JULY 2019

Housing and Healthcare Integration for Low-Income Seniors:

Experiences with an Effort to Launch an Innovative Initiative

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About Long-Term Quality Alliance

The Long-Term Quality Alliance (LTQA) is a community of organizations aimed at improving outcomes and quality of life for persons and their families who are managing functional limitations due to chronic health conditions. It draws member organizations from the full range of health care and social services delivery systems involved in provision, administration, innovation, policymaking, and advocacy for quality long-term services and supports (LTSS). LTQA advances person-centered, integrated LTSS through research, education, and coordinated public affairs and government affairs efforts. LTQA members work together to identify effective models of LTSS integration, build the business case, catalyze consensus, and encourage broader adaptations for financing LTSS integration. For more information, see www.ltqa.org.

About West Health Policy Center

The West Health Policy Center is focused on research and education to identify innovations and policy solutions that can slow the trajectory of rising healthcare costs while improving access to—and the quality of—care, particularly for our nation's growing population of seniors. Specific areas of focus include reducing growth in U.S. spending on prescription drugs, promoting value-based care models, increasing price transparency, and limiting consumer exposure to high out-of-pocket costs. Solely funded by philanthropists Gary and Mary West, the Policy Center is based in Washington, D.C., and is part of West Health, a family of nonpartisan, nonprofit organizations dedicated to lowering the cost of healthcare to enable successful aging.

About LeadingAge Massachusetts

LeadingAge Massachusetts, is the only organization representing the full continuum of mission-driven, not-for-profit providers of health care, housing, and services for older persons in Massachusetts. Members of LeadingAge Massachusetts provide housing and services to more than 25,000 older persons in the Commonwealth each year. The services and settings offered by LeadingAge Massachusetts members include Continuing Care Retirement Communities, skilled nursing and rehabilitation facilities, residential care facilities, assisted living residences, independent, congregate and supportive senior housing, PACE programs, home health services, adult day health, and transportation. The mission of LeadingAge Massachusetts is to Expand the World of Possibilities for Aging. We strive for this by leading in innovative practices that transform how we care for our aging population, spear-heading cutting-edge initiatives to develop services that meet older adults' needs and preferences, and advocating to advance the interests of the aging consumer.

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Executive Summary

Our nation is challenged to provide appropriate healthcare for older Americans, whose ranks are growing daily. Many older Americans are not getting the comprehensive medical care and social services that can help them successfully age in place and maintain their independence, dignity, and quality of life. This is especially true for the vulnerable population of low-income seniors dually enrolled in Medicare and Medicaid. Around the nation, several notable efforts are underway in the search for sustainable models of integrated housing and healthcare. From the initiatives in Vermont, Oregon, Pennsylvania, and elsewhere, we are seeing better health outcomes and quality of life – and in some cases cost savings, from these efforts.

To further the work in this field, in 2016, the Long-Term Quality Alliance (LTQA) partnered with the West Health Policy Center and LeadingAge Massachusetts to test a potential model of integrated long-term services and supports (LTSS) for seniors living in affordable housing in the Boston area. These seniors were dually eligible for both Medicare and Medicaid and enrolled in integrated care plans. The goal was to determine if the Housing and Healthcare Integration Initiative (the Initiative) could demonstrate value (e.g., improved outcomes and cost savings) using a housing-based team to coordinate residents' care and services with their health plans.

The Initiative sought to address three challenges demonstrated by earlier efforts to provide ongoing care coordination for residents of senior affordable housing:

1. Develop a sustainable method of financing the added staff in the buildings;
2. Connect the housing-based teams with residents' integrated care plans as an extension of the plans' care teams; and
3. Achieve a critical mass of residents in order to enable the housing-based teams to efficiently serve residents and demonstrate value to their integrated care plans.

After more than two years of work, the Initiative ultimately did not launch given the challenges faced in development. The team identified and sought to address several remaining challenges affecting the potential success of the effort. Adjustments the team felt would work to make the Initiative viable involved an added time and resource commitment beyond what had been devoted for the project. The team elected to put the effort on hold, pending some promising opportunities under consideration by the Massachusetts state government.

There is much value in the creative effort that went into the design of the Initiative and much to be learned from this experience in addressing the challenges that arose. The search continues around the country for a sustainable model for integrating housing and healthcare – one that can have a substantial impact on the independence and health of the residents of affordable senior housing. The experience captured here and experience with further efforts to continue this project can inform future efforts to improve integrated care and supports for seniors living in senior housing. Sustainable and replicable models will be important to ensuring seniors, particularly those in need of coordinated care, have the resources they need to age successfully in place.

Background and Goals of the Initiative

Senior housing, by virtue of its above-average concentration of seniors with complex care needs and high medical costs, provides an opportunity for targeting intensive care management and service coordination to support individuals in their homes, defer institutionalization, and reduce unnecessary and expensive medical care.

Seniors in affordable senior residences are low-income (median income = $10,236), growing older (median age is 74 and 30% are over 80), and diverse (56% white, 19% African American, 13% Hispanic, 19% other). Chronic conditions and functional limitations are more prevalent among people with lower incomes, those with advanced age, and minorities.[1] They are more likely than community dwelling seniors to be dually enrolled in Medicare and Medicaid: (70% vs. 13%).[2]

Work to design the Initiative arose from a effort initiated by LeadingAge Massachusetts and its member housing organizations that sought to leverage the benefits of affordable housing as a platform for the effective and efficient delivery of long-term services and supports and to increase available on-site services to support residents to remain in their communities for as long as possible. LTQA and the West Health Policy Center joined forces with LeadingAge Massachusetts to help develop a sustainable financing model and encourage integrated care plans to participate. A team from the LeadingAge Center for LTSS at UMassBoston also joined to help design and implement the Initiative evaluation plan. Finally, a team from Quantified Ventures provided consultation on the options for financing and, in particular, the feasibility of structuring the project to “Pay for Success” and attract social impact investment.

