Healthy Aging Begins at Home

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BIPARTISAN POLICY CENTER

Chapter 4. Integrating Health Care and Supportive Services with Housing

"When I suffered a stroke, I didn't know whether I would be able to cook my own meals, listen to my music, or travel back to Jamaica. Moving to NewCourtland [a nonprofit provider of affordable housing with supportive services] has helped me be independent. I love everything about it. There are good, skilled attendants, and they take me on shopping trips. There is good food. You get a lot of attention."

—Dudley Bryan, 75

One of the most important public health findings over the last two decades has been that there are a number of factors, beyond medical care, that influence health status and contribute to premature mortality. Of these factors, social circumstances and the physical environment (particularly the home) impact an individual's health.

Housing takes on even greater importance for older Americans since they spend a significant portion of their day in this setting. Thus, as discussed in Chapter 3, ensuring a safe, age-friendly home is critical. In addition, the home is increasingly being seen as a potential site of care for seniors to receive health and wellness services and as an essential tool in chronic care management.

By virtue of the rapid expansion of the senior population, more and more Americans will be living with multiple chronic conditions and experiencing limitations in activities of daily living. Today, 68 percent of Medicare fee-for-service beneficiaries have multiple chronic conditions, resulting in 93 percent of total Medicare spending.[126] In addition, about 70 percent of adults over 65 will eventually need LTSS at some point in their lifetimes and those turning 65 can expect to incur $138,000 in future LTSS costs.[127]

Models and interventions that deliver health care and other services to seniors with multiple chronic conditions or disabilities in their own homes have the potential to improve health outcomes and reduce health care utilization and costs. At the same time, the management of certain chronic conditions, such as asthma, require a healthy home setting to avoid triggers that can lead to exacerbations of the condition. Bundled payments for care of asthmatics could support funding of home remediation services that remove triggers of asthma. With health care transformation increasingly focused on paying for value, health care entities are beginning to think about patients beyond the four walls of the clinical setting.[128]

In addition, the home is increasingly being seen as a potential site of care for seniors to receive health and wellness services and as an essential tool in chronic care management.

Fortunately, there are several policy opportunities that can help accelerate the integration between health care and housing. Each involves one or more key actors in the nation's health care system: Medicare, Medicaid, and hospitals.

The Health Plan of San Mateo: Integrating Health and Housing to Reduce the Need for Institutionalization

The Health Plan of San Mateo's (HPSM) Community Care Settings Pilot (CCSP) is an innovative program aimed at reducing institutionalization for vulnerable HPSM members, primarily individuals who are dually eligible for Medicare and Medicaid.[129] By enabling community living, rather than residency in long-term care (LTC) facilities, HPSM is delivering a higher quality of life and improved health outcomes for its members while simultaneously reducing or avoiding costs to the system. A key finding of the program has been that for the less than 20 percent of current LTC residents who do not require a skilled level of care, along with many of those at risk of institutionalization but residing in the community, housing and social issues are the main factor driving institutionalization. Once these individuals are either referred to CCSP or identified for enrollment by HPSM, they receive intensive transitional case management at a 1:20 ratio, along with an array of supports, including housing services, to either migrate out of or avoid LTC residency.

The housing services, delivered by contracted partners, include landlord liaison, unit modification, housing location, on-call availability, affordable housing waitlist management, assisted living services, and the potential for temporary rental subsidy. Of 129 members enrolled in CCSP to date, 83 percent have required the procurement of a new residential setting, while the 17 percent able to remain in an existing community setting have often required services such as Section 8 voucher extension or landlord dispute resolution in order to retain that housing. As of December 2015, 96 percent of clients enrolled for more than six months have remained in their identified community setting with the assistance of CCSP case management and housing services. Though early in its efforts, CCSP has so far delivered high levels of enrollee satisfaction, utilization shifts to managed long-term services and supports, and cost reduction or avoidance ranging from 35 to 72 percent.

Medicare

The Centers for Medicare and Medicaid Services should take into greater consideration the importance of the home as a site of care. From Health Risk Assessments to post-acute care to care for those with multiple chronic conditions, CMS should seek to incentivize the home as a place of clinical care. Current regulations and restrictions on what is reimbursable care can inhibit the use of care appropriate to the home. Assessment of social and environmental factors that contribute to the health status and capacity of the patient to adhere to clinical recommendations can be enhanced by assessment and care provided in the home. In addition, for particular patients, CMS should consider allowing managed care entities under Medicare Advantage and, possibly, alternative payment models to pay for home modifications and transportation and to consider these allowable costs under Medicare.

Several service demonstration models intended to support aging in place are currently showing significant promise.

The Medicare program should begin by focusing on vulnerable seniors for whom services at a home setting could yield improved outcomes and reduced health care costs. One population of focus should be the approximately 1.3 million older adult renters living in publicly assisted housing, the vast majority of whom are dually eligible for the Medicaid and Medicare programs. HUD-assisted dual-eligible beneficiaries have more chronic conditions and higher health care utilization compared with unassisted beneficiaries.[130] HUD has a history of supporting service coordination at properties it finances and recently issued a funding opportunity for current grantees to provide enhanced service coordination coupled with wellness services (see: Chapter 2).[131] While this effort deserves praise, there should be a larger initiative funded through the health care system to demonstrate that this approach helps to prevent or delay health and functional declines in seniors and results in savings for taxpayer-funded health insurance programs. Such an effort would address the "wrong-pocket problem" by ensuring the health care system bears the cost of implementing a practice from which it can potentially benefit. If successful, the effort could serve as the foundation for a more robust set of activities.

More specifically, CMS — through its Center for Medicare and Medicaid Innovation and Medicare-Medicaid Coordination Office — should solicit proposals from health care entities (e.g., accountable care organizations, managed care plans, and provider groups) willing to be accountable for quality, health outcomes, and total costs of care for Medicare beneficiaries in publicly assisted housing (Section 202 projects, senior-restricted public-housing projects, LIHTC properties, USDA Section 515 projects, and other assisted units in congregate settings where seniors predominate). Applicants would have to partner with a large housing property or a network of housing organizations within a particular service, or "catchment," area to achieve the volume of participants necessary to conduct and evaluate the demonstration. In addition, partnerships with state Medicaid programs and local community-service providers would be encouraged.

