U.S. Department of Health and Human Services
Assistant Secretary for Planning and Evaluation
Office of Disability, Aging and Long-Term Care Policy

SUPPORT AND SERVICES AT HOME (SASH) EVALUATION:

EVALUATION OF THE FIRST FOUR YEARS

March 2017

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This report was prepared under contract #HHSP23337006T between HHS's ASPE/DALTCP and RTI International. For additional information about this subject, you can visit the DALTCP home page at http://aspe.hhs.gov/office_specific/daltcp.cfm or contact the ASPE Project Officer, Emily Rosenoff, at HHS/ASPE/DALTCP, Room 424E, H.H. Humphrey Building, 200 Independence Avenue, S.W., Washington, D.C. 20201. Her e-mail address is: Emily.Rosenoff@hhs.gov.

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March 2017

Prepared for
Office of Disability, Aging and Long-Term Care Policy
Office of the Assistant Secretary for Planning and Evaluation
U.S. Department of Health and Human Services
Contract #HHSP23337006T

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ACRONYMS

The following acronyms are mentioned in this report.

AAA	Area Agency on Aging
ACL	HHS Administration for Community Living
ACO	Accountable Care Organization
ADL	Activity of Daily Living
ASPE	HHS Office of the Assistant Secretary for Planning and Evaluation
BMQ	Brief Medication Questionnaire
CAR	LeadingAge Center for Applied Research
CDSMP	Chronic Disease Self-Management Program
CHT	Community Health Team
CMS	HHS Centers for Medicare & Medicaid Services
COA	Council on Aging
CSC	Cathedral Square Corporation
DAIL	Vermont Department of Disabilities, Aging and Independent Living
DID	Difference-in-Differences
DocSite	Vermont's central clinical registry
DRHO	Designated Regional Housing Organization
DVHA	Department of Vermont Health Access
EQ-5D	EuroQol Five Dimensions questionnaire
ER	Emergency Room
ESRD	End-Stage Renal Disease
FFS	Fee-For-Service
HCC	Hierarchical Conditions Category
HHS	U.S. Department of Health and Human Services
HUD	U.S. Department of Housing and Urban Development
LIHTC	Low Income Housing Tax Credit
MAPCP	Multi-payer Advanced Primary Care Practice
MNA	Mini Nutritional Assessment
MOU	Memorandum of Understanding

OAA	Older Americans Act
OLS	Ordinary Least Square
PBPM	Per-Beneficiary Per-Month
PCP	Primary Care Provider
PHC	Physical Health Composite measure
PIC	Public and Indian Housing Information Center
P.O.	Post Office
SASH	Support and Services at Home
SSN	Social Security Number
TRACS	Tenant Rental Assistance Certification System
USDA	U.S. Department of Agriculture
VNA	Visiting Nurse Association

EXECUTIVE SUMMARY

Abstract

This evaluation report describes the implementation and impacts of a program intended to improve health status and slow the growth of health care expenditures among older adults living in affordable housing properties. The Support and Services at Home (SASH) program connects participants with community-based services and promotes coordination of health care. In July 2011, the SASH program was launched in Vermont; and by June 2015, the latest date for this analysis, the program had expanded to include 54 panels and 4,741 participants across the state who had spent at least 3 months in the program.

Our analysis combines findings from interviews with SASH staff members and key stakeholders, a survey of SASH participants, and an analysis of Medicare claims data. The SASH program faced challenges in expanding beyond the affordable housing properties and into the community. Highlighted successes included the partnerships formed with other organizations and the training program for SASH staff. Another notable success reported was the program's ability to help participants remain in their homes, in terms of both allowing participants to age in place as their health and functional needs increase and helping participants avoid eviction.

Self-reported health status and functioning were higher for SASH participants relative to the survey comparison group, and SASH participants reported fewer problems managing multiple medications. Overall, we do not find that the SASH program had a significant impact on the growth of Medicare expenditures. However, among participants enrolled in SASH panels established before April 2012 (early panels, representing 40% of SASH participants with Medicare living in affordable housing properties), growth in annual Medicare expenditures was slower by an estimated $1,227 per-beneficiary per year. These same beneficiaries in the early panels also had lower rates of hospitalization and slower rates of growth for hospital and specialty physician costs.

Introduction

In 2008, the non-profit housing provider Cathedral Square Corporation (CSC) in South Burlington, Vermont, began developing the SASH program out of concern that frail residents in its properties were not able to access or receive adequate supports to safely remain in their homes. CSC designed the SASH program to connect residents with community-based support services and promote greater coordination of health care. As part of the Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration, the SASH Teams extend the work of the Vermont Blueprint for Health's

Community Health Teams and medical homes/primary care practices by providing targeted support and in-home services to participants. The SASH program was officially launched in July 2011 and expanded into other non-profit affordable housing sites and communities across the State of Vermont.