[1] Section 202 Supportive Housing for the Elderly Program Status and Performance Measurement; Data is for residents of Section 202 housing properties, 2006.
[2] Source: A Picture of Housing and Health, found at http://aspe.hhs.gov/daltcp/reports/2014/HUDpic.pdf

SCO and PACE Programs in Massachusetts

Massachusetts was an early adopter of integrated managed care. The state replicated the On-Lok Model (which became PACE in the late 1980s) and later designed and implemented a comprehensive care health plan called Senior Care Options (SCO), which is a form of integrated Medicare-Medicaid plan known today as a Fully-Integrated Dual Eligible Special Needs Plan (FIDE-SNP). Both PACE and SCO bundle all Medicare- and Medicaid-financed medical, behavioral, pharmacy and long-term services and supports benefits in a contractual manner with one accountable entity serving as the plan responsible for the care delivery and cost management of participants. Despite their longevity in Massachusetts, PACE programs continue to be relatively small in membership compared with the SCOs.[3]

The SCO plans allow members to receive medical services as well as social supports to improve their care quality. SCOs arrange for an interdisciplinary primary care team to coordinate care including specialized geriatric support services. SCO's success in enabling frail elderly enrollees to remain in the community, increasing enrollees' satisfaction with healthcare services and quality of care—and achieving savings for both Medicare and MassHealth—is well established. With these results, Massachusetts in 2019 began passively enrolling some residents who are ineligible for Medicare coverage into the program. MassHealth has submitted a plan to extend the state's current federal/state demonstration ("Duals Demo 2.0") that would allow the State to passively enroll all seniors with eligibility for both Medicare and Medicaid (duals) into the SCO plans, beginning in 2021.

Massachusetts affordable senior housing provided an efficient opportunity for targeting intensive care management and service coordination to support individuals in their homes, defer institutionalization, and reduce unnecessary and expensive medical care. As noted above, the senior housing has a heavy concentration of seniors with complex care needs and high medical costs. However, for a given population of residents in a particular building, healthcare coverage is typically provided through a wide variety of integrated care plans and fee-for-service Medicare, with no single integrated care plan having a sufficient critical mass of enrollees to justify its investment in providing in-building services and supports. Since multiple plans would have members in any particular building, with each plan only having a few members in each building, the Initiative was designed around the idea that plans would pool their resources to fund housing-based teams for several participating buildings in order to create the critical mass needed to bring costs to an affordable level.

Housing organizations realized it was in their best interest, and in the interest of the integrated care plans holding the healthcare risk of individual residents, to collaborate on an approach that would fund in-building services and service coordination that could improve healthcare outcomes for building residents. It was anticipated that by bringing housing-based staff together with integrated care plan care teams, the housing-based staff would be empowered to function as an extension of the plan's clinical care team and be able to provide improved preventive services, "real time" eyes and ears to monitor residents' status, and enhanced after-hours coverage. This project proposed to improve efficiency by having a single team in each building provide services for multiple plans' members. It proposed to improve outcomes and reduce avoidable medical utilization by identifying

[3] In Massachusetts, statewide PACE enrollment was 4,559 in March 2019 (Integrated Care Resource Center, Program of All-Inclusive Care for the Elderly (PACE) Total Enrollment by State and by Organization, March 2019), while SCO enrollment was 53,887 in 2018 (MAHP, "Aging in Place: Senior Care Options Plans and the Dual Eligible Population in Massachusetts." On Point: Issue Brief. February 2018).

changes in individual health conditions earlier and introducing strategies and services aimed at mitigating preventable medical events. It further proposed to enable plan members to have the support needed to remain in their homes and communities and defer or avoid institutionalization.

The Initiative was intended to demonstrate this approach and collect evidence of the volume of savings in the plans' medical spending that could be attributed to the added services and supports. It was also intended to provide an estimate of the return on investment (ROI) based on reduced avoidable medical utilization, to the plans from this approach. The pooled financing and service delivery approach to be tested would enable multiple plans (payers) to finance and connect with shared housing-based staff serving plan members across multiple residential sites. The Initiative design called for enhanced services and service coordination for residents on-site, linking in-building services with residents' integrated care plans to support and promote aging in place.

Specific goals of the Initiative included:

1. Enhancing collaboration between housing-based teams and integrated care plan teams to positively affect healthcare utilization and cost;
2. Creating a combined/pooled mechanism to pay for enhanced housing-based teams by integrated care plans; and,
3. Demonstrating that integrated care plan investment in improving long-term supports and services in the home is cost effective.

Previous Health and Housing Efforts Across the Nation

This project was informed by other national initiatives that had demonstrated successful outcomes in integrating housing, service coordination, and supportive services.

Support and Services at Home (SASH) – Vermont

The Support and Services at Home (SASH) program in Vermont coordinates services provided by social services agencies and health providers for older individuals living independently at home.[4] The program, which launched in 2011, created a formal consortium of housing and service providers to address participants' needs, including physical and mental health, social services, and long-term care. All SASH staff received comprehensive training to ensure that staff maintain the necessary knowledge and skills to meet SASH participants' needs.

SASH assigned one full-time care coordinator and one quarter-time wellness nurse to serve up to 100 participants located in Department of Housing and Urban Development-assisted or other affordable housing sites. SASH staff then used evidence-based practices to provide comprehensive health and wellness assessments, create individualized care plans, provide one-on-one nurse coaching, care coordination, and group health and wellness programs. SASH also linked participants to vital community resources through their formal partnerships with community organizations, facilitating better ongoing care coordination for program participants.

The SASH program successfully improved participants' health outcomes, quality of life, and independence. SASH participants in early panels had higher overall functional status, lower rates of all-cause hospital admissions, slower per-beneficiary Medicare expenditure growth, and less difficulty managing their medications than non-participants.[5]

[4] https://sashvt.org/
[5] https://aspe.hhs.gov/pdf-report/support-and-services-home-sash-evaluation-highlights-first-four-years-research-summary

Housing with Services – Oregon

The Housing with Services (HWS) program in Portland, Oregon coordinates health and social services for over 1,400 residents at 11 affordable housing properties. This project brought together housing providers, community-based service providers, mental health providers, and health plans to identify and provide coordinated services for vulnerable populations in Oregon's affordable senior housing communities. The HWS care navigation team includes a physical health care navigator, a mental health care navigator, a care manager active in two housing properties, a housing and health case manager, and a mental health professional. The team dedicates several hours each week to each housing property in the program, working with all residents to ensure their needs are met, regardless of their insurer.

