Grant Program allowed PA to recruit people they were helping through ROSS, although some fell below Aging Gracefully's specific age criterion. This would not be an obstacle for other implementing organizations, who could set age criteria based on their community needs.

**Baltimore Recruitment Experience.** Nkimbeng et al. (2018) reported on the effect and cost of the JHU's Baltimore CAPABLE recruitment strategies, which were similar to those used in Aging Gracefully.<sup>4</sup> Of the 300 participants, 35% were recruited through mailings (with direct costs of \$745.71/participant), 19%

through existing government programs, 16% through referrals from community-based organizations, and 15% through an ambassador program in which past CAPABLE participants were reimbursed \$20 for each new participant enrolled into the program on their referral.<sup>1</sup>

**Summary.** The NC team leader noted they “screened a ton of people but unexpectedly many did not qualify,” noting three main reasons why screened individuals did not ultimately reach full eligibility:

1. The participant may have passed the phone screen (which asked age, income, whether person currently lived in assisted living or other place that provides direct medical care) but at first visit was found to have issues such as dementia, or they could not answer a short mental status questionnaire.
2. Many children of older adults called wanting to enroll their parent. The children did the screen, but during the first visit, the parent either would not or could not answer the eligibility questions.
3. Health status: Someone’s health challenges (e.g., unable to stand with or without assistance) couldn’t be fully ascertained until the first visit.

The VT Site Coordinator, on the other hand, reported they often encountered people who identified themselves as “too fit” to benefit from CAPABLE. The PA Site Coordinator said that, surprisingly, the older adults (80s/90s) were the ones who reported few ADL difficulties and were resistant to help. She recommended enrollment staff take the time to make sure participants fully understand the purpose of the eligibility questions, i.e., they understand that no one is trying to take away their independence; therefore, they can answer eligibility questions frankly.

## STEP 7. PROVIDE CAPABLE SERVICES

*“At the completion of the work in the bathroom, which involved installing safety handrails and a shower chair, that evening, I went in to take a shower for the first time in what was for me essentially a new bathroom. I noticed when I got out of the shower when I was finished that I had been in the shower for over thirty minutes. The reason I had been in there for so long is that I was sitting on the shower chair crying. I know that sounds mushy, but what was causing me to cry was the realization that it was the first time in approximately 10 years that I had been able to shampoo and shower using both hands, and not just one hand, because I was no longer grabbing for the wall. I felt safe and secure and it made all the difference in the world.”*

- [Madeline Reed, Aging Gracefully Homeowner](#)

The four Aging Gracefully partners provided CAPABLE services to a total of 153 participants, needing an average of five months per participant to complete CAPABLE. Considerations in providing services are summarized below.

**Timeline of CAPABLE Services.** When designing the CAPABLE programs, teams need to discuss how to juggle the CAPABLE visit timeline, with participants at different visit stages. VT, for example, decided to batch their participants so that OTs and RNs were visiting a specified number of participants each month.

Another consideration is whether to hire full-time or part-time OT and RN CAPABLE work. Due to Aging Gracefully’s set project timeframe and enrollment goals, partners did not hire full-time OT or RN personnel. OTs and RNs added CAPABLE visits to their normal load during working hours and/or conducted CAPABLE visits before or after their normal workday. As partners enrolled more participants in the project, the CAPABLE workload became increasingly complex, it became more difficult to do visits during these time periods, which led some partners to hire additional staff. At some partner sites, home modifications, especially if complex, took longer than expected, slowing the CAPABLE visit pace. OTs had to wait until these

modifications were in place before educating participants in their safe use.

Even an efficiently designed and well-planned CAPABLE program will encounter delays. Several Aging Gracefully clinicians noted that some participants forgot their goals or their practice regimen, especially if the lag time was lengthy. Participants may be dealing with many different healthcare providers and find it

extremely difficult to keep them all straight. Clinicians also noted that participants changed their minds between visits, frustrating the process if home modifications and equipment had already been ordered. Continued rapport with participants is crucial to maintaining trust. Building in staff time for phone calls during lag periods helps remind participants of their goals and upcoming activities and plans. In apartments, partners noted it was relatively easy for the site coordinator to drop by and say “hi, we haven’t forgotten you” to many participants. In NC participants, the site coordinator established a routine call process (with or without visit delays), so participants stayed engaged.