The SASH program is implemented at the panel level, and almost all of the 54 SASH panels are hosted by U.S. Department of Housing and Urban Development (HUD)-assisted or other non-profit affordable housing properties. Each SASH panel consists of up to 100 participants served by a full-time SASH coordinator and a quarter-time wellness nurse. Using evidence-based practices, key services provided by core SASH staff include comprehensive health and wellness assessments, creation of individualized care plans, on-site one-on-one nurse coaching, care coordination with medical homes/primary care practices and with hospitals, and health and wellness group programs. Local service providers build on these core tenets by offering additional community activities, health and wellness workshops, and direct services.

While SASH was originally created to help meet the needs of residents in affordable housing sites ("site-based participants"), the program is available to any Medicare beneficiary living in surrounding communities ("community participants"). SASH panels that started before April 2012 ("early panels") primarily serve residents in affordable housing sites; these are "site-based panels." As the SASH program expanded statewide, some panels based in affordable housing sites were created to serve a mixture of site-based and community participants ("mixed-panels"), and a few panels were created solely for community participants ("community panels"). "Late panels," started after April 2012, include site-based panels, mixed-panels, and community panels.

Using a mix of qualitative and quantitative methods, RTI International and the LeadingAge Center for Applied Research (LeadingAge) have been conducting an evaluation of the impact of the SASH program. The evaluation will address the core research questions of interest to the U.S. Department of Health and Human Services (HHS) and HUD: (1) "Can coordinated health and supportive services to older adults in affordable housing improve quality of life, health, and functional status?" and (2) "Are there differences in health care and housing costs for seniors who receive coordinated services in an affordable housing setting?"

Methodology

Our analysis combines findings from interviews with SASH staff members and key stakeholders, a survey of SASH participants, and an analysis of Medicare claims data. To address key evaluation questions on SASH program implementation and operation and identify successes and challenges in the statewide expansion of the program, we collected and analyzed three varieties of primary data: semi-structured, in-person interviews with SASH staff members and key stakeholders; telephone interviews with SASH staff members and key stakeholders; and a cost survey fielded to housing host

organizations. The qualitative analyses of these data have been designed to illuminate the issues surrounding the SASH program start-up and continuing operations, with a particular focus on understanding points that are most relevant for program sustainability and replication, as well as helping interpret variation observed in the quantitative findings.

To determine the impact of the SASH program on self-reported physical and mental health status, problems taking multiple medications, and dietary issues, the evaluation team conducted a mail survey of SASH participants and comparison Medicare beneficiaries. We created outcome measures from the survey responses and then used regression modeling, with control variables for the demographic characteristics and with propensity-score weights, to estimate the effect of the SASH program on the five outcome measures related to health, nutrition, and medication management.

Finally, our analysis of Medicare claims data used regression methods to identify the impact of the SASH program on health care expenditure and utilization outcomes. Due to data availability, this analysis is limited to SASH properties that receive funding assistance from HUD or the Low-Income Housing Tax Credit (LIHTC) properties. This includes properties receiving assistance through HUD's multi-family programs, such as Section 202; the public housing program; and properties receiving tax credits.

The SASH intervention group consisted of Medicare fee-for-service (FFS) beneficiaries who had participated in the SASH program for at least 3 months and who lived in a non-profit affordable housing property as identified in the HUD or LIHTC data bases. As of June 2015, a total of 4,741 individuals had participated in the SASH program for at least 3 months. After applying the beneficiary and property exclusions, the sample for this analysis contained 2,682 SASH participants. The comparison group is composed of 3,591 individuals who were Medicare FFS beneficiaries who were not participating in SASH and who lived in HUD or LIHTC properties that were not hosting the SASH program.

For the Medicare expenditure outcomes, we used a linear version of a difference-in-differences model. The impact estimate is the difference between SASH program participants and the comparison group in the *change in level of the Medicare expenditure outcomes between the baseline and intervention periods*. For the utilization outcomes, we used a non-linear (negative binomial) version of the regression model. For negative binomial models, the coefficients are incidence rate ratios, and they are interpreted as the difference in the expected rate of events; values less than 1 indicate that the expected rate of utilization is less than that of the comparison group, and values greater than 1 indicate that the expected rate of utilization is greater than that of the comparison group.

