Effects of Guided Care on Providers' Satisfaction with Care: A Three-Year Matched-Pair Cluster-Randomized Trial

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Abstract

It is important to understand the effects of a new care model on health professionals' satisfaction, which may help inform organizations' decisions regarding the adoption of the model. This study evaluates the effect of the Guided Care model of primary care on physicians', Guided Care Nurses' and practice staff satisfaction with processes of care for chronically ill older patients. In Guided Care, a specially educated registered nurse works with 2–5 primary care physicians, performing 8 clinical activities for 50–60 chronically ill older patients. This model was tested in a 3-year matched-pair cluster-randomized controlled trial with 14 pods (teams of physicians and staff) randomly assigned, within pairs, to provide Guided Care or usual care. Physicians and Guided Care Nurses were surveyed at baseline and annually for 3 years. Staff were surveyed at baseline and 2 years later. Physicians' satisfaction with chronic care processes, knowledge of patients, and care coordination were measured, as well as Guided Care Nurses' satisfaction with chronic care processes and staff perceptions of quality of care. Findings suggest that Guided Care improved physician satisfaction with patient/family communication and management of chronic care, and it may bolster staff beliefs that care is patient oriented. Differences in other aspects of care were not statistically significant. (*Population Health Management* 2013;16:317–325)

Introduction

CARE FOR OLDER PATIENTS with multiple chronic conditions is challenging because these patients have complex needs and receive care from multiple health care providers in multiple settings.¹ Researchers and practitioners have developed new versions of the primary care model, such as the “medical home” (and “comprehensive primary care”), to provide high-quality chronic care efficiently. These new versions require new roles and work processes for physicians, nurses, and practice staff, and may affect their satisfaction with work and their practice climate. Literature has shown that physicians' and nurses' job satisfaction is related to burnout,^{2–5} intention to leave,^{6–9} and job turnover,^{10–12} as well

as patient satisfaction^{13–16} and care continuity.^{15,17} Practice climate is the extent to which practice staff share attitudes and behaviors supporting the collaboration and teamwork that are required to care for their patients.¹⁸ A more favorable practice climate in primary care teams may be associated with increased patient involvement in their own health and health care, and patient trust of the physician.^{18,19}

Little is known about physicians' and nurses' satisfaction with the care they provide. However, available studies examining physicians' views of office visits suggest that physicians' perceptions of care are related to the quality and processes of care.^{20–22} Such information on provider perceptions may help improve new models of primary care. Knowledge of the effects of a model on health professionals'

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Marsteller JA. Guided Care Nurse Satisfaction and Its Change over Time. Poster presentation to the AcademyHealth Annual Research Meeting, June 2010, Boston, MA. (Results of Guided Care Nurses' satisfaction with chronic care processes are presented.)

satisfaction also may help to inform organizations' decisions regarding adoption of the model. Moreover, there is increasing concern about the primary care workforce, as primary care physicians are dissatisfied with their jobs,²³ young physicians are leaving practice faster than their subspecialist colleagues,^{24,25} and medical students are expressing less interest in primary care.²⁶ Ideally, new models of practice would improve professional satisfaction and provider morale²⁷ and, thereby, attract and retain physicians and nurses in primary care.

Guided Care is a model of comprehensive care developed to improve the quality and outcomes of care for patients with multiple chronic conditions. As described in detail elsewhere,²⁸ Guided Care is provided by a primary care team that includes a registered nurse, 2–5 physicians, and other members of the practice staff. The Guided Care Nurse (GCN) provides 8 services to a caseload of 50–60 chronically ill older patients: (1) conducting a comprehensive in-home assessment, (2) creating an evidence-based plan of care, (3) monitoring the patient monthly, (4) coordinating the efforts of all clinicians who provide the patient's health care, (5) smoothing the patient's transitions between sites of care, (6) coaching the patient's self-management, (7) educating and supporting family caregivers, and (8) facilitating access to community resources. Guided Care is designed to provide the services of a "medical home" for patients with chronic conditions and complex health care needs.

