In this issue of Circulation: Heart Failure, Smith et al report findings from a randomized trial comparing usual care posthospital discharge (healthcare provider led office appointments) and usual care plus 4 weekly shared (group) appointments and 1 booster shared appointment at 6 months, involving groups of 4 to 8 patients, who were discharged ≤8 weeks prior. The premise was that shared appointments would allow for more extensive education, more face time with healthcare providers, greater opportunities to identify self-management issues and greater opportunities for multidisciplinary professionals and fellow patients to engage in problem solving for themselves and others. The intervention group received transportation vouchers and an experienced heart failure (HF) nurse practitioner, mental health clinical nurse specialist, social worker, and dietician used 2 theoretical models to guide the intervention. The Chronic Care Model2,3 focused on patients by encouraging and activating them to be engaged in self-management and also on the healthcare team, by ensuring that they were prepared and proactive in fostering productive, interactive relationships. The second model, the American College of Physicians’ Family Home Care Management Guide, offered multiple strategies to enhance postdischarge care, including video education, shared group visits, and patient-centered medical home concepts. Patients randomized to both groups received standardized HF education beyond what was delivered during hospitalization in the form of a 5-part digital video disc of self-management strategies. Patients in the usual care group took the digital video disc home and patients receiving shared appointments reviewed and discussed 1 segment of the digital video disc as a group at each intervention visit.

The shared appointments’ intervention had multiple features. Patients completed daily self-monitoring checklists/diaries of weight, sodium and fluid intake, physical activity, HF symptoms, and emotions and brought their information to shared appointments. During the shared appointment, assessments were completed of current status and patients received a 1-page summary of self-management trends (vital signs and depression score) that also included a list of all guideline-directed HF medications and those patients were taking. The nurse practitioner was the shared appointments supervisor but did not alter the clinical treatment plan. Rather, the focus was on helping patients adhere to the treatment plan and identify and document issues that primary care providers should address at the next clinical visit. Patients were followed up for 12 months after randomization and primary outcomes, time to first HF-related hospitalization or cardiovascular-related death, were also assessed at the 7-month point, after the intervention subjects received their final boost shared appointment. Assessment of time to HF hospitalization or death is a worthy endpoint, as researchers who completed a gap-time analysis learned that extending the time between hospitalizations was an important outcome in patients with HF.4 Although there were no statistically significant differences between usual care and shared appointments groups in the primary outcome at 12 months, when data were censored to the first 7 months, time to the primary outcome was significantly longer in intervention group patients. Beyond 7 months, investigators found no differences between groups.

Smith et al results can be interpreted in many ways. Investigators reported that the most common reason for not participating in this study was a lack of desire for attending shared appointments; this single factor was the rationale for ≥63% of patients who were not enrolled. The sample might have been biased in that patients may have been self-motivated to attain better health and at minimum, were unopposed to social interactions with other adults who shared similar health issues. Once intervention group patients met, they may have been more likely to follow group norms and expectations during the life of the intervention, including the 6-month boost shared appointment. The surge in rehospitalization or death in intervention group patients after the 7-month point requires further assessment. It is unknown whether patients were holding off on communicating symptoms of worsening health until after the boost visit, if patients thought they no longer needed to follow HF self-management strategies post intervention, or if they stopped self-monitoring and diary update processes post intervention and no longer recognized changes requiring primary care follow-up. Alternately, the shared appointments might not have had a positive effect on individual or composite self-care behaviors; investigators did not report the effects of the intervention on self-care behaviors. In previous research, self-reported adherence to HF self-care management (diet, weight monitoring, fluid limitations, and activity expectations) was <50% at 1 month after decompensated HF hospital
discharge. When patients were assessed at 18 months for the composite of death or HF readmission using Cox regression analysis, adherence to self-care expectations at 1 month post discharge was associated with fewer 18 month events.\(^6\) In another report of patients with HF who were grouped by the level of adherence to self-care management strategies when worsening or new HF symptoms emerged, risks of all-cause mortality, hospitalization, or emergency-room admission were lower in patients who scored above-level in self-management of symptoms.\(^6\)

Smith et al\(^1\) investigators reported higher use of vasodilator therapies and a trend toward more β-blocker use at 12 months in intervention group compared with usual care group patients with reduced ejection fraction. However, in another research report, 1 year after attendance in a specialized HF clinic, HF medication adherence rates were higher than what was achieved in this study: 93% for renin angiotensin system therapies, 92% for β-blockers, and 86% for spironolactone.\(^7\) In the current study, the use of guideline-directed medical therapies may not have been different enough to affect clinical outcomes and sample sizes were small. Part of the intervention encouraged patients to ask questions. Primary care providers could have benefited from patient questions and summary reports of medication therapies during the 6-month intervention period that were not available after the final boost visit.