**Participant-staff rapport.** Despite extensive JHU training, some partner OTs and RNs reported difficulty establishing rapport. Some participants were extremely reluctant to voice their needs. They were used to healthcare staff diagnosing needs and dictating care plans. Others were reluctant to admit frailty through fear of losing their independence, while still others saw themselves as much better off than their peers, despite obvious physical limitations. Some OT and RN staff, particularly those new to the profession or those with little or no home healthcare experience, found it difficult to adopt the CAPABLE approach of letting the participant “drive the bus.” Community learning, through webinars and connecting experienced staff with less experienced staff, greatly helped meet this challenge.

**Services provided.** Aging Gracefully participants participated in six to ten total CAPABLE clinician visits, with an average of the 10 JHU-recommended visits. JHU currently recommends a minimum of eight (six OT and two RN) visits per participant.<sup>s</sup> These visits, particularly the early ones, can be lengthy. Both OTs and RNs noted their first visit took 60 to 90 minutes, during which they gave participants “the big CAPABLE” picture and had free-form conversations to give participants time to feel comfortable in conversing about CAPABLE goals.

CAPABLE interventions generally include both home modifications and equipment (DME, AE, and everyday items). In Aging Gracefully, most home modifications and equipment focused on the goals of fall prevention and personal care. Participants in single-family homes tended to get more home modifications, while participants in apartments or condominiums tended to receive more equipment.

| Aging Gracefully Most Common Interventions  |   |
|---|---|
| Home Modifications  | Durable Medical Equipment/Assistive Devices   |
| <ul style="list-style-type: none"> <li>• General fall prevention, grab bars</li> <li>• Miscellaneous home repairs</li> <li>• Home organization</li> <li>• Floor repairs</li> <li>• Home safety devices</li> <li>• Door repairs</li> <li>• Home accessibility modifications</li> </ul> | <ul style="list-style-type: none"> <li>• Non-grab bar fall prevention items</li> <li>• Personal care items</li> <li>• Sleep-related items</li> <li>• Bathroom fall prevention items</li> <li>• IADL aids</li> <li>• Pain reduction items</li> <li>• Safe mobility/transfer equipment</li> </ul> |

**CAPABLE Goal-Setting.** This is one, if not the, most critical aspect of CAPABLE, working with participants to identify three goals. OTs among all four Aging Gracefully partner sites were “surprised at how hard it is for people to come up with goals . . . not for a lack of trying.” The PA OT said that about 50% of her participants knew exactly what problems they wanted to focus on, while the other 50% thought she, the OT, should dictate what the participant needs. With advice from JHU, OTs found that gently working with participants to probe deeper into their ADL difficulties helped clarify problems and safety hazards for participants. The PA OT said that OTs need to help participants “turn on that light bulb.” She gave an example: “One participant had a lot of back pain but couldn’t recognize how that affected her function. She liked cooking but couldn’t stand. She went to art classes but couldn’t stand. I did functional standing tolerance, and it improved function in multiple areas beyond just dealing with back pain. They know their impairments but don’t know how to make an end goal to improve function.” The OT and RN help the participants do just that.

The NC OT said, in her initial conversations, she notes everything a patient says is a bit difficult, then when they later say they're fine (no goals), she circles back to these mentioned difficulties, and usually the patient ends up being able to identify three things they want to work on. She also used observations such as, "It seemed to me like you had some trouble getting up" and gauged how they responded.

## STEP 8. RETAIN PARTICIPANTS

Over the course of Aging Gracefully, 24 enrolled participants were lost to follow-up. Reasons included participants passing away, moving into assisted living or other medical facilities, becoming too ill or being injured to participate, no longer wishing to participate, or staff simply not being able to contact them after repeated attempts.

CA experienced a particular difficulty in maintaining contact with enrolled participants. Staff noted that formerly homeless move frequently and are not used to needing to stay in contact over a period of months with healthcare personnel. Some also had a general anxiety about opening their doors, even when appointments had been set up. The Site Coordinator, who knew many of the participants from his previous employment, had to do a lot of handholding and trust building to maintain CAPABLE services. Despite the extra time needed, these efforts helped keep participants engaged and enthusiastic over the five-month CAPABLE period.