Guided Care was tested in a matched-pair cluster-randomized controlled trial involving 7 nurses and 49 primary care physicians providing care for 904 chronically ill older patients.²⁹ Publications from this trial have shown that Guided Care improves patient-reported quality of chronic health care as measured by the Patient Assessment of Chronic Illness Care (PACIC) and the Primary Care Assessment Survey.^{29–31} Family caregivers' perceptions of the quality of the chronic illness care, measured by PACIC, were improved as well.³² Preliminary results indicated that Guided Care may be associated with less use of expensive health services (ie, hospital, skilled nursing facility, emergency department, home care services).³³ Based on data from the first 8 months of the study, researchers concluded that the costs avoided were sufficient to offset the costs of additional staff and resources to provide Guided Care.³⁴ Moreover, preliminary data after 1 year indicated that, compared with control physicians, Guided Care physicians were more satisfied with patient/family communication and knowledge of patients' clinical conditions.³⁵

This article reports on the 3-year effects of Guided Care on physicians' satisfaction with chronic care processes, knowledge of their chronically ill older patients, and the care coordination provided by their practices. In addition, the effect of Guided Care on practice staff satisfaction with care, as well as the changes in GCNs' satisfaction with chronic care processes over time are reported.

The authors hypothesized that, compared with usual care, Guided Care is associated with greater physician satisfaction with several processes included in chronic illness management, as well as with greater knowledge of chronically ill patients' characteristics and better coordination of their care. The authors also hypothesized that GCNs would become more satisfied with the care they provided over time. The authors hypothesized a null effect of Guided Care on prac-

tice staff satisfaction with care because most practice staff would interact with Guided Care patients only occasionally, and the addition of a GCN as a new team member would not disrupt the existing workflow.

Methods

Recruitment

Primary care practices were recruited from 3 health care delivery systems in the Baltimore–Washington, DC area. Practices were eligible to participate if they cared for at least 650 patients aged ≥ 65 years and could provide an on-site office for a GCN. All of the 8 eligible practices agreed to participate. Three were operated by Kaiser Permanente Mid-Atlantic, a group-model integrated health care organization (HCO); 4 practices were operated by Johns Hopkins Community Physicians, a statewide network of community-based practices; and 1 practice was operated by Medstar Physician Partners, a multisite group practice. All physicians who worked at least 70% of the time at the 8 practices gave written informed consent to participate. All participating physicians were employed or salaried physicians. The sample size was determined by the power needed to detect effects at the patient level.

GCNs were recruited by placing advertisements in local newspapers, human resources Web sites of participating delivery systems, and a regional nursing journal. Applicants were eligible if they were licensed registered nurses with 3 or more years of practice experience. Seven nurses were recruited to be providers of health care, and all gave written informed consent to serve as research participants.

Randomization

Teams of physicians and staff comprised "pods." For each of 7 pairs of "pods," 1 pod was randomly assigned to Guided Care and the other to usual care. There were 49 physicians at baseline, with each pod having 2–5 physicians. After completing an educational curriculum and being introduced and integrated into a practice pod, each GCN developed a caseload of 50–60 Guided Care patients and 5–26 primary family caregivers of these patients during the following 6–8 months. The study design, intervention implementation, and randomization processes, which have been summarized for this article, are described in detail elsewhere.²⁹

Survey development and data collection

Surveys were developed to assess physician, practice staff, and GCN satisfaction with care. Participating physicians and GCNs were requested to complete surveys at baseline (before the caseload of patients and family caregivers was developed) and annually for 3 years. Practice staff took their survey on-site during staff meetings at baseline and 2 years later.

The physician survey included: a single question about overall satisfaction with care for their chronically ill older patients; 11 questions about satisfaction with specific care processes (rated 1–6 from "very dissatisfied" to "very satisfied"); and validated questions (rated 1–4 from "definitely not" to "definitely") from the Primary Care Assessment Tool (PCAT)³⁶ about their knowledge of their chronically ill older

patients (6 items) and the practice's care coordination activities (4 items). In the year 2 and year 3 physician surveys, items were added for Guided Care physicians to rate their satisfaction with the Guided Care program. These questions (rated 1–6 from "very dissatisfied" to "very satisfied") addressed physicians' satisfaction with the overall program, satisfaction with time and effort spent to participate in and to evaluate the program, and perceived usefulness of the GCN in the practice.