In other reports, multiple factors associated with rehospitalization included comorbidities, clinical depression, and decreased cognitive functioning.\(^8\) In a report, cognitive decline was associated with higher depression,\(^9\) and in another study, depression and anxiety were closely linked and multifaceted interventions that included cognitive behavioral therapy, exercise, and anxiolytics were used to meet psychiatric needs.\(^10\) In the Self-Management and Care of Heart Failure (SMAC-HF) intervention, mental health clinical nurse specialists were part of the shared appointments team and depression evaluations were completed, but cognitive decline was not studied and nurse practitioners and the other multidisciplinary providers did not alter the clinical treatment plan to alter depression. Moreover, research results of the benefits of depression assessment, cognitive behavioral therapy, and medication management to treat depression in patients with HF is limited,\(^11,12\) reflecting a need for novel interventions. Although not stated in the Smith et al\(^1\) report, the shared appointments team model approach may have provided nonthreatening depression assessment and self-management and possibly provided decision support of depression treatment strategies. More studies are needed to determine whether shared appointments or other programs that use a team model approach can resolve or stabilize depressive symptoms.

In the context of evolving transition care recommendations, there may have been gaps in the methodology of this research that limited the opportunity for positive outcomes after the intervention ended. Patients enrolled in SMAC-HF had a mean duration of HF that was >6 years. Patients with long-standing HF may have been less likely to alter self-care behaviors if illness beliefs and traditions were inconsistent with intervention messages, even if they were activated and engaged in managing their health. It would have been important to learn whether there were differences between groups in previous hospitalization history, because the gap time from first to second hospitalization was longer than time between second and subsequent hospitalizations when patients were followed up during a 5-year period.\(^4\) Furthermore, although researchers provided evidence that patients were at high risk for rehospitalization or death based on percentage of subjects with history of chronic renal insufficiency, diabetes mellitus, or chronic pulmonary disease, there was no evidence of non-comorbidity high-risk features, such as ≥2 hospitalizations in the previous year and evidence of severe congestion on hospital admission. In a meta-analysis of transition care involving 47 trials, mean patient age was 70 years,\(^13\) a much older sample than the SMAC-HF subjects who had a mean age of 62.3 years. It is unknown whether younger patients with HF are more likely to appreciate shared appointments and a team model approach; they may also have been less likely to follow-through with self-care diary and other reporting expectations post intervention. Finally, although this study of shared appointments in HF is the largest to date,\(^14,15\) it did not involve nurse practitioner use of guideline-directed medical therapies and details about group visits were not provided, both of which could have affected 12-month outcomes.

To date, team model shared appointment programs are evolving and are heterogeneous, making it difficult to determine successful components;\(^16\) but evidence of patient satisfaction was high.\(^17\) It may be a promising approach that can be added to the list of chronic disease management processes and systems if patient interest and support lead to return on investment. More research is needed to learn who the best candidates are and which settings (primary care versus specialty care) will create the best success. Other factors that must be studied are the optimal number and length of visits, number and type of multidisciplinary team providers needed per appointment, depth and breadth of services and education rendered, format of visits (healthcare provider time spent in group versus private, individualized patient interactions), presence of caregiver support, and outcomes that determine success. Furthermore, because it is resource intensive, it will be important to learn the type and intensity of training needed by healthcare providers and resources (written handouts, items for demonstration, and role play) needed to create an environment that promotes optimal success.

HF disease management and transition care programs have multiple structures, systems, processes, and evaluation methods to determine success. We are often left with the thought that doing something is better than doing nothing, but we are not really sure what best practice looks like. Many successful transition care programs focused on a team model approach of early follow-up communication, collaboration, and medication reconciliation, which the SMAC-HF shared appointments facilitated. To date, HF disease management programs delivered as multidisciplinary clinics, home-visiting programs, or structured telephone support had the greatest success in improving all-cause and HF-related clinical outcomes.\(^13\) Other interventions, such as the postdischarge virtual ward,\(^18\) may have been thought to be more innovative, but the intervention failed to make a difference in primary or secondary morbidity and mortality outcomes. During, but not after the intervention period, the patient-centered, shared appointment SMAC-HF
approach led to important clinical outcomes. Ultimately, a team model approach may be the key ingredient of successful postdischarge programs because experts in different healthcare fields have an opportunity to meet individualized patient and family needs. To advance care management for HF, clinicians and researchers must review what has previously worked, and specific to SMAC-HF, discover why outcomes changed immediately after the intervention ended. Finally, clinicians and scientists must instill disruptive innovation into the mix to find the right ingredients that optimize achievement of clinically important short- and long-term outcomes.

Disclosures

None.

References


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Nancy M. Albert

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