Support and Services at Home Program Implementation

Among the operational successes of the SASH program, the development of relationships with a variety of community agencies and resources was important in order to better meet the needs of the SASH participants. CSC also succeeded in developing a comprehensive training program for the SASH program staff. Funding remained an operational challenge, both for operating SASH panels and for expanding the SASH program.

The relationships between SASH and their community partners have matured and strengthened over the course of the implementation of the SASH program, although some partners remain concerned about perceived overlap as the SASH program has expanded into the community. Interaction between the SASH Teams and the medical homes/primary care practices was greater for some panels than for others, but overall it had increased over the years.

Several SASH staff members and property managers believe that a notable success has been the program's ability to help participants remain in their homes, in terms of both allowing participants to age in place as their health and functional needs increase and helping participants avoid eviction. SASH staff are able to make sure that participants have the necessary services and resources to be safe in their apartments or uphold their tenancy obligations. Other successes of the SASH program noted by SASH staff members and property managers included the training program developed by CSC and the teamwork and communication within the networks established by the SASH staff members.

Support and Services at Home Program Participation

The SASH program sites included in this analysis are those that implemented the SASH program prior to July 2015. Designated SASH sites are non-profit affordable housing properties subsidized by HUD, the LIHTC, the U.S. Department of Agriculture Rural Development, or other State of Vermont funding sources.

The site-based SASH participants were older and in poorer health than the comparison group beneficiaries; propensity-score weighting methods were used to balance the demographic characteristics between the SASH group and the comparison group. Community participants in the SASH program have more health care needs, higher health care expenditures, and may be more difficult to serve than the site-based SASH participants.

Community participants receive the same set of services as the site-based participants. However, from the claims data analysis, community participants were found to have more health needs and higher health care expenditures compared to site-based participants. SASH staff also reported that community participants have more

environmental issues with their homes compared to site-based participants, ranging from inaccessibility to severe dilapidation.

Support and Services at Home Program Outcomes

From both our interviews with SASH staff members and our analysis of the SASH participant survey, we found evidence that the SASH program had a positive impact on the health and functional status of participants. Additionally, SASH participants reported fewer issues with managing their multiple medications, which is consistent with the training that the SASH staff provided to participants on medication management, both in group programming and in one-on-one interactions. Our survey results should be interpreted with caution, because we surveyed our sample at only a single point in time and do not have information about their health status prior to the start of the SASH program.

The impact of the SASH program on the growth of Medicare expenditures varied across different panels. Site-based participants in the early panels--those launched in the first 9 months of the SASH program--experienced significantly slower growth in Medicare expenditures relative to a comparison group of similar Medicare beneficiaries; for these participants, growth in annual Medicare expenditures was slower by an estimated $1,227 per-beneficiary per year. However, for the SASH participants living in the HUD-assisted or LIHTC housing sites in the later panels, we found no evidence that Medicare cost growth was significantly slower. Consequently, across all of the SASH participants, we found no evidence that the SASH program slowed the growth of Medicare expenditures. For the participants in the early panels, we observed a shift in health care services, as they had lower rates of acute care hospitalization and slower growth in Medicare expenditures for both hospitalizations and specialist physicians following their enrollment in the SASH program.

The HHS Centers for Medicare & Medicaid Services (through the MAPCP Demonstration) was the primary funding source for the SASH program from July 2011 to December 2016; their per-beneficiary per-month payments covered the salaries of the SASH coordinators and wellness nurses. CSC was able to leverage additional funds from Medicaid and other Vermont agencies and foundations to cover the administrative costs of implementing and overseeing the SASH program statewide. Based on our survey of host properties, we also found that there were between $7,500 and $15,000 in additional costs each year for the housing properties to host an individual SASH panel.

Conclusion

The SASH program is designed to improve the continuity of care and reduce the growth of health care expenditures among a population of older adults and individuals with disabilities. The program's unique contribution is its use of coordinator and wellness nurse teams embedded in affordable housing properties as a platform to

connect residents to health services and social supports. Thus far, our evaluation has identified many successes attributable to the SASH program and also challenges to consider when implementing a similar housing with services program.

Our continuing research efforts will follow the transition of the SASH program from its role in the MAPCP Demonstration to its role in Vermont's all-payer Accountable Care Organization. Having identified a group of SASH panels that has been successful in slowing the growth of health care expenditures for participants, we will focus our research efforts on which characteristics of those SASH panels are contributing to the slower growth in health care expenditures. We also plan to evaluate the impact of the SASH program on use of long-term care services and Medicaid expenditures among SASH participants.