To summarize data from similar items in the physician satisfaction survey, exploratory factor analysis was used on baseline data to create scales. Two factors were identified to represent satisfaction with chronic care processes (satisfaction with patient/family communication and satisfaction with management of chronic care), and 2 for knowledge of patients (knowledge of patients' personal circumstances and knowledge of patients' clinical characteristics). The 4 care coordination items were not converted to a scale. The Cronbach α for each scale ranged from 0.58 to 0.93. Individual items included in each scale and the results of the factor analysis are described elsewhere.³⁵

The practice staff survey included 9 validated questions from the Practice Climate Survey¹⁸ and other questions developed for this project. This study reports on items related to staff-perceived quality of care provided by the practice, including a single item assessing how satisfied staff were with the quality of health care for the older chronically ill patients in their office, another item reflecting the ability to provide continuity of care, and a scale of 2 items (stability of the patient relationship and familiarity with older patients, Cronbach alpha=0.72), called "patient orientation."¹⁸

The GCN survey included the same set of 11 questions about satisfaction with chronic care processes as the physician survey. These questions were not asked at baseline because these nurses were new to the practices. In the year 3 GCN survey, 8 questions were added to assess nurses' satisfaction with their Guided Care roles (rated 1–6 from "strongly disagree" to "strongly agree"). Because of the small sample size of GCNs, factor analysis was not conducted and scales were not developed for these 8 questions.

The baseline surveys for all groups also collected information about demographic characteristics, race/ethnicity, years in the occupation/specialty, and years in current position.

Statistical analysis

Baseline characteristics of Guided Care and control physicians were compared using Fisher exact tests for categorical variables and Wilcoxon rank sum tests for continuous variables. One-way analysis of variance was used to compare continuous baseline variables for practice staff who supported Guided Care, usual care, or both Guided Care and usual care.

To assess the effect of Guided Care on physicians over time, multilevel regression models were constructed to compare the differences between values at baseline and at each follow-up time point for the Guided Care group and for the usual care group (this comparison of over-time differences between 2 groups is known as a "difference-in-difference" model). Included in the regression models were a dichotomous variable indicating study group; dummy vari-

ables for the time periods; interactions of the study group and the time period dummy variables; a dichotomous variable for practice ownership (group-model integrated HCO or other practice type); and a physician-level random intercept. The estimated coefficients of the "study group by time period" terms provide the magnitude of possible effects of Guided Care for each follow-up year. The same approach was used to test the effect of Guided Care on staff assessments of quality of care. Because of the limited number of nurses, descriptive statistics were used to illustrate the change in GCNs' satisfaction with care.

Because of the small number of physicians and staff per pod, individuals in matched pods could not be directly compared to one another. Nonindependence of errors within pod could not be accounted for when assessing the effect of Guided Care. However, clustering of observations on physician (eg, repeated measures) for physician attitudinal outcomes was accounted for using a random intercept. The physician-level intra-class correlation coefficient (ICC) ranged from 0.3 to 0.7. Similarly, a random intercept was used in the staff model that accounts for nonindependence of errors related to repeated measures on individual staff members. The staff-level ICC ranged from 0.6 to 0.8. All analyses were conducted using Stata statistical software, version 11.2 (StataCorp LP, College Station, TX).

Results

Figure 1 describes the participant flow through the study. In aggregate, the response rate was 88% (ranging from 78%–92% per wave) for Guided Care physicians and 93% (ranging from 88%–100% per wave) for usual care physicians. The response rate for the practice staff survey was 79% and 84% at baseline and 2-year follow-up, respectively. Two GCNs dropped out before being integrated into the practice sites and were replaced. Of the 7 GCNs who were placed in the intervention sites, 1 left after year 2 and was replaced. All GCNs completed the survey annually.

Physicians

As shown in Table 1, all participating primary care physicians were board-certified family physicians or general internists; one self-identified as a geriatrician. The Guided Care physicians and the control physicians did not differ significantly in their baseline characteristics.

Table 2 displays adjusted regression results and indicates that, compared with usual care, Guided Care was associated with greater physician satisfaction with patient/family communication (second set of columns) in every follow-up year with reference to the baseline value and, in years 2 and 3, with management of chronic care (third set of columns). The difference-in-differences in overall satisfaction, knowledge of patients, and care coordination were not statistically significant.