In addition to bringing services to residents of affordable senior housing communities using multidisciplinary care teams, HWS also created a pooled funding mechanism that enabled multiple stakeholders to support the program.[6] This pooled funding mechanism, a limited liability corporation (LLC) separate from the partner organizations, required each partner to invest in HWS—financially or in kind—and encouraged stakeholder collaboration in both the planning and execution of the program.

In a 2016 evaluation, Portland State University researchers found that HWS increased residents' use of outpatient mental health services, decreased emergency department visits, decreased food insecurity, and increased access to LTSS.[7] However, evaluators cautioned that cost savings would be unlikely until the third year of the program.

Staying at Home Program – Pennsylvania

UPMC's Staying-at-Home (SAH) program provides a "unique clinical model for community-based members that focuses on in-place, attentive care with an emphasis on care coordination."[8] This program uses an integrated care team including a registered nurse, a social worker, a physical therapist, a pharmacist, and a nutritionist to provide care to members in their home and help them to age in place. SAH is an extension of UMPC's Living-at-Home (LAH) program, which has provided geriatric care management to low-income seniors since 1987.[9] SAH focuses on low-income older adults living in publicly subsidized high-rise buildings across Allegheny County in southwest Pennsylvania. Participants receive case management and enhanced services at a lower cost than many other case management programs.

In 2014, researchers concluded that service-enriched housing for elders in high-rise buildings was beneficial to participants' health outcomes and produced cost savings.[10] UPMC has continued to support the program, even after insurers stopped paying for its services.

Mercy Housing

Mercy Housing, a national nonprofit organization that develops and manages affordable housing for various populations, has created an integrated health and housing model organizing health and social services for residents. Mercy arranges services directly through the housing entity, rather than through intermediaries such as those used in Oregon and Maryland.

[6] https://www.leadingage.org/sites/default/files/Housing%20With%20ServicesPortland%20ORFINAL.PDF
[7] https://www.oregon.gov/oha/HPA/ANALYTICS/Evaluation%20docs/Housing%20with%20Services%20Evaluation%20-%20Executive%20Summary%20and%20Report.pdf
[8] https://www.upmchealthplan.com/docs/providers/2013_ProviderManual_M.pdf
[9] https://www.reliasmedia.com/articles/18513-care-coordination-helps-seniors-live-independently-at-home
[10] Castle, N. & Resnick, N. (2014). Service-Enriched Housing: The Staying at Home Program. Journal of applied gerontology: the official journal of the Southern Gerontological Society. Available from: https://www.ncbi.nlm.nih.gov/pubmed/25012185

While Mercy's model has improved access to health insurance and reduced the need for Emergency Department visits and hospitalizations, it has not demonstrated the ability to impact longer-term outcomes such as overall health and emotional wellbeing.[11] Furthermore, without a control or comparison group, results cannot be conclusively attributed to service-enriched housing.

HUD Supportive Services Demonstration/Integrated Wellness in Supportive Housing (IWISH)

In January 2017, the U.S. Department of Housing and Urban Development (HUD) awarded approximately $15 million to owners of HUD-assisted senior housing developments to help low-income seniors age in their own homes and delay or avoid costly nursing home care.[12] Through these grants, organizations could hire Enhanced Service Coordinators and Wellness Nurses to connect seniors with the services they need to age in place and maintain independent living.[13] Forty applicants across seven states received funding for three years, and demonstrations will be independently evaluated to determine their impact.

HUD encouraged grantees in this demonstration to create partnerships with housing, healthcare, and provider agencies, and it focused on fee-for-service beneficiaries. Hence, it did not require partnerships with managed care entities already coordinating care for people with long-term services and supports (LTSS) needs. The HUD-supported projects rely on the federal funding to pay for the resident care teams. It is not clear what the strategy is to sustain these projects once demonstration is completed.

[11] https://www.mercyhousing.org/file/0-0-main-document-library/Report-Service-Enriched-Housing-Impact.pdf
[12] https://www.hud.gov/press/press_releases_media_advisories/2017/HUDNo_17-007
[13] http://www.leadingage.org/members/hud-announces-awards-supportive-services-demonstration-grants

Earlier Initiatives in Massachusetts

Massachusetts has a lengthy history of sponsoring housing-based care coordination and support service programs. The State Unit on Aging, referred to in Massachusetts as the Executive Office of Elder Affairs, and more recently, MassHealth, the State Medicaid program, have supported the development of housing-based care coordination and support services programs for the past three decades through the creation of programs such as Congregate Housing, Managed Care in Housing, State Supportive Housing Program, and Group Adult Foster Care. These programs enable residents to age in place by serving as funding vehicles for resident service coordinators in senior housing that establish plans of care and make referrals for supportive services.

These programs have operated mainly through local Aging Service Access Points (ASAPs), and most have operated as Area Agencies on Aging, as the locus of management. Some ASAPs have also gone beyond the confines of these state government sponsored programs to offer services directly to housing developers and operators on a privately negotiated fee basis. Housing management companies that have procured these services have done so recognizing the growing needs of their residents, the landlord/tenant challenges that result when proper service coordination has not occurred and the housing entity's lack of expertise in the areas of care and service coordination. Some housing operators have had successful partnerships with these community-based agencies and this served as an important foundational experience in planning this initiative.

Ongoing Housing and Healthcare Research Projects in Massachusetts

Hebrew Senior Life R3 Project

In 2016, Hebrew Senior Life (HSL), an affiliate of Harvard Medical School, launched a pilot program, funded by the Massachusetts Health Policy Commission (HPC), aimed at connecting housing with health care for seniors in affordable housing. The Right Care, Right Place, Right Time (R3) project is aimed at providing supportive services in residences to help reduce transfers from home to hospitals, emergency rooms, and long-term care. The aim of the pilot project is to create a sustainable and scalable model of housing with supportive services that can enable seniors to live independently for as long as possible while reducing medical expenditures. The R3 is currently operating in six senior living communities in the Boston area. HSL has been collecting data throughout the project to measure the impact of the R3 project on medical utilization, costs, and quality of life.