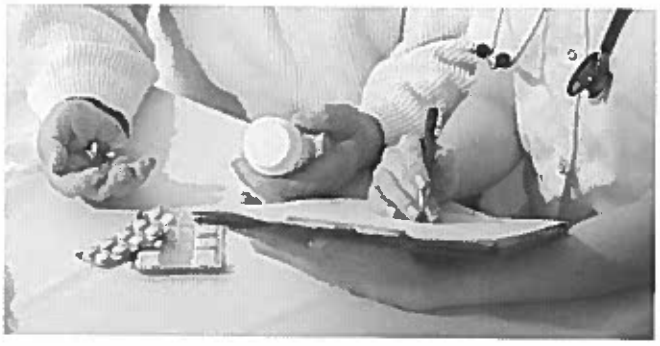
Eligible applicants would ensure the delivery and coordination of health care, LTSS, and preventive services and wellness programs within a congregate housing setting, using housing-based service coordinators and evidence-based models or programs that have a track record of helping beneficiaries remain in their homes and reduce health care utilization.

Several-service demonstration models intended to support aging in place are currently showing significant promise. For example, the Support and Services at Home (SASH) program in Vermont relies on an onsite service coordinator and part-time wellness nurse team per 100 residents to coordinate and integrate services and supports in 130 low-income senior housing properties across the state. The program offers seniors comprehensive health and wellness assessments, creation of individualized care plans, on-site one-on-one nurse coaching, care coordination with primary care medical homes and hospitals, and health and wellness group programming.

Initial data demonstrate positive impacts on resident health, health care utilization, and a slowing of the growth in Medicare expenditures relative to two control groups.[132] Another example is the Community Aging in Place, Advancing Better Living for Elders (CAPABLE) model. CAPABLE is a patient-directed, team-based intervention that includes an occupational therapist, a registered nurse, and a handyman to decrease hospitalization and nursing home usage of community-dwelling older adults with functional limitations who are dually eligible for Medicare and Medicaid. Activity of daily living limitations improved in 79 of the first 100 people who completed the intervention, and the disability level of the average participant was cut in half.[133]

There are also a number of evidence-based programs addressing the specific health issues of senior populations that could be delivered to the senior residents of publicly assisted housing. These include falls-management programs, such as A Matter of Balance; programs to reduce depression symptoms, such as a Program to Encourage Active and Rewarding Lives for Seniors (PEARLS); and programs to help manage multiple chronic conditions, such as the Chronic Disease Self-Management Program. Several of these programs have been shown to reduce costs to the Medicare program and are currently available in the SASH model and other housing-plus services programs.[134]

Eligible applicants would receive advanced payments (e.g., an amount per beneficiary on a monthly basis), which they could use to make important investments in their care-coordination infrastructure — including financially supporting housing-based service coordinators to enhance this function — and to provide the models and programs described above. The demonstration would look at health outcomes and costs over a five-year period and be matched with comparable control groups. Specifically, the demonstration would expect savings from reduced hospitalizations, hospital readmissions, and nursing home stays for beneficiaries. An important aspect of the payment model would be that any realized savings would be shared among participating entities and partners, including Medicare and Medicaid.



Recommendation #1. CMS should launch an initiative that coordinates health care and LTSS for Medicare beneficiaries living in publicly assisted housing to test the potential of improving health outcomes of a vulnerable population and reducing health care costs.

Another vulnerable Medicare subpopulation for whom in-home health services are important includes frail beneficiaries with multiple chronic conditions and limitations in activities of daily living. The Affordable Care Act created the Independence at Home demonstration under the Medicare program to test a service delivery and payment incentive model that uses home-based primary care teams to improve health outcomes and reduce expenditures for Medicare beneficiaries with multiple chronic illnesses.[135] Medical practice staff are required to make in-home visits and to be available 24 hours per day, seven days per week to implement care plans tailored to the individual beneficiary's chronic conditions.

In the first performance year, 17 participating practices served more than 8,400 Medicare beneficiaries, and the program met quality-of-care performance standards and saved $3,070 per participating beneficiary — totaling more than $25 million in the demonstration's first performance year.[136] In July 2015, Congress and the president enacted legislation that extended the existing Independence at Home participant agreements by two years.[137] Congress should expand this program nationwide once CMS:

- Analyzes at least the second year of data to ensure cost savings are sustained for the Medicare program and outcome measures

are improved for beneficiaries. This is important to ensure that first-year savings are not a result of onetime "low-hanging-fruit" savings or a reflection of statistical regression to the mean. CMS should also attempt to estimate the number of beneficiaries who might have needed to spend down to become Medicaid eligible and transition into a nursing home setting if it were not for the primary-care home-based intervention. Such a finding could also potentially demonstrate savings to the Medicaid program.

- Performs subgroup analyses to determine characteristics of beneficiaries who gained the most from the intervention in terms of health improvements and cost savings and to inform whether patient eligibility needs to be adjusted. Correctly matching the acuity of the patient to the intensity of the care management intervention is critical to maximizing potential cost savings.
- Analyzes the practices that performed the best to identify characteristics of practices best suited to deliver the intervention. For example, in the first year, although all participating practices improved quality in at least three of six quality measures, only four practices met all six quality measures.

Recommendation #2. Congress should consider expanding the Independence at Home Demonstration program into a permanent, nationwide program to maintain optimal health status and to reduce health care costs of frail, medically complex Medicare beneficiaries.

The Medicare program should also focus on preventing declines in health status of older adults in the home setting. One of the most worrisome outcomes for an older adult is a fall. Approximately one in three older adults fall annually resulting in approximately 2.5 million emergency-department visits, 700,000 hospitalizations, and approximately $34 billion in health care costs.[138] Falls are the leading cause of injury-related deaths in older adults, and most falls occur in the home setting.