Table 3 displays the average Likert score for physicians' satisfaction with care and the Guided Care model, stratified by time. After 3 years of the program, 21 out of 22 Guided Care physicians reported that they were satisfied or very satisfied with the program, the time and effort required for participation in the program, and the usefulness of the GCN position in practice; the remaining physician indicated being "slightly satisfied." No physician reported dissatisfaction.

FIG. 1. Participant flowchart.

Practice staff

The practice staff comprised primarily medical assistants and administrative personnel. The staff working with Guided Care, usual care, and both Guided Care and usual care were not significantly different at baseline (Table 1). The staff in the group-model integrated HCO worked exclusively with either the Guided Care or usual care pods; in the other practices some staff supported both Guided Care and usual care groups.

As shown in Table 4, staff members' beliefs in patient-oriented care (second set of columns) in the usual care pods decreased after 2 years. Compared with this reduction in the usual care group, Guided Care was associated with sustained beliefs that the care provided was patient oriented. There were no statistically significant differences between the 2 groups in staff perceptions of the overall quality of health care (first set of columns) or in their ability to provide continuity of care (third set of columns).

Guided Care nurses

All of the GCNs were female, with considerable diversity in age (range: 32–57 years), race (5 white and 2 African Americans), clinical background (including inpatient medical-surgical, case management, psychiatric nursing, and disease management), and years of nursing experience (range: 4–31). Table 3 presents the average Likert score for GCN satisfaction with patient/family communication and with management of care from year 1 to year 3. GCNs' reports of satisfaction with patient/family communication and with management of chronic care were consistently high (means = 4.7–5.1 on a 6-point scale). No consistent increase or

decrease in nurse satisfaction with care was found over time. At the end of the project, GCNs were generally satisfied with the Guided Care role, especially with the GCN position as a career path and with the degree of teamwork with physicians (means = 4.2–5.4 on a 6-point scale).

Discussion

This study examined the effects of Guided Care on physicians', GCNs', and staff satisfaction with care provided for chronically ill older patients. Consistent with the authors' hypotheses, Guided Care physicians were significantly more satisfied than their usual care peers with their communication with their chronically ill older patients and their families. Guided Care physicians also reported higher satisfaction with management of chronic care in years 2 and 3 (although not at 1-year follow-up). These results align well with the GCNs' efforts to communicate with, monitor, educate, and motivate patients and their families. No impact of Guided Care was found on physicians' knowledge of patients or coordination activities. These findings may be plausible, because the GCNs might not share with physicians all the patient knowledge and specific coordination activities they managed.³⁵

As anticipated, among staff there were no significant differences between the Guided Care and usual care staff member reports of the overall quality of health care and their ability to provide continuity of care. However, groups working with a GCN did perceive that care provided by the practice was patient oriented compared to the waning beliefs voiced in the control groups.

Though the GCNs did not report increasing satisfaction with chronic care processes over time, other analyses of