Jewish Community Housing for the Elderly (JCHE) Evaluation

JCHE has been conducting a retrospective cross-sectional analysis of existing service-enrichment in housing properties to assess the impact of different levels of service on Medicare, Medicaid expenditures and LTSS utilization.

Housing and Healthcare Integration Initiative Design

The Initiative was designed to solve three challenges from earlier efforts to provide ongoing care coordination for residents of senior affordable housing:

1. Developing a *sustainable* way to finance the added staff in the buildings—earlier health and housing projects relied on short term foundation grants, federal demonstration funding, or other exceptional means that were not sustainable;
2. Connecting the team in the building with the various integrated care plans that covered the building's residents, to enable the housing-based team to serve as the "eyes and ears" for the plan, communicating critical and timely information and acting on behalf of the plan when necessary; and
3. Achieving a critical mass of residents to enable the housing-based team to efficiently serve the building residents and demonstrate value to the integrated care plans.

Unique Features of the Housing and Healthcare Integration Initiative

Pooled Resources and Services
The Initiative sought to address both funding and service delivery needs through an approach that would pool resources to be provided by the integrated care plans and services that would be provided in the buildings. The idea of pooling the plans' resources to fund care coordination functions in the buildings was intended to eliminate the need to send multiple plan-specific personnel to serve building residents. Pooling also enabled the integrated care plans collectively to concentrate enough members to spread the cost of services broadly and make the intervention affordable on a per capita basis.

Connectivity of Integrated Care Plan and Building Teams
The Initiative was intended to connect housing-based teams with each participating resident's integrated care plan to enable the housing-based team to function as an extension of the plan's care team. This requires a mechanism that can provide two-way connectivity between the housing-based team and each resident's integrated care plan team to enable the exchange and sharing of information in real time on the resident's change in condition or adverse event. The Initiative also was intended to provide an enhanced evening and weekend ("24/7") presence for the plan and a capacity to respond to adverse events during non-business hours.

Critical Mass of Participants
The opportunity to bring a large number of senior residential communities together with several integrated care plans in a single project made it more likely that the project could serve a large enough group of members to make the additional services affordable, and to make it possible to measure the impact of the added services on members' health outcomes with a reasonable degree of certainty. The integrated care plans were also interested in the opportunity the concentration of population afforded for increasing their enrollment.

Housing-Based Teams

The design called for the enhanced housing-based on-site teams to be comprised of two types of staff: Enhanced Resident Service Coordinators (ERSCs) and Wellness Nurses. The project anticipated allocating these staff to buildings at standardized ratios developed in collaboration with the housing organizations.

The ERSCs would meet established qualifications and provide services including the following: serve as an integral member of the integrated care plan care team for plan members in the residence; participate in timely and bi-directional communication with the integrated care plans in the Initiative on a regular and ongoing basis; and implement effective communication systems (aligned with protocols established for the initiative) with participating integrated care plans for residents on SCO/PACE to relay important information, such as changes in condition, transitions between settings, or changes in behavior/activity.

The Wellness Nurses would meet established qualifications and provide services including:

1. Coordinating with and serving as on-site contact for primary care physicians, mental health providers and hospitals;
2. Monitoring and evaluating targeted clinical indicators relevant to health and wellness needs in alignment with integrated care plan's Individual Plan of Care for individual members, assessing;
3. Attending to medication adherence needs of members (e.g., ensure medications were obtained, review system for taking medications, etc.); and,
4. Ensuring smooth transitions of care back to the residence when plan members were in need of care in other settings (e.g., hospital, nursing home).

All personnel on the teams were to be trained on protocols developed with input from the integrated care plans participating in this project.

Integrated Care Plan Involvement

As noted above, the Massachusetts SCO and PACE programs are fully integrated and combine the benefits of health services with social support services. Representatives from SCO and PACE were present from early planning stages through the program development activities for the Initiative over several months. Workgroups were established to address key Initiative planning and design issues. Every committee included representatives from both integrated plan and housing organizations.

Plans participated in committee work to (1) define how "success" in the Initiative would be measured; (2) develop parameters for communication and coordination protocols to be followed by the residence teams in communicating with plan care teams; (3) identify key requirements for training curriculum development; and (4) specify the elements of an approach for educating building residents on the benefits and value of integrated plan enrollment. Plans also were integrally involved in suggesting financing approaches for the initiative (flat annual fee with PMPM) and in designing a pooling concept to take advantage of the efficiencies offered by enhancing on-site services in senior housing residences.

Additionally, integrated care plans provided key input into defining the menu of "enriched" services to address the needs of SCO and PACE enrollees at participating sites, including 24/7 coverage for timely monitoring of/intervention on issues such as status change, falls, and emergency 911 calls; compliance with/adherence to care plan interventions and medication regime; transitions of care support; development and monitoring of resident emergency plans; and off-hours support for both scheduled and unscheduled interventions.

Integration

To formalize and leverage the housing-based team's knowledge and obtain timely input as a direct partner in the individual enrollee's care plan, the housing-based team was expected to integrate activities on both a system-wide and individual resident basis with each integrated care plan. Integration was to include specification of protocols for timely intervention and communication (e.g., excessive 911 calls), participation of housing-based teams in overall

Interdisciplinary Care Team meetings about residents and specified mechanisms for real-time important information transfer.

It was envisioned that web-based technology could be used to enable bi-directional communication and sharing of information in real time about individual members who were residents in the buildings, thus housing-based teams would be utilizing one technology to communicate with each integrated care plan's unique electronic health record (EHR) and care management systems. The selected technology also included additional functionality to enable telephone calling through the platform, and recording and documenting of calls to promote efficient and effective team conferencing and collaboration.

This level of real-time communication was expected for the on-site staff to serve as an extension of the integrated care plan's clinical care team and for either team to exchange information regarding changes in conditions or other circumstances to facilitate timely communication, responsive collaboration and intervention to avoid fragmentation and to avert preventable medical events and utilization.

