

How Preferences for Continuity and Access Differ Between Multimorbidity and Healthy Patients in a Team Care Setting

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Abstract

Introduction: Team-based care has become an essential part of modern medical practice. Patient-centered medical homes often struggle to balance the dual competing goals of acute access and continuity of care. Multimorbidity patients may value continuity more than healthy patients, and thus may prefer to wait to see their primary care physician (PCP). **Methods:** A total of 1700 randomly selected healthy adults and multimorbidity patients were asked to rate satisfaction with care and presented with 4 acute and 4 chronic scenarios to choose an access and continuity preference in an anonymous mailed survey. **Results:** In all, 770 responses were obtained. All respondents preferred to be seen 2.5 days sooner for acute appointments. Multimorbidity patients preferred to wait 0.28 days longer for acute issues to see their PCP. Patients who were not satisfied with their care team preferred to wait 0.75 days to see their PCP. Those not satisfied with their PCP choose to be seen 0.38 days sooner by their care team or any physician. **Conclusions:** All patients prefer continuity of care with their PCP for chronic disease management and value quick access to care for acute problems. For acute visits, multimorbidity patients prefer to wait longer to see their PCP than healthy adults. Satisfaction also plays an important role in patients' willingness to wait for an appointment with their PCP.

Keywords

team care, patient preferences, provider access

Introduction

Team-based medical care, the delivery of health care by a group of health care professionals working collaboratively, has become an essential part of modern medical practice.^{1,2} Team care is a potential solution to the growing demands placed on primary care physicians (PCPs), and may be necessary to improve quality of care for patients with multiple comorbidities.³ Advantages of team care include patient interaction with a larger number of professionals and improved timeliness of health care delivery.⁴ Disadvantages also exist: More clinicians providing care can lead to fragmentation of services and poor chronic disease management.⁵ Clinicians may not address preventive services with patients whom they do not have an ongoing relationship.⁶

Waibel et al⁷ have shown that chronically ill patients value continuous care from one provider, but individuals seeking an appointment for acute care value convenient access to any provider. The popularity of retail clinics,

which provide convenient and affordable access, provides further evidence that many patients value convenience over continuity for acute problems.^{8,9}

Continuity of care has been associated with many beneficial effects, including reduced readmissions, improved chronic disease management, and improved preventive services.¹⁰⁻¹² Patients with multiple comorbidities are most likely to benefit from continuity of care.¹³ Multimorbidity patients may recognize the value of a physician knowing their “story” and having continuity of care. Thus, they may wish to wait to see their PCP even if team access is available sooner. We hypothesize that for acute problems and chronic

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disease management in our patient-centered medical home (PCMH) practice, multimorbidity patients prefer waiting to see their PCP even if team care access is available sooner, whereas healthy patients are less willing to wait for their PCP. This has direct implications for scheduling priorities when trying to balance the dual goals of continuity and access in a PCMH clinic.

Methods

An anonymous questionnaire was mailed to 1700 patients at a family medicine clinic to assess their satisfaction and preferences regarding the tradeoff between continuity of care and quick access in various scenarios.

Setting

The family medicine clinic, located in Kasson, Minnesota, averages 24000 visits annually and hosts an 8-8-8 family medicine residency program staffed by 9 faculty physicians. On May 1, 2013, the clinic instituted a team-based care model. Prior to this, residents performed 55% of patient visits but had relatively small patient panels. In the team care model, all patients were reassigned to a resident physician on one of three teams led by the faculty physicians. Each care team consists of 3 faculty physicians, 8 resident physicians, a registered nurse, and several licensed practical nurses. In addition to supervising residents, the faculty physicians see patients directly 1 to 2 days per week. They are assisted by a pharmacist, social worker, psychologist, behavioral health specialists, and care coordination registered nurses. At the time of the survey, the clinic was a NCQA level 3 certified PCMH.

Sample

Eligible patients had an assigned primary physician at the clinic, were 18 to 90 years old, and able to independently fill out a survey in English. Additionally, to ensure they experienced both the previous system and the new team based care model, eligible patients had at least 1 clinic visit between May 1, 2010 and April 30, 2013 (precare team) and at least 1 clinic visit between May 1, 2013 and August 31, 2014 (postcare team).

As part of a Minnesota state program to incentivize chronic disease management within PCMHs, patients are assigned a tier using the Minnesota Care Coordination Tier Assignment Tool.¹⁴ We utilized this tier level to select 2 groups of patients. Patients with a tier score of 1 or 2 are healthy adults (group A), and individuals with a tier score of 3 or 4 have multimorbidity (group B). All the multimorbidity patients (group B) and a random sample of the healthy patients (group A) were selected to receive the mailed survey.