TABLE 1. CHARACTERISTICS OF PARTICIPANTS AT BASELINE

	GC		UC		GC & UC ¹		
Characteristic	N	%	N	%	N	%	p ²
Physicians (N=25 in GC group and N=24 in UC group)							
Female	13	52	9	38			0.393
Race							
White	16	64	13	54			0.394
Black	2	8	5	21			
Asian	7	28	5	21			
Other	0	0	1	4			
Specialty							
Internal medicine	23	92	24	100			0.360
Family medicine	2	8	0	0			
Practice ownership							
Group-model integrated health care org.	10	40	10	42			1.000
Other	15	60	14	58			
Age ³	46.4	8.9	45.8	7.9			0.810
Years in the specialty ³	14.7	10.4	13.2	8.6			0.645
Years in the current position ³	9.4	7.9	11.3	8.3			0.440
Panel size ³	1511	533	1426	424			0.847
Proportion of panel aged 65 years old and older, % ³	23.0	10.6	22.7	11.3			0.777
Practice staff (N=46 in GC group, N=51 in UC group, and N=43 in GC & UC group)							
Female	43	93	51	100	43	100	0.062
Race							
White	26	59	25	52	28	67	0.425
Black	15	34	17	35	13	31	
Asian	1	2	1	2	1	2	
Other	2	5	5	10	0	0	
Occupation							
Administrative staff	13	29	17	36	25	58	0.187
Medical assistant	18	40	18	38	8	19	
Nurse	7	16	8	17	6	14	
Nurse practitioner/ physician assistant	4	9	3	6	1	2	
Physician	2	4	1	2	2	5	
Patient educator (not nurse)	1	2	0	0	1	2	
Practice ownership							
Group-model integrated health care org.	13	28	18	35	0	0	<0.001
Other	33	72	33	65	43	100	
Age ³	41.4	11.6	40.6	13.9	40.8	13.1	0.957
Years in the occupation ³	10.4	8.93	12.9	11.1	11.6	10.9	0.506
Years in the current position ³	4.92	4.32	5.64	5.34	4.73	6.08	0.714
Guided Care nurses (N=7) ⁴							
Female	7	100					
Race							
White	5	71					
Black	2	29					
Age ³	45.4	9.9					
Years as a registered nurse ³	15.9	10.4					

GC, Guided Care; UC, usual care.

¹These practice staff members supported patients in both GC and UC care groups.²Fisher exact test for categorical variables, Wilcoxon rank sum test for continuous variables between 2 groups, and analysis of variance for continuous variables among 3 groups.³Presented as mean (SD), whereas all other variables presented as N (%).⁴Two Guided Care nurses who dropped out before placement were not included.

GCNs' job satisfaction showed that they were more satisfied with their GCN positions than their past nursing roles, and that the GCN position afforded them higher autonomy and independence in decision making.³⁷

This study is subject to several limitations. First, the physicians, practice staff, and GCNs were not blinded to their group assignment, so responses may be biased. Second, because the study was originally powered to detect effects

for patients, the number of clinicians and staff in each pod was small, which affects the authors' ability to account for clustering of outcomes at the pod level. As a consequence, standard errors of the effects may be underestimated. Third, all of the participating physicians in this study were employed or salaried physicians who were not responsible for the financial support of the Guided Care. Therefore, the study findings may not apply directly to self-employed

TABLE 2. REGRESSION ANALYSIS OF GUIDED CARE ON PHYSICIAN SATISFACTION, KNOWLEDGE OF PATIENTS, TIME SPENT, AND CARE COORDINATION ACTIVITIES (N=163 OBSERVATIONS FROM 51 PHYSICIANS)¹

Variables	Overall satisfaction with care ²			Satisfaction with patient/family communication ²			Satisfaction with management of chronic care ²			Knowledge of patients' personal circumstances ³			Knowledge of patients' clinical conditions ³		
	Coef.	SE	P	Coef.	SE	P	Coef.	SE	P	Coef.	SE	P	Coef.	SE	P
GC	0.12	0.28	0.667	-0.01	0.24	0.977	0.26	0.24	0.284	0.08	0.16	0.593	0.14	0.15	0.352
1 year	-0.15	0.21	0.474	-0.26	0.16	0.112	-0.18	0.16	0.262	0.08	0.09	0.428	0.06	0.10	0.531
2 year	-0.19	0.22	0.395	-0.22	0.17	0.204	-0.20	0.17	0.245	0.11	0.10	0.278	0.27	0.11	0.011
3 year	-0.10	0.22	0.645	-0.32	0.17	0.066	-0.17	0.17	0.304	0.04	0.10	0.727	0.01	0.11	0.945
GC×1 year ⁴	0.21	0.30	0.481	0.56	0.23	0.016	0.11	0.23	0.640	0.03	0.14	0.843	0.22	0.15	0.132
GC×2 year ⁴	0.40	0.31	0.190	0.80	0.24	0.001	0.50	0.23	0.033	-0.15	0.14	0.293	-0.12	0.15	0.406
GC×3 year ⁴	0.44	0.30	0.147	1.02	0.24	<0.001	0.75	0.23	0.001	0.07	0.14	0.638	0.21	0.15	0.153
Estimate of random-intercept SD	0.68			0.64			0.66			0.44			0.40		
Estimate of residual SD	0.67			0.52			0.51			0.30			0.32		
Conditional intraclass correlation	0.49			0.40			0.37			0.32			0.39		