There has been an increasing focus on falls prevention for the last decade through the Falls Free Initiative, a national effort led by the National Council on Aging. The Initiative includes the National Falls Prevention Action Plan, last updated in 2015, a national coalition, and 43 state coalitions on falls prevention.[139] While there has also been an increased focus in the public sector through the U.S. Administration for Community Living and the Centers for Disease Control and Prevention (CDC), federal programs and policies are not uniformly oriented toward falls prevention. The nation, at the very least, should strive to reach the Healthy People 2020 goal of a 10 percent reduction in the rate of emergency-department visits due to falls among older adults.[140] There are several efforts that could help further orient federal programs toward falls prevention and make this a top priority:

- Medicare now covers an Annual Wellness Visit providing personalized prevention services to beneficiaries. CMS should clarify with providers that falls risk assessments are a mandatory element of the Annual Wellness Visit.[141] While there is no one standard falls risk-assessment tool, CMS should share CDC's Stopping Elderly Accidents, Deaths and Injuries (STEADI) algorithm for falls risk assessment with providers.[142] In addition, for those found at risk of falls, referrals to falls-prevention programs as well as personalized health advice are required elements of an Annual Wellness Visit prior to submitting a claim. Specifically, this advice should be consistent with current U.S. Preventive Services Task Force recommendations for exercise or physical therapy and vitamin D supplementation to prevent falls in community-dwelling older adults who are at increased risk for falls.[143]
- CMS should ensure that quality measures related to falls

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prevention are embedded in all of its quality-measurement programs. Specifically, these measures should be incorporated into the new Merit-Based Incentive Payment System created through the Medicare Access and Reauthorization Act of 2015 and into measure sets for alternative payment models. Quality measures should go beyond screening for falls, as is currently required of accountable care organizations, and also include quality measures that reduce the actual incidence of falls. These actions will further incentivize health care entities to focus on falls prevention.

- CMS's Quality Improvement Organization program is one of the largest federal programs dedicated to improving health quality for Medicare beneficiaries. CMS should ensure that falls prevention becomes a key part of the next "scope of work" of its Quality Improvement Organizations, groups of health-quality experts, clinicians, and consumers organized to improve the care delivered to people with Medicare. Taking this step will help create a national focus on falls-prevention screening and on building important clinical-community linkages on behalf of falls prevention.
- A final rule published by CMS on July 15, 2013, included a change to the Medicaid regulatory definition of preventive services.[144] As a result, practitioners other than just physicians and other licensed practitioners can be reimbursed for furnishing preventive services that are recommended by a physician or other licensed practitioner. There are a number of evidence-based falls-prevention programs in the community that could benefit older Americans. States, through state plan amendments to their Medicaid programs, could ensure that these services are provided and reimbursed. If the programs reduce falls-related health care expenditures on dual-eligible beneficiaries, consideration should be given to sharing any Medicare savings with the state Medicaid program. Such an arrangement could entice further interest by state Medicaid programs.
- While the Administration for Community Living already funds a National Falls Prevention Resource Center and administers grants to support community-based falls-prevention programs, an additional focus on home safety could help reduce falls. As discussed in Chapter 3, a Modification Assistance Initiative (MAI) could assist senior households with home modifications necessary for aging in place. Many of these modifications — such as bathroom grab bars, no-step entry, and eliminating the need to use stairs — will be central to falls prevention.

CDC's STEADI (Stopping Elderly Accidents, Deaths, and Injuries) Initiative

CDC's STEADI initiative has established clinical guidelines for health care providers who treat older adults who are at risk of falling, as well as those that have fallen in the past.

STEADI's algorithm for Falls Risk Assessment and Intervention provides a three-step outline:

1. Screen for falls with a few basic questions.
2. Evaluate the risk level of any patient based on gait, strength, and balance.
3. Recommend the proper interventions to reduce the patient's risk of falling.

The CDC estimates that for every 5,000 health care providers that adopt the STEADI system, over a five-year period:

- Six million more patients could be screened for falls risk;
- One million falls could be prevented; and
- $3.5 billion in medical costs could be saved.

Source: CDC's STEADI. Available at: www.cdc.gov/steadi. STEADI's Algorithm for Falls Risk Assessment and Intervention. Available at: http://www.cdc.gov/steadi/pdf/algorithm_2015-04-a.pdf

- CDC should assist and encourage state health departments to optimize existing surveillance systems for falls by partnering with health care entities and health information-technology companies. These partnerships will help states collect improved epidemiological data to target STEADI resources and provider training to regions with high fall rates and ensure that community-based falls-prevention programs are available in localities where there is the highest need.

Recommendation #3. The administration should ensure Medicare and other federal programs and policies support substantially reducing the number of older adult falls and their associated financial impact.

Beyond preventing falls, the Medicare program has an opportunity to identify additional health risk factors that may exist in the home. As an example, UnitedHealth Group's HouseCalls program offered to Medicare Advantage plan members has demonstrated that a thorough home-based clinical assessment of a member's health and home environment combined with referral services can support aging in place and preempt costly institutional care.[145]

Health risk assessments (HRA) are health-related evaluations used by providers, insurers, and employers to collect data for individual and population health improvement. CMS requires Medicare providers to administer HRAs as part of the annual wellness visit. HRAs are also commonly used by Medicare Advantage plans and are occasionally administered in the home. With respect to Medicare Advantage plans, CMS does not require utilization of a specific HRA but, in its 2016 Final Call Letter, strongly encouraged plans to adopt recommended best practices, including components of a model HRA developed by CDC.[146] Though CDC's sample HRA included important questions on health behaviors, activities of daily living, and self-reported biometric measures, it did not include questions related to housing and/or LTSS.[147] CMS should encourage all providers, but specifically Medicare Advantage plans, through questionnaires or in-home visits, to include assessments of the following needs in HRAs: frailty and fall risk, living situation (e.g., lives alone), home safety/accessibility, and modifications.[148] This will ensure more attention to the effects of housing on health and lead to opportunities to enhance optimal aging in place.

Recommendation #4. CMS should incorporate housing-related questions in health risk assessments used by Medicare providers and Medicare Advantage plans.