In NC, OTs and RNs encountered situations where a participant was suddenly unable to be contacted. If the participant was a Cone Health patient, they decided that they could search the patient's records to see if the patient was experiencing health difficulties. In general, rather than de-enrolling the participant, they put CAPABLE services on hold until the participant returned home.

Despite challenges, through careful planning and sufficient time allotment to Site Coordinator-participant communication, Aging Gracefully partners retained over 80% of participants over the three-year project period which compares favorably to other long-term programs.

## STEP 9. RETAIN STAFF

Staff retention was a persistent challenge. All partners reported difficulty hiring OTs, in part due to the short-term nature of this project, but also due to regional OT shortages. PA was the only partner to retain the same OT and RN staff throughout the project. CA, on the other hand, lost and replaced their OT four times, requiring substantial time for hiring in an OT-scarce region. We did not collect data on the reasons for staff attrition over the Aging Gracefully study period, so it is unknown whether the causes were related to the project work or due to other factors.

This amount of staff turnover posed the additional issue of training for new staff. As discussed under step 4, JHU accommodated the need to quickly train new staff. The more recent availability of online training modules greatly helped with this need.

Partners also had to take measures to ensure that timelines wouldn't be too disrupted by staff turnover. One of VT's two RNs left the project partway; however, VT agreed to give the remaining RN sufficient time from her other duties to complete the CAPABLE work.

## OTHER STORIES OF OBSTACLES AND SUCCESSES

In addition to the considerations in the above steps, learning about other obstacles and successes Aging Gracefully partners experienced may help implementing organizations avoid the obstacles and experience the same successes.

### OBSTACLES

**Scheduling Challenges.** Aging Gracefully participants frequently canceled appointments on short notice, which made it difficult for OTs to adjust their schedules. Some OTs were already constrained by their full-time jobs, so finding available time was extremely difficult. Obviously, this would not be as great an obstacle if CAPABLE staff had time allocated specifically to visits. JHU reports that some programs utilize clinicians on a per-diem basis, some part time, and some full time.

*“Be aware of the tremendous amount of coordination involved in coordinating potential contracted OTs and RNs, keeping up with the ordering of supplies, delivery of supplies and invoicing.”*

*- Sabine Chabot, Cathedral Square Corporation*

**Utilization of Handyman.** Utilization of the handyman or home repair professionals may vary depending on the implementing organization’s capabilities and its relationship with the other team members. Some Aging Gracefully partners felt the handyman aspect was under-utilized, that participant homes needed more health and safety modifications than were provided. Some partners’ decisions to focus on participants in multi-unit rental properties often limited the types of home modifications because some buildings already had items such as grab bars. In some buildings, landlords were reluctant to allow home modifications in one apartment without offering them to all apartments in the building. JHU, however, notes that they have “never had a landlord say no.” VT’s team noted that the project was bringing needed repairs to community members who otherwise would not have been able to afford safety improvement to their homes. When implementing CAPABLE, organizations should keep in mind the value of the home repair aspect and the expertise its professionals can provide.

**CAPABLE for Older Adults Who are Uncomfortable Speaking English.** At the time Aging Gracefully was initiated, CAPABLE materials were available only in English; therefore, we had to enroll older adults who were comfortable speaking English. This was a hindrance, particularly in CA, where a large percentage of potential participants spoke Spanish. Currently, JHU also has Spanish-language, Mandarin, Russian, and Vietnamese materials available. CAPABLE teams, particularly OTs and RNs would need to be able to deliver CAPABLE services in the appropriate language(s). Simply having a translator may not be sufficient, given the dependence of the program on brainstorming and open exchange of personal health information among the clinicians and the participant.

### SUCCESSES

**Influence of Existing Programs on Initiation and Implementation.** It definitely was a positive for Community Housing Solutions in NC to have an existing home repair program, which gave them credibility with Cone Health, who knew CHS had respect in the community. All of CHS’ construction staff were already CAPS certified, and most had extensive experience working with older adults and knew how to interact with participants.