Survey

The survey asked patients to anonymously rate overall satisfaction with their primary physician and their care team on a 5-point Likert-type scale (very dissatisfied, dissatisfied, neither satisfied nor dissatisfied, satisfied, very satisfied). Responses other than “satisfied” or “very satisfied” were considered dissatisfaction. Eight hypothetical scenarios including acute (sore throat, sinus infection, sprained ankle, stitches) and chronic issues (medication refill, high blood pressure follow-up, weight management, depression) were presented. Two other scenarios presented (general physical and mole removal) were not analyzed as the authors felt they did not reflect acute or chronic conditions clearly. For each scenario, respondents were asked to choose between seeing their primary physician within 1 week, seeing a care team physician within 3 days, and seeing any physician within 1 day to assess their preferences regarding the tradeoff between continuity of care and quick access to care. Demographic information, including gender, age, race, and marital status were also assessed.

The surveys, mailed in November 2014, were coded by tier group, but no individual identifying information was retained. A cover letter describing the study, privacy protections, and assuring participation was voluntary was mailed along with the survey. Reminder letters were mailed 1 month after the initial survey distribution. The study procedures and contact materials were reviewed and approved by the institutional review board.

Sample Size

Survey power was calculated for the primary endpoint of care team satisfaction. Based on prior experience, a 30% response rate was anticipated. There were 566 patients in the multimorbidity group (group B) prior to checking eligibility, yielding an estimated 170 returned surveys in this group. Choosing the healthy patient group (group A) to be twice as large (1132 patients) and assuming 80% of these respondents would be “satisfied” or “very satisfied” with their PCP or care team, we were able to detect an absolute 6% difference in the proportion satisfied between the 2 groups ($\alpha = 0.05$, power = 0.80). Thus, we mailed 1700 surveys with approximately 2/3 going to healthy patients in group A and approximately 1/3 going to the multimorbidity group B patients.

Analysis

Demographic survey responses were summarized by group with descriptive statistics. Differences between the 2 groups were assessed using Fisher’s exact test for 2 x 2 comparisons or the chi-square test with *P* values less than .05 considered significant.

Table 1. Comparison of Healthy Group Versus Multimorbidity Group.

	Healthy (Group A)	Multimorbidity (Group B)	P
Respondents, n	577	193	
Age in years, n (%)			<.001
18-44	105 (18.3)	18 (9.4)	
45-64	219 (38.2)	54 (28.3)	
65+	249 (43.5)	119 (62.3)	
Gender, female, n (%)	355 (62.3)	110 (57.9)	.303
Married, n (%)	442 (77.4)	140 (74.6)	.427
Satisfied/Very satisfied with PCP, n (%)	421 (75.4)	140 (75.7)	1
Satisfied/Very satisfied with care team, n (%)	379 (67.4)	115 (61.8)	.18
Acute scenarios, %			<.001
7 days, PCP	13.3	13.0	
3 days, care team physician	20.6	27.4	
1 day, any physician	66.1	59.6	
Chronic scenarios, %			.15
7 days, PCP	51.3	48.7	
3 days, care team physician	31.4	30.7	
1 day, any physician	17.3	20.6	

Abbreviation: PCP, primary care physician.

The 8 preference scenarios represent a repeated measure on the same subject. Thus, to test our hypothesis that multimorbidity patients are willing to wait longer in exchange for greater continuity with their PCP, a fixed and random effects multivariate model was used to analyze respondents' preferences regarding this tradeoff. The dependent variable was the desired appointment waiting time and continuity level (1 day with any physician, 3 days with care team, or 7 days with primary physician). Independent fixed variables included gender, age group (18-44, 45-64, 65+ years), marital status, PCP satisfaction, care team satisfaction, tier group (multimorbidity or healthy), and scenario (acute or chronic). To account for possible combined effects, a fixed interaction term between tier group and acute versus chronic scenario was also included. The respondent was the random effect variable, which accounted for correlation between scenario responses from a single individual. *P* values less than .05 were considered significant and 95% confidence intervals for each fixed variable were computed.

Results

Of 1700 surveys mailed, 838 were returned for an overall response rate of 49.3%. Among the returned surveys, 770 contained responses which were analyzed while 68 declined participation, yielding a participation rate of 45.3%.

Table 1 shows the demographic breakdown of respondents by group. There were no differences in gender, marital status, or satisfaction between tier groups. As expected, age varied by tier group because it correlates with the presence of chronic disease. Multimorbidity respondents preferred to wait longer for more continuity

in the acute scenarios. There was no difference in preference for appointment time and continuity within the chronic scenarios.

The multivariate mixed effects model shown in Table 2 describes how many days respondents are willing to wait for continuity in the tradeoff between continuity of care and quick access. Not surprisingly, respondents wanted to be seen quicker with less continuity for the acute scenarios (-2.51 days; 95% CI = -2.63 to -2.39). Age, gender, and marital status had no effect on the tradeoff. Multimorbidity alone also had no effect on the tradeoff. However, multimorbidity respondents (group B) were willing to wait longer in acute scenarios for continuity of care (0.28 days; 95% CI = 0.04 to 0.52). Nonsatisfaction with one's primary care physician was associated with wanting to be seen sooner with less continuity (-0.38 days; 95% CI = -0.65 to -0.11). Likewise, nonsatisfaction with the care team was associated with a willingness to wait longer to be seen by the primary physician (0.75 days; 95% CI = 0.51 to 1.00). The intercept was 4.47 days with a random variance attributable to respondents of 1.26 days.