Medicaid

For the first time in 2013, the majority of Medicaid LTSS spending ($146 billion) was devoted to care in home- and community-based settings instead of institutional care.[149] Congress has supported rebalancing Medicaid LTSS in several ways over the last decade, most recently through the Affordable Care Act, by extending the Money Follows the Person (MFP) initiative. The MFP was first enacted in 2006 as part of the Deficit Reduction Act.

As of December 2014, the MFP has helped states safely transition nearly 52,000 institutionalized Medicaid beneficiaries to community settings in over 45 states. While the majority of those transitioned are younger individuals with disabilities, approximately 37 percent have been older adults. The last year states can request MFP funding is 2016, though they will have until 2018 to transition beneficiaries from long-term institutional care and until 2020 to use these funds to support participants in home- and community-based settings.[150] It is estimated that a significant number of senior nursing home residents could still be transitioned into communities if the MFP continues beyond its current funding cycle ending on September 30, 2016.

The program should be extended and funds appropriated at a level

similar to previous years until such time that a decision is made as to whether it should become a permanent part of the Medicaid program. This will ensure that states continue to build the necessary infrastructure that allows an older adult to transition from an institutional setting to a quality and stable community-based arrangement. In an effort to determine the appropriate funding level, analyses should be conducted to demonstrate whether transitioning beneficiaries from institutionalized settings to community settings results in cost savings to the Medicaid program.

States should also continue to think creatively about how to expand affordable housing options for beneficiaries ready to be transitioned from institutionalized settings. For example, Iowa has created a state-funded rental-subsidy program administered by the Iowa Finance Authority that specifically targets older adult Medicaid HCBS recipients. Similar initiatives may further increase the supply of affordable housing, a recognized barrier for people who want to leave institutionalized settings.[151] For its part, CMS should disseminate best practices from its Medicaid Housing-Related Services and Partnerships program to all states to support housing tenancy and accelerate Medicaid-state housing-agency partnerships. This effort is part of Medicaid's Innovation Accelerator Program and will run through October 2016.[152]

States should also continue to think creatively about how to expand affordable housing options for beneficiaries ready to be transitioned from institutionalized settings.

Finally, states should also think about how to provide enhanced case management and evidence-based programs (e.g., CAPABLE intervention) to older adults transitioning into community settings to ensure they have adequate supports. Older beneficiaries with multiple chronic conditions and multiple limitations in activities of daily living will likely have different needs as they transition into community settings compared with younger

individuals. One of the lessons learned by states as documented in the MFP 2014 Annual Evaluation Report is that early identification of an older adult's needs and preferences, such as assistance for mental health conditions, is essential to facilitate timely linkages to services in the community and to avoid reinstitutionalization.[153]

Recommendation #5. Congress and the administration should work together to extend the MFP program to support state efforts to rebalance their Medicaid long-term care systems.

The federal Medicaid program currently pays for housing in the form of nursing homes, but it does not otherwise allow capital funding for supportive housing and it does not pay for room or board. In a recent Medicaid Informational Bulletin, the agency laid out a number of opportunities through which states could be reimbursed for providing housing-related activities and services. These activities include individual housing transition services (e.g., assisting with the housing application process; identifying resources to cover expenses, such as moving costs; and ensuring that the living environment is safe) and individual housing and tenancy sustaining services (e.g., education and training on the role, rights, and responsibilities of the tenant and assistance with the housing recertification process). In addition, through home- and community-based waivers, states can cover environmental modifications to install necessary accommodations for accessibility.[154]

Medicaid does not have comprehensive knowledge of how each state is currently using these various opportunities and to what extent older beneficiaries — specifically beneficiaries dually eligible for Medicare and Medicaid who are at risk for institutionalization — are eligible to

utilize these services. Not only should Medicaid track this information, where possible, it should also seek to quantify the impact of these services on beneficiary outcomes and health costs. In doing so, Medicaid would also be satisfying the secondary objective of ensuring that coverage of housing-related services is supplementary to, and not duplicative of, other federal programs that provide housing assistance to vulnerable populations.

In addition, given the evidence suggesting that placing people who are homeless in supportive housing can lead to improved health, reduced hospital use, and lower health costs, especially when frequent users of health services are targeted, several states are contemplating using their own Medicaid dollars (nonfederal) to pay for housing. For example, New York funds housing in the form of both newly constructed supportive housing units and subsidies for use in existing units.[155] Medicaid should ask states that pay for capital expenditures and room and board to evaluate their respective interventions and share data on beneficiary health outcomes and potential cost savings. This information could help inform policies of other state Medicaid programs as well as future federal Medicaid policy with regards to the coverage of housing-related services.

Recommendation #6. Medicaid should collect data on state coverage of housing-related activities and services and, where possible, track its impact on beneficiary health outcomes and health costs.

Hospitals

Medicare pays for more than 14 million hospital stays annually.[156] Each hospital discharge offers an opportunity for health care personnel to inquire about aspects of housing that may impact a senior individual's recovery at home. CMS has proposed a rule revising requirements for discharge planning for hospitals. The rule suggests that hospitals consider the availability of and access to non-health care services for patients, which may include help with home and physical environment modifications, assistive technologies, transportation services, meal services, household services, and housing for homeless patients.[157] Regardless of the final rule, hospitals should begin to more explicitly incorporate questions into their discharge process regarding both housing stability and falls risks.

The nearly 3,000 nonprofit hospitals across the country could take a larger role in assessing the housing of seniors as part of their community benefit obligations.

With respect to the latter, hospitals should underscore several home-safety recommendations from the National Patient Safety Foundation as patients are discharged.[158] These include:

- Plan to enter your home without climbing steps. If you need to climb steps to enter your home, determine if a neighbor, friend, or family member will be routinely available to provide assistance to you.
- Plan to make your bedroom on a floor with a bathroom if possible.
- Use night-lights in strategic areas to prevent falls at night.
- Place the telephone and emergency telephone numbers near you.
- Keep hallways, stairways, and pathways clear of clutter.
- Wear snugly fitting, nonslip, low-heeled shoes or slippers.