	Knowledge about all the specialist visits ³			Patient was helped to get appointment for referral visit ³			Written information sent to patients' specialists ³			Useful information received from specialists ³		
	Coef.	SE	P	Coef.	SE	P	Coef.	SE	P	Coef.	SE	P
GC	0.14	0.19	0.476	0.06	0.27	0.816	-0.27	0.26	0.310	0.05	0.17	0.770
1 year	0.00	0.14	0.988	-0.35	0.19	0.062	-0.46	0.24	0.054	-0.15	0.15	0.307
2 year	0.11	0.15	0.445	-0.29	0.20	0.141	-0.30	0.24	0.215	0.11	0.16	0.496
3 year	0.11	0.15	0.457	-0.53	0.20	0.008	-0.29	0.25	0.252	-0.08	0.16	0.598
GC×1 year ⁴	0.02	0.20	0.919	0.45	0.28	0.103	0.57	0.34	0.090	0.23	0.22	0.284
GC×2 year ⁴	0.06	0.21	0.786	0.44	0.27	0.111	0.19	0.34	0.568	-0.11	0.22	0.627
GC×3 year ⁴	0.08	0.20	0.698	0.35	0.27	0.193	0.53	0.34	0.115	0.13	0.22	0.537
Estimate of random-intercept SD	0.47			0.71			0.46			0.28		
Estimate of residual SD	0.45			0.60			0.75			0.49		
Conditional intraclass correlation	0.48			0.41			0.73			0.76		

GC, Guided Care.

¹Adjusted for practice ownership (group model integrated health care organization vs. other) using physician-level random intercept models.²Rated 1–6 from “very dissatisfied” to “very satisfied” with higher values representing greater satisfaction.³Rated 1–4 from “definitely not” to “definitely” with higher values representing better knowledge of patients or better care coordination.⁴The estimated coefficients of the “study group by time period” terms provide the magnitude of effects of Guided Care for each follow-up year.

physicians. However, a large number of physicians are salaried physicians in the United States. Thus, this study group is still relevant. Further, self-employed physicians likely face many of the same issues in caring for complex chronically ill elders and so this study may hold insights for them as well.

Finally, nonresponse and those lost to follow-up might have biased the results reported here. However, there were no differences between the characteristics of physicians who responded to all 4 waves versus those who did not. As is common in primary care practices, staff turnover was high. Comparison between full reporters and baseline-only reporters in staff measures showed that baseline-only reporters were older, more satisfied with their work conditions, and more satisfied with delegation and collaboration among office members at baseline. However, no differences in these measures were observed by the intervention group. Also, no differences were found when time 2 outcomes were com-

pared between full reporters and time 2-only reporters. Sensitivity analysis conducted using only the staff who were present at baseline and time 2 produced similar results to those using all available staff responses.

Various models of comprehensive interdisciplinary primary care have been developed to improve care for patients with multiple chronic illnesses. Only a few of them examined and reported provider experience as an outcome. Evaluations of Group Health Cooperative's medical home pilot project showed that staff in the intervention group reported less burnout than their counterparts in the control group.^{38,39} However, a study examining the use of an added staff person to help patients navigate and use the health care system reported mixed effects on physician burden and perceived usefulness of the staff person.^{40,41} That study's sample size was relatively small. The results of the present study contribute to the existing body of literature on how care