Some respondents made unsolicited written comments. For the purpose of this study, we did not formally analyze the content of the comments. However, it appears that those making written comments (*n* = 108, 14%) were less satisfied with their PCP (52.6% vs 78.9%, *P* < .001) and care team (37.3% vs 70.6%, *P* < .001).

Discussion

Not surprisingly, respondents valued quick access over continuity of care for acute scenarios, wanting to be seen 2.5

Table 2. Multivariate Mixed Effects Model.

Fixed Effect Variables	Effect (Days)	95% CI (Days)	P(> t)
Intercept	4.47	4.16 to 4.77	<.001
Gender, female	-0.1	-0.31 to 0.10	.335
Age in years			
18-44	Ref	Ref	n/a
45-64	0.21	-0.09 to 0.50	.166
65+	0.05	-0.24 to 0.33	.757
Unmarried	0.21	-0.03 to 0.46	.086
Not satisfied with PCP	-0.38	-0.65 to -0.11	.006
Not satisfied with care team	0.75	0.51 to 1.00	<.001
Multimorbidity (group B)	-0.15	-0.41 to 0.11	.25
Acute scenario	-2.51	-2.63 to -2.39	<.001
Multimorbidity and acute scenario interaction term	0.28	0.04 to 0.52	.021

Abbreviations: n/a, not applicable; PCP, primary care physician; Ref, reference category.

days sooner than for the chronic scenarios. Gender, age, and marital status were not significantly associated with quick access or continuity preferences. These results demonstrate that patients are willing to trade continuity for timely treatment of acute issues; likewise, they will wait longer for continuity with chronic issues. Patient desire for timely access to acute care may explain the recent rise of retail clinics and the lower continuity associated with retail clinic users.⁹ Our findings correspond with previous work by Turner et al,¹⁵ demonstrating the equally important dual goals of timely access for acute care and continuity for chronic care.

Overall, multimorbidity was not associated with a willingness to wait for continuity, thus disproving our initial hypothesis. However, for the acute scenarios, multimorbidity respondents demonstrated a slight willingness to wait for continuity of care (+0.3 days). While the absolute magnitude of this is small, all respondents want to be seen quickly for acute issues (4.47 - 2.51 = 1.96 days) and it represents a 15% increase in the time they are willing to wait. As seen in the breakdown listed in Table 1, multimorbidity respondents with acute issues may not have been willing to wait a full week, but they were more willing to wait 3 days for increased continuity to see a care team physician than healthy respondents. Patients with multimorbidity place a greater emphasis on continuity, and their satisfaction depends on arranging for them to see their PCP.¹⁶ Furthermore, continuity of care in patients with multimorbidity has been shown to reduce healthcare utilization and costs.^{10,12,17,18} Perhaps multimorbidity patients value continuity because they understand that their chronic issues interact with acute problems and they prefer a clinician who already knows their entire health history. While all patients deserve quick access for acute problems, it may be important to preferentially schedule multimorbidity patients with their care team or PCP.

Respondents who were dissatisfied with their PCP were less willing to wait for continuity of care (-0.4 days), while respondents who were dissatisfied with their care team

were more willing to wait for continuity of care with their PCP (+0.8 days). These findings make intuitive sense, patients will avoid seeing clinicians that cause them dissatisfaction. Our findings may be exacerbated by the recent reassignment of patients to resident primary physicians. There is evidence that the level of trust between a patient and their physician was correlated with the length of the relationship rather than the percentage of time they saw their PCP (usual provider continuity).¹⁹

Limitations

Because of the anonymous nature of the survey, we cannot determine if respondents differ from nonresponders. However, our overall participation rate of 45.3% was above our prediction and there were no differences in participation rate between multimorbidity and healthy patients. The study was conducted at a training site for residents in family medicine. Because residency programs face unique access and continuity problems, further study is needed to determine if our results also pertain to non-academic community practices.²⁰

This pilot study was conducted at a single site. In addition, practice-based factors unique to our site may limit generalizability. Specifically, the survey was mailed approximately 18 months after changing the practice structure to a team-based care team model with residents as PCPs. Some respondents, as evidenced by unsolicited written comments, were upset about the perception of "losing" a long-standing relationship with a staff physician, even though that staff physician was still part of their care team.

Conclusion

Our results indicate that multi-morbidity patients place a higher value on continuity at the expense of access for acute problems when compared to healthy patients. All patients prefer access over continuity for acute visits and continuity

over access for chronic disease management and preventive visits. Thus, when attempting to balance the dual goals of access and continuity, it is especially important to preserve continuity within multimorbidity patients for both acute and chronic appointments.

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Declaration of Conflicting Interests

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