*“There is not another program doing this kind of work, where the owner gets both health education and home repairs together [...] This program is a true benefit to homeowners.”*

*- Gene Brown, Community Housing Solutions*

One NC participant had a leaking roof at enrollment. Because of its routine work, CHS was able to repair the roof using non-Aging Gracefully funding. The participant was thankful and relieved that her roof no longer leaked. NC’s Project Director definitely feels this type of service was a strength in getting and keeping people into the Aging

Gracefully project and will continue to be a plus when NC scales up the program. Several other partner staff, both in NC and other regions, noted that a main draw for participants was the home repair piece,

with many people wanting their homes fixed and not being as interested in the OT and RN piece. Having a strong home repair organization as the lead organization may help engage older adults and also provide a way for non-goal, deferred maintenance and safety home repair issues to get addressed.

Because VT recruited many people from the properties they manage, they already knew and had ADL/IADL data (through the SASH program) which allowed them to target these folks for maximum success. However, some of the residents who were already part of SASH were reportedly overwhelmed by the added CAPABLE visits. VT later shifted to enrolling people who were not yet in SASH, to alleviate these issues.

**Success with the people CAPABLE served:** All four partner teams repeatedly spoke of substantial positive participant feedback, particularly with the coping strategies, equipment, and home modifications that made them safer in their homes.

The NC project director observed that CAPABLE inspired some homeowners to do more than what CAPABLE recommended—for example, motivating people to start exercising, volunteer in community, and stop smoking. He noted the program restored purpose in older adults because they were trained and were able to use their homes more purposefully.

**Success in improving older adult physical function and mental health.** The research portion of Aging Gracefully found that participants experienced significant improvements all key health outcomes—ADLs, quality of life, falls efficacy, depression, and pain interference with normal activities. Participants reduced their ADL score by two points. They reported having difficulty with an average of 3.7 ADLs at baseline versus 2.1 after CAPABLE. A change of 1 point is considered clinically important. CAPABLE yielded a more than 20% increase in the percentage of participants who reported no difficulty with bathing, lower body dressing, getting in and out of beds and chairs, using the toilet (almost 40% increase), and walking across a small room. More details on the gratifying Aging Gracefully health outcomes will be detailed in the manuscript currently in development. These improvements were significantly greater than any changes experienced by a control group, which had not yet received CAPABLE services.

*“I believe we have successfully been able to keep people in their homes and prevent nursing home placements. Also, increasing their independence. There were individuals who received assessments who would not have without [this] program. This was due to outreach that was done for the program. These individuals also would not have been able to receive equipment because of their income. There is a lot of poverty in our area.”*  
- Roxanne Foy, Catholic Social Services

**Success with the people providing the services:** The NC team noted that, in their routine work, OTs and RNs provide education to patients on needed home modifications but have no way to guarantee that work will get done. In CHS’s routine work, they can do a home modification but cannot provide education on the safe way to use the modification. CAPABLE training with the participant on the actual home modifications was something OTs and RNs hadn’t experienced before, and they loved that they could do follow-up training once modifications were in place. The home repair personnel loved that fact that participants learned the safest way to use the home accessibility and other home modifications they installed.

One PAs team member observed she liked the way CAPABLE utilized OTs and the independent OT evaluation. She thinks it’s appropriate that the OT be “in charge” of coordinating services. Allied Health in PA has, in fact, done some one-time OT evaluations to make a person safer, but this is usually requested by a child who lives far from the parent and paid for with private funds. CAPABLE is quite valuable from both an OT and RN perspective because of the checks on meds, co-morbidity, and reduction in ADL limitations.



## LIMITATIONS AND SUSTAINABILITY OF THE AGING GRACEFULLY PARTNER CAPABLE PROGRAMS

As of the end of the Aging Gracefully project, NC is the only one of the four partners actively planning to continue to sustain and grow the CAPABLE program in their region. Partner staff at the other three sites offered insights about why they chose not to pursue CAPABLE scale-up at this time:

**Vermont.** Since VT is fully invested in their SASH program, which provides some services similar to CAPABLE, they will not be continuing the program. Given their SASH commitment, they are unable to fund the CAPABLE program in regards to staffing and supplies. They struggle to find funding for the well-established SASH program and do not have capacity to take on another program without some melding of the two programs. They do plan to discuss the critical lessons they learned to any future plans. They have had discussions with JHU about ways to possibly meld SASH assessments and visits with aspects of CAPABLE, particularly the home repair component.