TABLE 3. PHYSICIANS' AND GUIDED CARE NURSES' SATISFACTION WITH CARE AND THE GUIDED CARE MODEL OVER TIME^{1,2}

	GC			UC				
	Baseline	1 year	2 year	3 year	Baseline	1 year	2 year	3 year
Satisfaction with patient/family communication								
Physician	4.10 (0.76)	4.40 (0.83)	4.66 (0.60)	4.86 (0.71)	4.14 (0.94)	3.97 (0.76)	3.93 (0.98)	3.80 (1.01)
Guided Care Nurse		4.94 (0.65)	5.11 (0.50)	4.66 (0.79)				
Satisfaction with management of chronic care								
Physician	4.42 (0.83)	4.42 (0.83)	4.71 (0.57)	5.03 (0.69)	4.14 (1.04)	4.08 (0.75)	4.08 (1.02)	4.04 (1.08)
Guided Care Nurse		4.79 (0.34)	4.93 (0.61)	4.83 (0.86)				
Physician satisfaction with the GC model								
The model overall			5.38 (0.59)	5.45 (0.60)				
Cost in time and effort to participate in the evaluation of GC			5.19 (0.81)	5.36 (0.66)				
Cost in time and effort to participate in the GC model			5.24 (0.70)	5.50 (0.60)				
Usefulness of the Guided Care Nurse position in my practice			5.33 (0.73)	5.55 (0.60)				
Nurse satisfaction with the GC role								
Completing the GC curriculum helped me to care for my GC patients				4.17 (1.17)				
I am providing the highest possible quality of nursing care for my chronically ill patients				4.86 (0.90)				
Guided Care Nursing works well as part of a team with a primary care physician				5.14 (1.07)				
Guided Care Nursing is different from other forms of nursing care for the chronically ill				5.43 (1.13)				
I would recommend Guided Care Nursing as a career to others				4.71 (1.60)				
Guided Care is basically different from other nursing jobs I've had				4.86 (0.90)				
Guided Care has the potential to be a fulfilling career for registered nurses				5.29 (1.11)				
Guided Care is the right prescription for providing older patients with excellent chronic illness care				5.00 (1.53)				

163 observations from 51 physicians and 21 observations from 9 nurses^{1,2}

GC, Guided Care; UC, usual care.

¹Mean was presented with standard error in parenthesis.

²All items were rated 1–6 from “very dissatisfied” to “very satisfied” or “strongly disagree” to “strongly agree” with higher values representing greater satisfaction.

TABLE 4. REGRESSION ANALYSIS OF GUIDED CARE ON STAFF SATISFACTION WITH CARE

Variables	Overall quality of health care ¹			Patient orientation ¹			Ability to provide continuity of care ¹		
	Coef.	SE	P	Coef.	SE	P	Coef.	SE	P
GC	−0.18	0.17	0.306	−0.22	0.14	0.118	−0.03	0.18	0.846
GC & UC	−0.32	0.18	0.081	−0.39	0.15	0.009	−0.19	0.19	0.332
2 years	−0.31	0.17	0.075	−0.31	0.13	0.018	−0.33	0.18	0.074
GC × 2 year ²	0.17	0.23	0.452	0.43	0.17	0.014	0.22	0.24	0.361
GC & UC × 2 year ²	0.32	0.28	0.253	0.23	0.21	0.264	0.05	0.29	0.865
Estimate of random-intercept SD		0.41			0.44			0.42	
Estimate of residual SD		0.74			0.53			0.76	
Conditional intraclass correlation		0.76			0.59			0.77	

Abbreviations: GC, Guided Care; UC, usual care.

N=287 observations from 220 staff members; adjusted for practice ownership (group model integrated health care organization vs. other) using staff-level random intercept models.

¹Rated 1–6 from “very dissatisfied” to “very satisfied” with higher values representing greater satisfaction.

²The estimated coefficients of the “study group by time period” terms provide the magnitude of effects of Guided Care for each follow-up year.

providers perceive the usefulness of a comprehensive, interdisciplinary primary care model, such as Guided Care, for their chronically ill older patients.

Conclusions

Identifying new models for providing high-quality, patient-oriented care to multimorbid older adults is an important national concern. Other literature demonstrates that the Guided Care model has some positive effects for this population. The current study provides evidence that Guided Care improves provider satisfaction on some important measures of chronic care, including physician satisfaction with patient and family communication and with chronic illness management. In addition, GCNs were highly satisfied with their positions and indicated that Guided Care has the potential to be a fulfilling career for registered nurses. They responded positively to the survey item, “Guided Care is the right prescription for providing older patients with excellent chronic illness care.” The practice environment was not disrupted by Guided Care. Thus, Guided Care offers a model for health care for chronically ill elders that physicians, nurses, and staff find satisfying in many respects. Depending on the results of additional research on other outcomes, such as quality of care and health care costs, this and other models of patient-centered team care may play important roles in the medical homes and accountable care organizations of the future.

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