One additional area of focus was to provide a way to pool evening and weekend (after hours or 24/7) coverage in the buildings and connect in-building coverage with the plans' process for after-hours access to its care teams. Many adverse events that precipitate Emergency Room visits or hospital admissions occur at night or on weekends when building staff are a minimum. One solution that was considered was to enlist a few residents in each building to serve as site representatives who would be awake on-site after hours and on weekends to offer wellness checks and respond to adverse events. Site representatives would be trained in a project-wide, residence-based protocol that would direct them to quickly triage the situation and follow plan-designated procedures for contacting plan personnel prior to contacting external resources such as 911.

Pooling

Because each integrated care plan does not have enough enrollees to justify an individual investment in enhancing on-site services in multiple buildings, the pooling concept of financing this investment across integrated care plans creates the foundational financing support needed to support housing-based staffing and leverages the efficiencies offered by establishing these resources in senior housing residences.

Proposed Relationship of Health Plans and Senior Housing

Senior housing facilities each have residents in different integrated care plans as well as residents with no managed care, meaning several care coordinators from different plans serve residents in a single building – and some residents receive no care coordination at all. The Housing and Healthcare Integration Initiative proposed pooling resources to fund a single care coordinator for each building to provide residents with enhanced services.

The pooling entity was designed to be structured as a non-profit organization, overseen jointly by both LTQA and LeadingAge Massachusetts. Integrated care plans were expected to contribute funds to the pooling entity following contract terms, outlined in standard vendor contract form, between the pooling entity and each plan. Contracts were also to exist between the pooling entity and each housing organization and between the pooling entity and any other participants (e.g., centralized staffing entity on behalf of the housing entities) as necessary for accountability and performance. Both integrated care plans and participating residence representatives were to participate in an Advisory Council that would advise pooling entity management. LTQA and LeadingAge Massachusetts were anticipated to continue their oversight of the Initiative, manage the relationships and interactions with funders, and assume overall responsibility for the performance of the project.

Evaluation Plan—Assessment Data

The research hypothesis to be tested through the Initiative was that the investment in housing-based teams and the added connectivity that was then provided for each plan would have a substantial positive impact on residents' medical utilization such that the reduction in integrated care plans' expected healthcare spending would enable the intervention to pay for itself.

The evaluation anticipated measuring the impact of the intervention on primary and secondary outcomes, including medical utilization and institutional admissions. Endpoints of specific economic value to the integrated care plans would then be compared to project costs to determine the ROI to the plans.

The evaluation was designed to measure both change in the intervention population relative to their baseline, and relative to two control arms also from the SCO/PACE plans: one control arm a sample from non-participating buildings and the other an equivalent sample from the community.

In order to complete the evaluation, the Initiative needed to collect both assessment and claims data from the participating integrated care plans on both control and intervention group. Baseline data collection, including both claims and assessment data from participating plans (new data collection was not anticipated), with periodic data collection from plans on each of these three groups, was anticipated throughout the duration of the Initiative.

Financing Options

The Initiative was intended to test a sustainable approach to financing in-building services based on incorporating the cost of these services in the per-capita costs of total care for integrated care plan members. Most previous efforts relied on one-time, external financing for the services, through either grants of public or private funds. These one-time grants did not provide funding over the long run to sustain the services in the building. Incorporating the in-building services costs in the overall cost of care for integrated care plan members, it was hoped the Initiative would demonstrate a way to offer these services on a larger scale and in a sustainable fashion.

The Initiative was also intended to test the impact of providing this increment of in-building services on utilization and spending for healthcare of the enrolled members, with the expectation that there would be a reduction in healthcare spending sufficient to cover the costs for these services (a return on investment or ROI) that would enable integrated care plans to justify providing the services tested in the Initiative as a standard component of plan benefits.

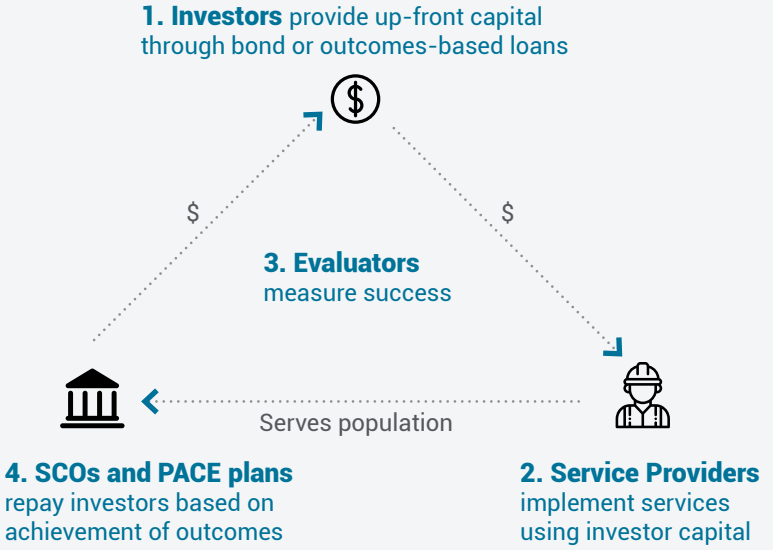
There were three components to the costs of the Initiative:

- **The cost of services**–including hiring, training, equipping, employing, supervising, and connecting the in-building staff with the care team;
- **The cost of program operations**–including administrative costs for the program and operation of the pool; and
- **The cost of the evaluation**–including the cost of designing the evaluation, collecting (before, during, and after the intervention) assessment and healthcare utilization data on the members in the participating buildings and members in non-participating buildings that serve as a control, and analysis of the results.

The costs of the building teams and supervision and support of the teams were to be divided among the participating integrated care plans through a blend of a fixed annual payment that is the same for each plan and a variable per member per month (PMPM) payment based on each plan's membership. It was expected that integrated care plans would sign standard vendor agreements with the pool.

The costs of the pooling entity and the project evaluation were to be financed through external funding. The Initiative planning team intended to pursue this funding through either a foundation grant or outside investment through a structured Pay For Success (PFS) investment model, as follows:

- Foundation funding would provide one-time support for the operation of the Initiative, which would make the Initiative more challenging to replicate.
- PFS would be a more easily replicated approach. In this financing model, private investors would bear all or part of the cost and risk of success in the model and would share in savings achieved when and if the project meets its outcome targets. Success in meeting the savings targets would attract social investors to the model in general and would encourage replication.