These issues are all the more important given that Medicare reimbursements to hospitals are now impacted by 30-day readmission rates. Specifically, since 2013, the federal Hospital Readmissions Reduction Program imposes payment reductions on hospitals considered to have excessive readmission rates for Medicare patients. The program was created in response to the fact that nearly one in five Medicare patients discharged from hospitals were being readmitted within 30 days, at a cost of more than $17 billion annually.[159] Many hospitals are now working in partnership

Bon Secours Baltimore Health System: Integrating Health and Housing for Optimal Aging

Bon Secours Baltimore Health System is a full-service health system, providing primary and emergency care, as well as a host of other services to meet health care needs in west Baltimore.[151] It dedicates nearly 12 percent of its operating budget to community benefit. In addition to its 88-bed acute care hospital, what is noteworthy about this institution is that it owns nearly eight times that number of affordable homes. In partnership with Enterprise and HUD, Bon Secours has been developing and operating housing for several decades. As of 2014, Bon Secours owned 648 homes, with 530 designated for disabled seniors and 119 for families. The system's neighborhood-revitalization strategy has ensured that every project to date, whether a renovation or a new construction, has been a reuse of a formerly vacant space. The city of Baltimore and the state of Maryland have been critical partners with respect to both financing options and zoning approvals. In the future, Bon Secours is looking to roughly double their number of homes.

To ensure the health of seniors, most of the affordable homes have onsite service coordinators to link residents with services at the hospital and in the community. The design of the senior buildings also offers communal settings to maximize social interaction among residents. Transportation options provide residents with access to essential services. Key measures of success include ensuring that residents are able to successfully age in place so they have the support they need. Most residents stay long-term and most properties have long waiting lists, demonstrating the need the health system is meeting for seniors. Bon Secours exemplifies a health care entity that understands the connection between health and housing for optimal aging.

with community-based organizations to facilitate care transitions from hospital to home. Although some hospitals are also beginning to conduct outreach to public and private housing associations and Villages, most hospitals are still at the earliest stages of determining how to work with housing stakeholders to reduce readmissions; much more effort needs to be undertaken in this area.

Finally, the nearly 3,000 nonprofit hospitals across the country could take a larger role in assessing the housing of seniors as part of their community benefit obligations. Specifically, community health needs assessments, mandated by the Affordable Care Act, are a requirement hospitals must meet to maintain their tax-exempt status with the IRS. Each assessment also requires a community implementation plan. In this way, hospitals that uncover a lack of senior housing options in a community could consider working with partners such as city housing and planning commissions to address this issue as part of their community implementation plans. The IRS has recently clarified that housing-improvement expenditures that meet a documented community need can be considered as a community benefit activity.[160]

Recommendation #7. Hospitals should incorporate questions about housing as part of their discharge planning to prevent hospital readmissions, and nonprofit hospitals, specifically, should include housing in their triennial IRS-required community health needs assessment.

Task Force Takeaway

In the years ahead, far greater integration of health care and supportive services with housing will be essential to improve health outcomes and will allow millions of seniors to age more successfully. A more integrated approach also holds the promise of substantially reducing overall medical costs. Fortunately, there are several important opportunities available today to test these propositions through Medicare, Medicaid, and the nation's hospital system. Seizing these opportunities is a critical step to realizing the full benefits of a more integrated approach that can transform homes into centers of senior health and well-being.

Chapter 5. The Power of Technology to Support Successful Aging

Technology influences almost every aspect of American life, including how Americans shop, travel, socialize, and manage their finances. Technologies have been adopted widely among adults:

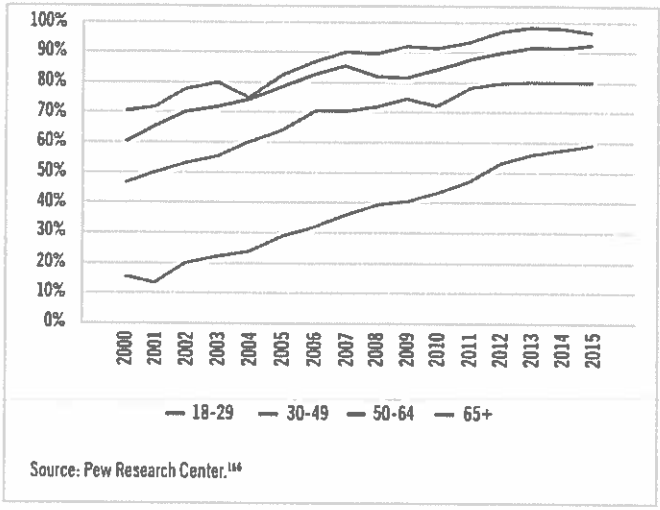
- 92 percent use a cell phone.
- 68 percent use a smartphone.
- 73 percent use a laptop or desktop computer.
- 45 percent use a tablet.[162]

And increasingly, Americans are using these technologies to help them navigate their health and health care:

- 72 percent of Internet users have looked online for health information.[163]
- Seven in ten American adults say they track at least one health indicator for themselves or for someone else.[164]
- 48 percent of Americans communicated via email or text with a health provider, used a health app on their smartphone, or looked at medical test results online.[165]

While older adults have lagged the general population in Internet use, today 58 percent of Americans over 65 use the Internet (see: Figure 5-1). For adults between 50 and 65 years old — younger baby boomers reaching retirement in the coming years — Internet use jumps to 81 percent. With increasing comfort and acceptance, health technologies have great potential to remove impediments to independent and optimal aging. These technologies can help manage

Figure 5-1. Internet Use by Age



Source: Pew Research Center.[166]

For adults between 50 and 65 years old, Internet use jumps to 81 percent.

chronic disease, reduce social isolation, support physical activity, and offset functional and cognitive impairments.

Public- and private-sector activities are now underway to enable consumer-facing applications, new medical devices, software, and clinical and administrative systems to work together seamlessly to enable the tracking, sharing, analysis, and use of health information. Electronic information sharing is expected to help people live healthier lives while also reducing costs by improving efficiencies and care delivery. A connected health care system will enable physicians to make medical decisions informed by real-time health information and complete medical records. And, in this ideal world, technologies would exist to detect and warn physicians when something goes wrong — for example, if medications were not taken on schedule or an older adult shows an increased risk of falling.