**Pennsylvania.** The loss of key Catholic Social Services staff during the Aging Gracefully project made it difficult to discuss extending CAPABLE. Allied Health staff reported they currently have three programs that touch people in their homes and therefore do not have the capacity to engage further in CAPABLE at this time:

- In-Home Services: Incremental care to stabilize people so they can remain in their homes.
- Medical Home Health: Sees 65% of Medicare patients through physician referrals and includes PT, OT, speech therapy, and certified home health aides.
- Hospice Care: A relatively small program serving about forty patients in the community, offering palliative care.

Allied noted that Pennsylvania is moving into managed care, so service coordinator functions are disappearing in the state. Managed care will be in Allied's region by 2020. In some cases, home modifications (e.g., grab bars, ramps) can be ordered and paid for by the state, but that ability is very limited in reach and mostly for disabled, who move around a lot; therefore, the state is reluctant to pay for changes to multiple homes. Allied's Executive Team has had ongoing discussions about creating a program, potentially named "Safe at Home," that would include home visits with options for physicians to "admit from home," i.e., a physician directs a person to be admitted to a rehab to increase strength to prevent ER visits and move to skilled nursing facilities. Allied noted a need for healthcare payers or managed care organizations (MCOs) to embrace programs like CAPABLE, but also noted these organizations are unaware and extremely slow to change their model of care. She is unsure how to get the word to these organizations and get them interested. She feels there is a population being missed in current care structure – folks whose income exceeds current thresholds and are not Medicaid eligible. For these folks, she envisions a program to be provided partially using funding and partially using co-pay, possibly from the younger generation. The best way to identify these participants would be to ensure that the younger generation would be able to find this funding/co-pay services when searching online for help for their parent(s). Referrals from the medical side would still probably miss a lot of people in need of holistic services to stay in home. Providing this funding/co-pay service and allowing it to catch on, and then collecting testimonials and data, could then get MCOs and others interested enough to take the program on.

In early 2019, when NCHH spoke with Allied staff, Allied was unaware the Center for Medicare and Medicaid Service's (CMS's) interest in funding a program like CAPABLE, e.g., as part of Medicaid waivers or in Medicare. Allied stated that funding is the largest stumbling block to sustaining this program. They suggested that MCOs would find information on the value of interventions and long term savings important in terms of providing the funding. Currently, a PA waiver allows for home modifications through Service Coordination activities, but these soon will be at the discretion of the PA MCOs. MCOs are already directing waiver services in many other states, and may be providing some of

these interventions through the waiver funding. As described below, JHU has explored the possibility of Medicare reimbursement for CAPABLE. Other possible funding ideas include having CAPABLE costs be approved expenses in flexible spending accounts or health saving accounts, or collaborating with low- or no-interest loan programs that already exist to help with home repairs.

**California.** CA also has a relatively new Program of All-Inclusive Care for the Elderly (PACE), which they are currently focusing on, so they will not be continuing with CAPABLE in order to not split resources between the two programs. Staff noted some structural issues with CAPABLE that would make it challenging to sustain the program. CA feels that the best way to make the CAPABLE program sustainable would be if insurance providers such as Medicare would cover it but that would require getting referrals from physicians, and there are currently no criteria for physicians to use in a clinic setting to refer patients to the program. Second, as described above one of the biggest challenges for the CA evaluation was their focus on the formerly homeless; in order to build trust with this population and keep the visit schedule on track, the Site Coordinator spent a lot of one-on-one time with participants. To make that workload feasible in the long-term, CA would ideally employ two people, adding to the costs of the program. Finally, CA staff disagreed that the 10-visit regimen of CAPABLE was necessary for participant success in most cases.