For PFS to be viable, Health Plans would need to support the project development in the following ways:

Provide baseline cost and utilization data at aggregate level for building members – in order to have a comparison baseline, which we will then compare the intervention outcomes against.

Uniformity among participating plans on outcome valuation and repayment triggers

Support from each Health Plan's finance team to set aside potential success payments in escrow for investor repayment

The Initiative was intended to demonstrate the ability of this increment of services, supports, and connectedness; to have a substantial effect on the use of medical utilization and spending; and establish the ROI for including in-building supports and services in the standard package of integrated care plan benefits.

Challenges

Although Boston, Massachusetts was an attractive location precisely because of the well-established integrated care programs and sophisticated senior affordable housing organizations, the impact that these plans and housing organizations already had on the health outcomes of residents made it a particularly challenging environment to demonstrate incremental value derived from the features added in the Initiative.

Beyond the challenge of generating a substantial, measurable improvement in the health and functioning of residents, the Initiative had to address a variety of other challenges in preparing the Initiative to be launched.

Inclusion of Existing Residence Service Coordination Staff

Each of the participating housing entities in the Initiative had existing staff, either hired directly or through contracted arrangements, who provided some baseline resident service coordination. The availability of this staff was inconsistent across housing sites, including the number and schedule of hours available, and the specific tasks and functions of the role. Additionally, only a minority of housing organizations offered any access to wellness nurses through contract arrangements.

The Initiative proposed to build on whatever level of existing staff was in place in order to reach the agreed upon standardized ratios for both resident service coordinators and wellness nurses. This structure required that existing residence service coordination staff be incorporated into the Initiative intervention in the following manner:

- Existing staff would be able to select their level of participation, from non-involvement to full involvement, depending on their interest in and qualifications for the enhanced resident service coordinator functions

- Management structures and contracting arrangements for existing staff would be honored unless the housing entity expressed interest in changing such arrangements
- Any training requirements and protocol development established for the initiative would apply to and include all existing residence staff such as residence service coordinators, building maintenance staff, front desk workers, etc.

The commitment to leverage existing resident service coordination staff was necessary to keep the intervention affordable, avoid disruption of pre-existing contractual and employment relationships, avoid duplication or redundancy, promote overall cohesion and efficiency, and leverage important relationships that were already developed between staff and residents. Clearly, from a management, supervisory and program oversight perspective this level of variation in the resident service coordination model created significant organizational complexity and posed a challenge to the implementation of a consistent, standard enhanced intervention across the Initiative sites. Nonetheless, LTQA and LeadingAge Massachusetts felt it necessary to accommodate these arrangements if they were to maintain the support of both the housing entities and those servicing them in their contractual relationships.

Interaction with Similar Existing Projects

While the planning was underway for the Initiative, several other projects (referenced earlier) exploring bringing healthcare and service coordination to affordable senior housing were in the pre-launch or early implementation phase in the Boston area. The Initiative was unique in its efforts to engage integrated care plans in both service delivery and financing of services and to establish a way to pool plan resources and in-building teams. However, the multiplicity of health and housing initiatives underway at the same time complicated the effort to obtain the specific integrated care plan and state agency commitment to move this particular project forward.

A few of the housing organizations and integrated care plans participating in the Initiative were simultaneously involved in other health and housing initiatives. These other initiatives stemmed from an interest, on the part of a particular housing entity, in improving services for their residents that aligned with an interest, on a particular integrated care plan's part, in developing a preferred relationship with the housing entity that might result in additional enrollment. In one case, a integrated care plan collaborated with a housing entity where a significant number of their enrollees lived to develop unique communication protocols that would connect the building's existing staff with the plan's EHR and software technology, with no additional financing required of the plan. One of the other housing entities involved in the Initiative had previously received grant support for a major ongoing project to enhance the health-related interventions of their housing-based teams, and it included an extensive evaluation component. Yet another integrated care plan and housing entity participating in the Initiative design process increased their collaboration independently of the project because it made business sense for them. In most of these instances, these partnerships proceeded in a smaller "proof of concept" direction and, with the exception of one partnership, did not involve financial support from the plan.

Some of these other arrangements moved forward more easily because the protocols, including those for plan/housing communication and collaboration, were agreed to between a single integrated care plan and a single housing entity. The resistance, on the part of one plan, to adopting

a standardized set of protocols and a communication system that would accommodate multiple payers and housing entities, became a significant barrier to moving forward on the Initiative. Additionally, the other arrangements did not require financial support from the integrated care plan to fund the housing entity's additional service coordination activities.

Role of ASAPs and their Geriatric Service Support Coordinators

As noted earlier, the Initiative focused on the inclusion of SCOs as the dominant managed care funding vehicle to support enhanced residence service coordination. The MassHealth contract with the SCOs required them to contract with the local ASAPs to procure the services of Geriatric Service Support Coordinators (GSSCs). These geriatric social workers participate within the SCO teams to inform assessment and provision of support services in the home setting. Although MassHealth's contract specifies the activities GSSCs will perform, there is wide variation in how each SCO utilizes this worker resource. MassHealth's contractual requirement does not permit the SCOs to procure GSSC-like services in a congregate living environment other than through the ASAP contracts and consequentially, there is perceived overlap between the GSSC resource contract and the desired support of the SCOs in funding the HHP enhanced resident service coordination function. Housing operators and ASAPs maintain that these are really quite different roles, with GSSCs functioning in an administrative capacity to arrange for services to be delivered to the residents, and enhanced resident service coordinators more directly involved in service intervention. However, some SCO leaders saw the enhanced resident service coordinator as redundant to the role already performed by the GSSCs and felt there should be some way to consolidate those roles.

Integration of Housing-Based Teams with Care Teams: Two-Way Connectivity

Critical to the success of the Initiative program was the ability of housing-based service coordination staff to communicate and collaborate with plan care managers. In the absence of this initiative, there is no globally structured way in which these communications occur; nor is there any systematic approach to the sharing of assessment, care planning, and service information on residents.