Examples of health technologies that are expected to achieve wider adoption include remote patient monitoring tools that connect blood pressure cuffs, blood glucose meters, and heart rate monitors to the Internet to support self-monitoring and ongoing monitoring by clinicians and care teams; telehealth and secure messaging tools that support care delivery to and from remote locations; and online tools that help individuals access educational and health information and connect with social networks through online communities.[167]

The benefits of these technologies are increasingly well-documented:

- Telehealth has been shown to improve access to care, reduce the cost of care (for example, through reductions in hospital readmissions and transportation costs), and increase the convenience of care.[168] Telehealth also improves access to specialists and extends provider capacity — an important benefit given the projected shortages in nurses and physicians.[169]
- Remote patient monitoring has been shown to reduce hospital readmissions.[170]
- Secure messaging has been shown to improve quality of care and outcomes.[171]
- Patients with online access to their health information are more likely to personally find and correct errors or incomplete information in their record, understand their health conditions better, and keep up with their medications.[172]
- Mobile health technologies have been effectively used in managing weight; increasing physical activity; quitting smoking; and controlling high blood pressure, high cholesterol, and diabetes.[173]
- Health IT-based fall risk assessments helped clinicians identify individuals who are at elevated risk for falls and facilitate appropriate intervention strategies for those patients.[174]

Older adults — a majority of whom suffer from multiple chronic conditions — and their caregivers will benefit considerably from the use of health care technologies, including telehealth and remote patient monitoring services, easy access to information contained in their electronic health records (EHRs), and tools that assist with medication management. There are also other technologies that may help older adults age in place. They include fall monitoring systems, home-based activity monitoring to address cognitive impairments,

speech-equipped or visually oriented "smart devices" to support sensory impairments, and social-networking applications to help loneliness and depression.[175]

While these new technologies offer great potential for improving health outcomes for all older adults, those residing in rural communities may particularly benefit. Transportation is a significant hurdle for older adults in rural communities — where the average travel for medical services is 17 miles, more than double that of urban residents.[176] In addition, public transportation may not be available and rural residents may become dependent on others, adding stress and unreliability. Some communities additionally face potential shortages in available caregivers, nurses, and doctors — particularly specialists.[177] Promising telehealth and remote monitoring technologies may alleviate some of these challenges, enabling rural seniors and chronically ill patients to live safely in their homes and communities for longer.

Addressing Barriers to Technology Adoption

Despite growing interest in using these myriad technologies to improve health and the delivery of health care, a few key barriers continue to stand in the way of higher levels of adoption. These barriers include high costs for consumers, lack of reimbursement, interstate licensing requirements, limited Internet access (particularly in rural areas and among low-income Americans), and continued concerns about the privacy and security of sensitive health information.[178] There are also other barriers that prevent effective use of technologies by older adults, including: paying for devices on a fixed income, forgetting or losing the technology, low ease of use, physical challenges, skepticism about benefits, and difficulty learning to use new technologies.[179]

All levels of government, philanthropy, and the private sector have a role to play in removing barriers that prevent the widespread adoption of increasingly important health technologies. Figure 5-2 details a number of efforts that have recently emerged to help address some of these barriers.

New technologies show great promise for improving the health and well-being of older Americans. Momentum is building for widespread adoption, with recognition of benefits by federal and state policymakers and private-sector payers. More work is needed to address remaining barriers to adoption, including those faced by seniors. But the opportunity for better health, reduced costs, and greater convenience for Americans is significant. The following are some additional policy recommendations for the federal government to more effectively encourage, develop, and scale technologies that support healthy aging in place.

All levels of government, philanthropy, and the private sector have a role to play in removing barriers that prevent the widespread adoption of increasingly important health technologies.

Cost is a chief concern regarding technologies for aging in place.[189] In the Task Force's own survey on technology and aging, a majority of survey respondents cited cost and lack of options to pay for technologies as very significant barriers to scaling technological innovations that support aging in place and optimal health — far ahead of privacy issues, broadband availability, interoperability, and others. Similarly, a majority of respondents selected "encourage Medicare/insurance reimbursement" as one of the best ways for the federal government to encourage, develop, or scale technologies that support healthy aging in place.

While providers are increasingly recognizing the potential of leveraging electronic tools to improve health outcomes and to empower patients to improve their health, more must be done. For example, despite the cost savings and improvements in access that are enabled by telehealth, of the more than $600 billion in Medicare spending in 2014, reimbursements for telehealth

Figure 5-2. Developments in Removing Key Barriers to Technology Adoption

EHR INCENTIVES PROGRAM	The Medicare and Medicaid Electronic Health Record Incentives Program (often referred to as "Meaningful Use") has provided more than $30 billion in incentive payments since 2011 to eligible professionals and hospitals for the adoption and meaningful use of EHR technology.[181] These technologies enable secure electronic messaging with patients on relevant health information and give patients the ability to view, download, and transmit health information online.[181] Despite increasingly rapid adoption, only 49 percent of eligible professionals and 77 percent of eligible hospitals had attested for stage 2 of "meaningful use" as of 2016.[182]
DELIVERY SYSTEM PAYMENT REFORMS	The federal government, states, and private-sector payers are increasingly adopting new delivery system and payment reforms that promote value and outcomes over volume in order to provide an environment conducive to the use of new health technologies. This includes not only accountable care models, shared savings, and bundled payments, but also provisions in the Affordable Care Act that require CMS to penalize hospitals for readmissions that occur within 30 days of discharge.[183] Also, several private-sector health plans, including Anthem, now include coverage of telehealth services in their benefits packages.[184]
THE CONNECT FOR HEALTH ACT	In February 2016, Senators Brian Schatz (D-HI), Roger Wicker (R-MS), Thad Cochran (R-MS), Ben Cardin (D-MD), John Thune (R-SD), and Mark Warner (D-VA) introduced the Creating Opportunities Now for Necessary and Effective Care Technologies (CONNECT) for Health Act, which allows telehealth and remote patient monitoring services to be used by qualifying participants in alternative payment models and Medicare Advantage without 1834(m) regulatory restrictions and clarifies other policies that would expand telehealth services through Medicare.[185]
INTERSTATE MEDICAL LICENSURE COMPACT	The Federation of State Medical Boards released an Interstate Medical Licensure Compact to streamline and expedite the pathway to licensure for qualified physicians who wish to practice in multiple states, which can help facilitate innovations in health care, such as telehealth. To date, 26 state legislatures have introduced the legislation and the Compact has been enacted in 12 states.[186]
INTEROPERABILITY ROADMAP	The Office of the National Coordinator for Health Information Technology has been tasked with advancing interoperability of health technologies, a key and often cited barrier.[187] In its effort, the Office of the National Coordinator developed a roadmap to nationwide interoperability that includes guiding principles and milestones, and sets a target date of 2024 for building an interoperable health IT infrastructure.
PCAST REPORT AND RECOMMENDATIONS	The President's Council of Advisors on Science and Technology (PCAST) released a report in March 2016 making 12 recommendations to support and enhance the role of technology in encouraging the healthy aging of older Americans.[188] The recommendations focus on actionable, near-term items for federal action.