## INFLUENCE OF JHU CURRENT CONFIGURATION AND MEDICARE/MEDICAID PLANS ON FUTURE OF CAPABLE

Medicaid programs can cover CAPABLE through their 1915 waivers, with approval from CMS. For example, CMS has approved coverage of CAPABLE in Massachusetts' Medicaid Frail Elder Waiver program.<sup>4</sup> To our knowledge, at least one program has tested CAPABLE implementation via Medicaid. In Michigan, four sites participated in a three-year evaluation of CAPABLE, providing services through the state's Home and Community-Based Services 1915(c) Medicaid waiver.<sup>5</sup> In this study, the implementing organization made the following adaptations in the CAPABLE process:

- RNs served as team leaders rather than OTs;
- Social workers were added to the care team;
- The delivery period was extended from 20 to 32 weeks;
- Flexibility was allowed in the number and type of home visits.

Similar to Aging Gracefully, the Michigan study found that CAPABLE participants experienced greater improvement in ADLs, IADLs, and fall rates, also compared with those of a comparison group who received more typical care provided by the waiver.<sup>6</sup>

Ruiz et al. estimated that CAPABLE as executed by JHU in Baltimore reduced total Medicare expenditures by an average of \$2,764/quarter (\$11,000/year for 2 years or \$22,000) for participants relative to comparison group, mostly due to reduced inpatient and outpatient expenditures.<sup>7</sup> Ruiz et al. also found that CAPABLE was associated with reduced readmissions and observation stays. In a single-arm clinical trial, Szanton et al (2018) found that average Medicaid spending per CAPABLE participant was \$867 less per month than that of their matched comparison counterparts, with the largest expenditure reductions in inpatient care and long-term services and supports.<sup>8</sup>

In June 2020, JHU presented CAPABLE to the PTAC (Physician-Focused Payment Model Technical Advisory Committee), which decides which innovations to advance to CMS. PTAC members unanimously voted to forward CAPABLE on to CMS to be considered for a broader scale that could ultimately lead to Medicare reimbursement. The CAPABLE approach has also been highlighted as promising in a report from the Bipartisan Policy Center.<sup>9</sup>

## CASE STUDY: NC SUSTAINS AND GROWS THEIR CAPABLE PROGRAM

Building from their positive experience, the two primary Aging Gracefully NC organizations—Cone Health and Community Housing Solutions—have set a date to begin their continuation and scale up of CAPABLE in their region, effective March 2, 2020. Challenges and successes they’ve experienced in this pursuit are summarized below.

**Staffing.** In NC’s current efforts to grow and sustain CAPABLE, providing OTs during the demonstration project was the biggest hurdle. They have enough RNs, but their partners at Cone Health have had to work harder to acquire a full-time OT. Staff are unsure why obtaining OTs for CAPABLE is so difficult – it could be that OTs are in high demand for other work, or OT employers are reluctant to spread OTs out over wider scope of services. Cone Health did recently approve hiring an experienced OT for the CAPABLE work.

**Structure.** The team needs to develop an efficient referral system. Cone Health needs to figure out how best to refer people to the program, and whether Community Housing Solutions will also be able to refer people they encounter in their home repair work. The team is also deciding who will make the first contact with potential CAPABLE candidates. The medical profession may see the CAPABLE program as medical care and therefore want to take the lead, but as NC keenly observed during Aging Gracefully, people are drawn to the home repair component and may enroll more readily if the home repair specialist makes the initial call. It is also possible, however, that older adults may suspect a “scam” if a home repair professional makes the first contact. The implementing organization needs to know which home repair professionals have credibility in their communities. CAPABLE uniquely combines the credibility of medical providers and the draw of getting home repair services paid for.

The team is also determining how and where to capture and store CAPABLE data. Aging Gracefully used Vanderbilt’s REDCap HIPAA-protected data platform, but if the continuation is incorporated into the health system, other data infrastructure such as EPIC may prove more feasible.

**Cost.** NC has been able to negotiate a lower price for the CAPABLE license and training from JHU due to their “pioneering” involvement through the Aging Gracefully project. JHU initially quoted \$20,000 for three years of training, support, and licensing; the final cost came to \$5,000 for three years, with the agreement that NC would contribute stories, lessons learned, and data from their implementation experience.