Having staff on site affords an enormous opportunity to assist integrated care plans with mitigating expensive and avoidable episodes of medical care involving ambulances, emergency room visits, and hospitalizations. Those in the housing environment know their residents and are best positioned to identify changes in status and condition that would otherwise be undetected by plan staff who visit their members infrequently. Moreover, housing staff can execute on the component of plans' care plans that relate to their home environment, community-based services, and need for surveillance. Wellness nurses and enhanced resident service coordinators can reinforce teaching, participation in activities, follow through on appointments, and generally provide oversight with the clear advantage of physical proximity and observational capabilities. This unique opportunity to service residents on behalf of integrated care plans carries great potential to promote adherence and reduce utilization of costly unwarranted medical services.

Facilitating the two-way communication and connectivity required to optimize this relationship is a key component of what the Initiative aimed to address. LTQA and LeadingAge Massachusetts reviewed a number of technology platforms to identify one that would serve two purposes: (1) provide housing staff with a HIPAA secure environment in which to store sensitive and

personal health information related to their residents; and, (2) facilitate the sharing of ongoing communication and documents needed to achieve optimal collaboration efficiently between housing-based teams and multiple integrated care plan care managers.

A secure messaging and collaboration platform was selected that would meet the needs of the housing and integrated care plan staff. The main features of the platform included its web-based mobile application for ease of use in a HIPAA secure environment, enabling asynchronous text message communication, document sharing, image attachments, messaging, and survey customization. The ability to integrate the platform with each integrated care plan's EHR or care management system was possible through the platform's developed commercial APIs, though unlikely to be advisable for the duration of the Initiative given the small number of integrated care plan members that would benefit and the costs to the integrated care plans to make the modifications to their existing systems. Nonetheless, the platform even as a side by side resource was quite simple to use, and economical. Hence, recommendations of strategies to mitigate duplicate documentation were planned and to be made available.

Unfortunately, some integrated care plans were unwilling to utilize a new platform for this initiative. They wanted to require housing-based staff to document in their own plan's EHR or care management system. From the perspective of the housing entities, this was untenable—enhanced resident service coordinators would need to know multiple technology systems in order to communicate information with integrated care plan-based care managers. This was viewed as an unreasonable and inefficient approach that would have significant implications for timely communication and staffing resources.

Structuring Integrated Care Plan Payment

The proposed financing structure for the Initiative, a flat annual fee and PMPM based on volume for each participating plan, presented a perceived regulatory challenge for integrated care plans as state requirements mandate that every plan document and report all encounters with enrollees—information referred to as "encounter reporting". This documentation was then to be used by the state, over time, to develop payment rates for each integrated care plan. Given the financial importance of how this data was to be used, integrated care plans were focused on capturing a level of granularity of information for the Initiative that was challenging to the extent that we were proposing an approach that did not depend upon documentation within each plan's EHR or care management system. While integrated care plans expressed a preference for on-site housing team members to enter information directly into each plan's individual EHR or care management system that presumably served to capture data that was reportable for encounter purposes, as aforementioned, the expectation that on-site housing staff would have the time necessary to learn and document into multiple systems was not realistic. These associated communication and documentation challenges became a major impediment to plan participation in the Initiative.

Calculation of the Return on Investment

One step of the planning process for the launch of the Initiative was the development of a prospectus for potential Pay-for-Success (PFS) investors in the initiative. LTQA and LeadingAge Massachusetts partnered with Quantified Ventures (QV)—a firm specializing in structuring PFS projects—to develop materials and solicit "social impact" investors for the initiative. As part of this effort, QV developed a detailed model to predict the return on investment (ROI) that could be achieved from the first two years of operation of the Initiative.

The anticipated ROI was defined as the value of the outcomes or results of the initiative (measured in terms of quantifiable results that can be monetized by the integrated care plans/ Initiative) net of the cost of achieving those results (measured in terms of the cost of inputs—staffing, training, equipment, management and administration). ROI is typically expressed as a ratio. A ratio less than one is a negative ROI.

Costs of the initiative: The major costs of the Initiative were the personnel that would be employed in the buildings. The costs to be included in the calculation of ROI were estimated in four buckets:

1. In-building staff (based on staffing ratios determined in the planning process,
2. Overhead (tax and benefits, training, supervisory personnel),
3. After-hours coverage of the buildings, and
4. Information technology to connect staff and integrated care plans.

Additional costs that were not included in the ROI calculation included pool operations and project evaluation. These were estimated and the model was run with and without these additional costs to estimate what the impact of these costs would be on ROI.

Costs were converted to a Fixed+PMPM cost that would be paid by the plans. The fixed cost was allocated equally across the participating plans, regardless of plan size. The PMPM was calculated based on the total anticipated aggregate plan enrollment in the buildings. It is important to note that the estimated PMPM cost varies considerably depending on the total number of plan members participating in the Initiative. To capture this range, costs were estimated for four enrollment scenarios: current enrollment in participating buildings, potential enrollment with growth in participating buildings, and those two scenarios if the Initiative were expanded to include selected public housing sites.

Results: The value to the integrated care plans was calculated in terms of expected measurable health outcomes. Other outcomes not easily measured from available data were expected to add economic value for the plans that could not be quantified for estimating ROI. These non-measurable outcomes included efficiencies that could be achieved in service delivery as a result of the Initiative model.

Measurable Outcomes

- Reduced emergency room visits
- Reduced hospital admissions
- Reduced 30 day re-admissions
- Avoided or delayed nursing facility admissions

Other Outcomes

- Enrollment increase
- Service delivery efficiencies, e.g., clustering personal care
- Potential offsets
- Improved wellness and prevention

The evaluation team generated an estimate of the percentage reduction in baseline rates for medical utilization that could reasonably be achieved, based on the expected demographics of the target population and known utilization rates from Medicare health data. These reduction targets were entered into the model along with an estimate of the cost savings that would result from this level of utilization reduction.

ROI Estimates: The model was run to produce estimates of potential ROI under a variety of scenarios, for the size of the Initiative and assumptions about expected health outcomes.