were less than $14 million.[190] The shift away from fee-for-service payment toward population health and other value-based delivery and payment models represents a key opportunity for broader integration of telehealth.

CMS is now allowing providers to use telehealth in the CMS's Next Generation Accountable Care Organization model and, after rulemaking with notice and a public comment period, is expected to allow telehealth waivers in the Medicare Shared Savings Program. In addition, BPC has previously recommended that the Senate Finance Committee Chronic Care Working Group consider:[191]

1. Authorizing CMS to test allowing Medicare Advantage plans in some states to include telehealth in their bids with the goals of improving care quality, outcomes, and value. This test could inform the range of telehealth services that should be permitted if the model is deemed eligible for expansion to a permanent, nationwide feature of the Medicare Advantage program.
2. Eliminating originating site requirements to ensure

BPC Survey on Supporting Aging in Place and Optimal Health Outcomes through Technology

BPC's Senior Health and Housing Task Force conducted an online survey in March 2016 to inform its work and learn from practitioners in the field. (Note: see Appendix for a full copy of the survey.)

Which technologies are the most effective and scalable?

Respondents ranked their top three choices. Below is the percentage of survey respondents that ranked that technology in the top three.

Telehealth/telemedicine	63%
Remote monitoring	63%
Emergency detection and response	58%
Health tracking devices & apps	47%
Social networks/online communities	36%
Secure messaging	14%
Other	7%

KEY TAKEAWAY Nearly two-thirds ranked "telehealth/telemedicine" and "remote monitoring" among their top three.

What are the key barriers to scaling innovations?

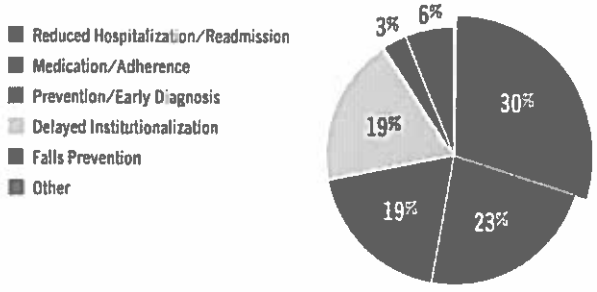
Below is the number of respondents that marked these barriers as "very significant."

Lack of options to cover cost	98
Price/cost for perceived value	82
Interoperability	73
Consumer discomfort/limited tech literacy	69
Product complexity	67
Privacy/data security	57
Broadband availability	49
Other	12

KEY TAKEAWAY Survey respondents had costs on their minds—a majority cited "lack of options to cover cost" and "price/cost for perceived value" as very significant barriers.

What are achievable health outcomes using new technologies?

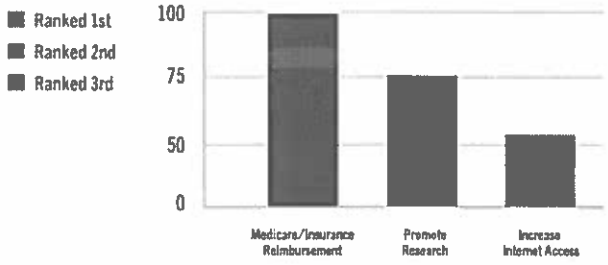
Respondents chose the most achievable outcome.



KEY TAKEAWAY Reduced hospitalization and readmissions was ranked most achievable (30 percent).

What can the federal government do?

Respondents ranked their top three choices, as shown below.



KEY TAKEAWAY "Encourage Medicare/insurance reimbursement of aging in place technologies" ranked as the top choice of survey respondents.

About the Survey: The survey was voluntary and transmitted electronically to a wide range of stakeholder groups. As intended, this information is illustrative only and not meant to be statistically representative. One hundred seventy-nine (179) individuals responded to the survey, categorizing their organizations as follows: nonprofit (21%); consultant or advisory service (19%); health care or insurance provider (15%); housing agency, provider, or builder (10%); association or trade group (8%); government entity (8%); tech entrepreneur or developer (6%); academic (6%); investor or seed accelerator (1%); and other (10%).

broader access and flexibility to help plans achieve these goals. (Originating site restrictions constrain telehealth reimbursement since that patient can only be located at certain clinical sites.)

3. Encouraging more states to adopt the Interstate Medical Licensure Compact, which can streamline medical licensure to help facilitate innovations in health care, such as telehealth.

The CONNECT for Health Act recently introduced in the House and Senate would expand the use of telehealth and remote monitoring and should receive serious consideration given its potential to enhance quality of care and reduce health care costs.

With Medicaid, the onus is on individual states to pursue reimbursement of aging technologies that could improve health outcomes and reduce costs. According to the LeadingAge Center for Aging Services Technologies, personal emergency response systems (PERS) are the most commonly reimbursed technology with support in at least 44 states, followed by medication management and telemonitoring/home telehealth.[192] Pennsylvania, New York, South Carolina, and South Dakota are among the most active in using Medicaid waivers to support reimbursement programs for aging technologies. Along with using Older American's Act Title III funding, Medicaid state plan services, and Veterans' Administration programs, states should continue to consider how best to reimburse effective technologies that facilitate aging in place, positive health outcomes, and cost savings.

