

Significance & Introduction

Although self-management support has been identified as one of the essential elements in the provision of high-quality chronic illness care, health care providers have struggled to identify approaches to support self-management activities that are sustainable and cost-effective, especially within the constraints of the traditional primary care clinic.¹ Community-based senior centers may play an important role in helping to preserve the health of aging primary care patients. The Institute of Medicine (IOM) suggests that primary care-public health integration can leverage the infrastructure of community resources like senior centers to improve health outcomes for vulnerable lower income and minority patients.² IOM implies that varying degrees of integration (i.e., mutual awareness, cooperation, collaboration, or partnerships) can be used to achieve better health results, but a 2012 systematic review and “environmental scan” found that few examples of linkages between primary care and community organization exist,³ and the extent to which these may enhance patients’ use of community resources and improve clinical outcomes remains unclear.

Methods

We conducted a prospective observational study, recruiting 149 adults ≥ 65 years with prediabetes or type 2 diabetes (T2D) who were new members of three multipurpose senior centers in San Antonio. Baseline evaluations included an interview with standardized questionnaires and clinical assessments of glycemic control (i.e., HbA1c). We asked participants to identify their source of primary care and whether a primary care provider (PCP) had encouraged them to join the senior centers. We repeated the clinical and questionnaire assessments at 9 months. We included two open-ended questions that asked participants if they had discussed their senior center participation with their PCP and whether it would be helpful for their PCP to receive feedback on their participation from the senior center. We also obtained electronically-captured member data on frequency of senior center visits and activities in which members participated, such as exercise classes. We used multivariable logistic regression to determine which baseline characteristics were associated with members’ report of being encouraged to attend the senior centers by a health care professional, as well as multivariable general linear regression to determine which factors were associated with improvements in HbA1c at 9 months follow-up.

Findings

The majority of the 149 participants had diabetes and were female (67.1%) and Hispanic (71.8%), with a mean (sd) age of 71.2 (5.6) years. Only 22% were encouraged to join the senior centers by a health care provider; multivariable analysis indicated that participants with total annual household incomes of \$20,000 or less [OR= 2.78; 95% CI=(1.05, 7.14)] and those reporting 12 years of education or less [OR= 3.57; 95% CI=(1.11, 11.11)] were significantly more likely to report being encouraged to attend the senior center by a health care provider. At 9-months follow-up (86% retention), 55.9% reported discussing their senior center participation with their PCPs (Table 1), which was significantly correlated with total number of visits ($p < 0.03$) and exercise-related visits ($p < 0.05$). In addition, 56.7% of the senior center members thought it would be helpful for their PCPs to receive feedback from the senior centers on their participation. In separate GLM analyses, members’ report at 9 months follow-up of discussing senior center participation with their PCP was associated with a 0.53 reduction in HbA1c ($p < 0.01$) after adjusting for exercise-related visits and sociodemographic and characteristics. There was a similar reduction in HbA1c (-0.52, $p = 0.012$) after adjusting for total number of senior center visits.

Table 1. Exemplar quotes from 129 participants at follow-up

Discussed senior center participation with PCP?	
Yes 71 (55.9%)	<ul style="list-style-type: none"> • I told him about exercises here at the Center. He said “That’s good, don’t stay home.” • I tell him what activities I do. He says to “keep it up.” • He knows I come to exercise. He says this is good for me. • I just told her I was coming to Center. She just said “o.k.”
No 56 (44.1%)	<ul style="list-style-type: none"> • He’s always in a hurry and typing everything in the computer that I don’t want to interrupt him. • I have not been coming.
Would feedback from senior center to PCP be helpful?	
Yes 72 (56.7%)	<ul style="list-style-type: none"> • Might give him some good information. • She needs to know what is going on with me. • So she’ll know I’m doing my part. • It will help him and me and it will be easier to discuss what I’m doing. • He can compare blood work and other results. • So she can keep track of what I’m doing to prevent diabetes.
No 55 (43.3%)	<ul style="list-style-type: none"> • I tell her all I do. • She’s always in a hurry...has too many patients. • He doesn’t look at stuff like that. He just looks at lab results. • What do they care? They don’t care

Conclusion

Older primary care patients with prediabetes or T2D may use health-related resources (e.g., exercise classes) at community-based multipurpose senior centers more frequently if they discuss their participation with their PCPs. Furthermore, discussion of senior center participation was significantly associated with improvements in HbA1c after controlling for frequency of senior center visits in general **or** exercise-related visits. This finding is consistent with suggestions that primary care-community linkages can improve health outcomes in vulnerable populations. The majority of participants agreed that feedback from the senior center to their PCPs would be helpful. Such feedback may be particularly useful in prompting patient-provider discussions, especially for low-income and low literacy patients who may not feel empowered to raise these issues with their primary care doctors. For our next steps, we plan to explore the acceptability, feasibility, and preferred strategies for implementing a sustainable primary care-senior center referral and feedback system in San Antonio, with stakeholder input. Our long-term goal is to establish and strengthen primary care-senior center linkages to improve the health and functioning of older adults.

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