Challenges with "Pay for Success" Financing

Initial runs of the model by Quantified Ventures produced ROI estimates that were below rates that would be necessary to make the initiative practical for PFS financing. These results were attributable to several factors:

- High costs for the in-building teams resulting from staffing ratios selected for this effort
- Redundancy of some functions performed by in-building staff and integrated care plan care coordinators
- High per-building costs assumed to provide after-hours staffing
- Overall scale of the initiative (small number of total enrollees in the participating buildings)

Ultimately, the small scale of the initiative was a complicating factor. The overall project costs spread on a per capita basis decline substantially as the size of the population served increases. A larger population in the Initiative would have a more favorable ROI.

The planning team for the Initiative initiated two areas of further work aimed at lowering net costs for participating integrated care plans:

Lowering net staffing costs by:

- Growing the population served by the in-building teams (lowering staffing ratios);
- Achieving efficiencies in how plan and in-building staff are deployed to reduce redundancies in functions; and
- Exploring the possibility of engaging organizations contracted to provide care coordination for the integrated care plans to provide those services on a per-building basis.

Reducing the cost of after-hours staffing by:

- Relying on volunteer residents to perform some after-hours functions in exchange for reduced rent;
- Centralizing some after-hours functions and deploying technology to improve monitoring and reporting from the buildings.

The planning team also explored ways to improve measurable outcomes that would be expected from the Initiative by expanding the scope to include populations not currently as well-served as the target population. Expansion could occur in two ways:

- To expand the population included beyond the already well-served SCO and PACE members, who already have low medical utilization rates, and to include a population enrolled in Medicaid fee-for-service who do not currently benefit from care management.
- To expand beyond the residences already participating (some already provide some level of care coordination) to include public housing that currently has no services on site.

A final factor affecting the value proposition for PFS financing was the cost of the management and evaluation of the Initiative itself. Including this cost in the overall cost-benefit equation substantially lowered the ROI rate. As a result, the planning team considered a mixed model for financing that would rely on foundation funding for the Initiative costs and focus the PFS financing on the cost of providing the services. The problem with this approach was that it would reduce the total financing level sought by investors, and thus reduce the potential ROI to a level that might make the effort unattractive for PFS investment.

Conclusion

The Housing and Healthcare Integration Initiative incorporated a creative approach to addressing the challenges that previously prevented meaningful integrated care plan engagement in efforts to better serve concentrated populations of seniors. Congregate senior housing presents an opportunity to provide robust preventive and wellness services, greater connectivity of caregivers and clinical care teams, and more effective monitoring and response to changes in conditions and medical events.

The key innovations that were needed to capitalize on this opportunity – sharing of services and personnel among integrated care plans, distribution of costs and financing across plans, connectivity of in-building care teams with integrated care plan care teams, and achievement of a critical mass sufficient to make the per-capita increment of cost affordable – were particularly challenging to negotiate, given the disincentive for collaboration imposed by the system of private, competitive integrated care plans.

While initial estimates of the cost of the services and of the project overall were high and made it difficult to arrive at a positive estimate of ROI for the project, cost was not an insurmountable barrier. Work was underway to lower the cost of services by adjusting the staffing ratios for the housing-based team and eliminating redundancies between the plan and housing-based care coordinators. Options were also under consideration that would have greatly increased the population served and reduced the per-capita cost of the initiative.

Initial estimates of the potential for a reduction in medical utilization were also lower than was needed to return a positive ROI for the initiative. The fact that the Initiative engaged two highly integrated models of care (SCO and PACE) that have likely already achieved low utilization rates for their members lowered the probability of substantial healthcare savings for this population. However, options under consideration to expand the Initiative to public housing residents and to Medicaid beneficiaries not served by SCO and PACE, would likely have increased the savings potential. Growing the population would have also helped lower per-capita costs and improved the ability to demonstrate a benefit statistically.

The more challenging task was to find a way for participating integrated care plans to adopt or connect into a common information and communication platform and support a shared staff operating under a single set of protocols, without compromising the organizational demands currently served by their proprietary information systems, care models, and protocols. For a housing-based team serving a building full of residents enrolled in multiple integrated care plans, having to operate under a variety of distinct protocols and communicating through multiple platforms and information systems would interfere with the effective performance of their responsibilities. The alternative–to share a common system for the Initiative–would have great value for the residents, their caregivers, their housing organizations and the integrated care plans, and could also have future, larger-scale value on the way care is provided. This is another area where commitment to finding a solution, creative effort to put forward options, and negotiation with participating integrated care plans to address their concerns, would yield an approach that could meet plan requirements and enable housing-based teams to interact effectively with multiple residents and their integrated care plans.

The innovative design for the Initiative addresses the challenges of developing sustainable financing for a program that would provide critical connectivity of integrated care plan members and caregivers with care teams to greatly improve the ability of plan members to remain independent and healthy in their own homes. The design, the experience in developing the design, and the challenges addressed in implementation are valuable learnings that can inform future initiatives to integrate housing and healthcare.

The effort to harness the role that congregate housing can play in maintaining health, functioning, and independence of its residents is worth pursuing. The work that was done in the Housing and Healthcare Integration Initiative can be continued in Massachusetts or initiated in another state with other housing and healthcare partners. We believe that with the commitment of time and effort, the challenges the Initiative faced can be overcome and this model has the potential to benefit many older, low-income adults.

Acknowledgments

The authors appreciate the commitment, engagement, and creative ideas from the organizations and individual participants participating in the process to design the Housing and Healthcare Initiative.

Organizations Involved in Initiative Design

Housing

Hebrew Senior Life

Jewish Community Housing for the Elderly (JCHE)

B'nai B'rith Housing

Preservation of Affordable Housing (POAH)

Allston Brighton Elderly Housing

Rogerson Communities

The Community Builders

Beacon Communities

Health Plans

Commonwealth Care Alliance (SCO)

Fallon Health (SCO)

BMC HealthNet (SCO)

United Healthcare (SCO)

Tufts Health Plan (SCO)

Upham's Elder Service Plan (PACE)

Element Care (PACE)

Harbor Health ESP (PACE)

Atrius (ACO)