The CHS project director has secured the \$150,000 he estimates is needed for the first year for home repairs to continue with CAPABLE. For sustainability to be attractive to Cone Health, they need to have a larger scale than the 22-people per year Aging Gracefully cohort size, so CHS estimated 50 people/year at \$3,000/person for home repairs (both CAPABLE home modifications and access modifications). Because of NC’s Aging Gracefully work, and various team members reaching out and sharing stories about the project work, other local Greensboro organizations are interested and finding ways to fund the home repair portion. Community partners who have committed to funding the program in its continuation include:

- United Way of Greater Greensboro - \$75,000 per year for 2 years
- St. Francis Episcopal Church - \$20,000 per year for 3 years
- Weaver Foundation - \$27,500
- Wells Fargo Foundation - \$25,000
- Tannenbaum-Sternberger Foundation - \$7,500

The team has also discussed various opportunities within public funding. One of NC’s Medicaid waivers will now pay for home modifications; in addition, the Medicare Advantage Plan now includes home repair services. One potentially relevant factor is that patient satisfaction is a big part of Medicare

Advantage contracts from states, and Aging Gracefully participants expressed great satisfaction with their CAPABLE services.

**Criteria.** NC teams have discussed where participants will come from and whether they'd change the criteria from Aging Gracefully, but have made no final decisions. If Cone Health becomes the project lead, perhaps they'd only take participants from within their healthcare system, but perhaps they'd also enroll CHS participants who need home modifications but are outside the Cone Health system. The initial client eligibility criteria the team plans to use beginning March 2, 2020 are:

- 65 years of age or older
- Guilford County resident
- Owner-occupied home
- Minimum of one ADL or two IADL limitations
- Household income below 80% annual median income as determined by HUD.

## SUMMARY

One of the underlying considerations at heart for both North Carolina and any other site looking to implement CAPABLE is the effort to reproduce the program with fidelity to the original JHU approach, which has been proven to produce positive results, while ensuring that their program will work for their own communities. CAPABLE was launched in the urban environment of Baltimore; the Aging Gracefully evaluation and others have demonstrated it can effectively serve participants in smaller regions, in a variety of delivery systems and settings. The steps to implementation, challenges, and successes outlined in this paper serve as a road map other programs can use to initiate and implement CAPABLE in their towns and cities, helping older adults in their communities age gracefully in place.

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<sup>b</sup> Manchanda, R. *The Upstream Doctors: Medical Innovators Track Sickness to its Source*. TED Conference, LLC. ISBN-13: 2940016793696. Published 5/13/2013

<sup>c</sup> Szanton SL; Xue Q; Leff B; Guralnik J; Wolff JL; Tanner EK; Boyd C; Thorpe, Jr RJ; Bishai D; Gitlin LN. 2019. Effect of a biobehavioral environmental approach on disability among low-income older adults: a randomized clinical trial. *JAMA Internal Medicine* 179(2):204-211

<sup>d</sup> CAPABLE FAQs. Available at: [https://nursing.jhu.edu/faculty\\_research/research/projects/capable/capable-faqs.html](https://nursing.jhu.edu/faculty_research/research/projects/capable/capable-faqs.html). Accessed 1/14/2020

<sup>e</sup> Szanton, S.L., et al., 2014. CAPABLE trial: A randomized controlled trial of nurse, occupational therapist, and handyman to reduce disability among older adults: Rationale and design. *Contemporary Clinical Trials*. 38(2014): 102-112

<sup>f</sup> U.S. Census Population Estimate. 2017. Greensboro, NC. Available at: [https://www.google.com/publicdata/explore?ds=kf7tgg1uo9ude\\_&met\\_y=population&idim=sub\\_county:3728000:3775000&hl=en&dl=en](https://www.google.com/publicdata/explore?ds=kf7tgg1uo9ude_&met_y=population&idim=sub_county:3728000:3775000&hl=en&dl=en). Accessed 1/21/2020

<sup>g</sup> U.S. Census Population Estimate. 2017. Wilkes-Barre, PA. Available at: [https://www.google.com/publicdata/explore?ds=kf7tgg1uo9ude\\_&met\\_y=population&idim=sub\\_county:4285152:4269000:4233408&hl=en&dl=en](https://www.google.com/publicdata/explore?ds=kf7tgg1uo9ude_&met_y=population&idim=sub_county:4285152:4269000:4233408&hl=en&dl=en). Accessed 1/21/2020

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