Recommendation #1. CMS and the states should encourage greater reimbursement of telehealth and other technologies that have the potential to improve health outcomes and reduce costs.

Enabling the use of these technologies by older adults is as important as the technology itself. Using technology has considerable value for older adults: improved health outcomes, access to Internet-based health care options, improved self-sufficiency, increased productivity, and less social isolation (reduced loneliness). Internet access is also critical for seniors attempting to navigate federal benefits and programs — which are increasingly online.

A number of recent efforts are working to expand access to broadband and related training programs to low-income Americans. In particular, the Obama administration's ConnectHome initiative is a pilot program launched in 27 cities and one tribal nation that works to deliver affordable Internet connectivity, particularly for children in HUD-assisted housing. It leverages existing federal resources while encouraging partnerships between Internet Service Providers, mayors, public housing authorities, nonprofits, and other companies to provide free or affordable Internet access, technical training, and digital-literacy training. HUD is also planning, through rulemaking, to require new and substantially rehabilitated HUD-assisted housing to include broadband infrastructure with limited exceptions.[193] These efforts, along with work at the National Telecommunications and Information Administration and Federal Communications Commission, are critical to expanding broadband access.

With a similarly strong federal commitment to preserve and leverage existing resources and build new partnerships with the private sector, Congress and the administration could ideally expand affordable, cost-effective, basic broadband connectivity to HUD-assisted and USDA-assisted seniors in rental housing properties. If states and local governments were committed to this goal as well, the effort could also reach LIHTC properties. This idea, though focused on lower-income seniors, dovetails with the recent recommendation from the President's Council of Advisors on Science and Technology, which recommended that HHS work with other agencies to develop a national plan to ensure all older adults have broadband Internet access. Internet access is fundamental to facilitating use of technologies that could potentially reduce costs, improve health outcomes, and enable aging in place.

Recommendation #2. Congress, the administration, and the states should work together to make broadband (with sufficient speed to use online education and training programs) available to as many HUD, USDA, and LIHTC properties where low-income seniors reside, including in rural communities, as possible.

With the proliferation of technologies that may contribute to optimal aging, one great need is further research, including research to quantify the value of senior households having access to the Internet. Recent administration efforts have prioritized Internet access for students and subsequently performance; this logically follows as the Internet is an increasingly critical tool in education. Yet older adults also benefit from Internet access, as this chapter has highlighted. Data does not currently exist quantifying the benefits or value of seniors having Internet access, though such information could provide evidence to policymakers and lead to enhanced funding where it would be cost-effective.

Along with home Internet access, more rigorous studies could further demonstrate the value of telehealth and remote monitoring technologies in effectively reducing preventable hospitalizations, hospital readmissions, and other negative health outcomes.[194] As evidence builds on how to best implement and deploy these technologies, alternative payment models should be able to increasingly incorporate them. PCAST has further recommended that several federal agencies support interdisciplinary and translational research on aging technologies.

Recommendation #3. Relevant federal agencies should work with the scientific research community and the private sector to demonstrate the benefits of home Internet access for very low-income seniors and the effectiveness of health technologies.

Task Force Takeaway

The potential impact of technology on optimizing the health of seniors cannot be overstated. By utilizing this technology in the home setting, health care providers have the opportunity to promote healthy aging in place. We have not yet realized the promise of technology for this purpose; it is time to address and overcome the research, connectivity, and reimbursement barriers so that seniors can be empowered and engaged.

Concluding Thoughts

The United States is in a crisis and must confront a number of challenges: increased demand for expensive LTSS, a high prevalence of chronic disease, grossly inadequate retirement savings, and a severe undersupply of affordable and suitable senior housing. These issues affect us all; if they do not yet affect us individually, they likely affect our grandparents, parents, neighbors, or friends.

The simple truth is that for too long the nation has recognized its shifting demographics — driven by the aging of a massive generational cohort, the baby boomers, coupled with rising longevity — but failed to make investments that preserve dignity and independence in old age. Structurally, U.S. homes and communities have not been built for seniors to live safely. And governmental structures too often prevent collaborations that recognize the importance of the home setting to wellness.

The implications of this failure cannot be understated. The statistics are clear: 10,000 baby boomers hit age 65 every day. But society at large has not considered what this means for the nation's systems and services: growing demand for housing, ambulances, meals on wheels, financial planning tools, and other infrastructures and products. As a society and as policymakers, we have to act. Not only is the ability to age in place a widespread aspiration, but it can have a huge upside for the U.S. economy, the national budget, and American communities.

The Senior Health and Housing Task Force has worked to provide valuable guidance and an actionable, bipartisan agenda. As proposed, our recommendations would:

- Preserve and expand the supply of affordable and suitable housing to protect the most vulnerable seniors;
- Increase awareness and intergovernmental collaboration to better deploy federal resources in creating and sustaining healthier home and community environments for all ages;
- Move the United States much closer to aligning incentives and breaking down silos to better integrate health and housing policy to save money and materially improve the quality of life of our seniors; and
- Advance the development and deployment of technologies proven to support optimal health outcomes and aging in place.

Better connections between health and housing are just the beginning. The focus of this report has been on the tangible benefits of a policy framework that recognizes the inherent value of housing and the built environment to the health and happiness of our nation's seniors. Yet the demographic transformation taking place has a much more profound impact on all facets of government and society. While the policy recommendations provided represent a positive step forward, the Task Force recognizes the limitations of a single report. Further research and effort is needed to:

- Provide additional support to the nation's caregivers;
- Explore new and innovative ways of bringing government agencies together, breaking down policy silos in Congress, and implementing policies that more deeply recognize costs and benefits to society; and
- Build the evidence base on the cost savings and health benefits of housing, home modifications, community supports, and aging technologies, and integrate the systems that support them all.

SENIOR HEALTH AND HOUSING TASK FORCE

The Bipartisan Policy Center formed the Senior Health and Housing Task Force to underscore the synergies between health care and housing in fostering improved health outcomes, cost savings, and enhanced quality of life for America's aging population.

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