Provider Interactions and Cost Affect Type 2 Diabetes Mellitus Patients' Perceptions of Care Quality and Adherence

tence- the expertise to handle T2D care,

ssion and caring- treating the whole person,

iarity with broad and specific related topics.

being genuinely concerned, empowering the patient to be a partner in her own healing.

Communication skills- the ability to talk with the

patient, to engage the patient by not using jargon,

simplifying the conversation as much as possible."

- PLM member living with type 2

diabetes, female age 46

being up-to-date about the management of T2D,

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Abstract

Objective: Describe factors that affect Type 2 Diabetes Mellitus (T2DM) patients' perceptions of care quality and the impact of out-of-pocket (OOP) costs.

Methods: US-based patients aged 18+ who self-report T2DM were recruited from an online health data-sharing network, PatientsLikeMe, to complete an online survey. Multiple choice questions were analyzed using descriptive statistics; free-text questions were qualitatively analyzed.

Results: 296 patients completed the survey; 70% female, 89% white, with a mean age of 57.4 years, and median T2DM duration of nine years. The majority (67%) of respondents reported satisfaction with their current care. The most frequently mentioned indicator of high quality care (HQC) reported by patients in an open-ended question was patient-provider interaction (n=59), followed by adequate information and education (n=51). When asked to choose the three best indicators of HQC from a list, the 296 respondents most frequently selected: provider listens carefully (62%), explains things in a way that is easy to understand (45%), and spends enough time (44%). When seeking a new provider, respondents would most like to know a provider's patient outcomes (57%) and availability of support services (e.g., tobacco cessation and diet management) (51%). Many respondents (60%) made financial changes due to T2DM OOP expenses, 31% reduced non-health spending, 23% increased credit card debt, and 19% reported they use less medication than prescribed to reduce costs. Only 42% (74/178) who made financial changes discussed cost issues with their physician and, of those, 63% (44/74) altered their treatment regimen as a result.

Conclusions: T2DM patients prioritize provider engagement and healthcare outcomes when defining HQC. Respondents value providers who help them longitudinally understand and manage their T2DM. The OOP cost burden of T2DM management impacts adherence to treatment and forces patients to make other financial changes to afford treatment.

Background

- The cost and quality of Type 2 Diabetes Mellitus (T2DM) care are important factors in medication adherence and health outcomes. (1-3)
- Including the patient perspective in care quality measurement is an important way to improve the relevance of quality measures of patient care used in research and evaluation of health care services, as their perspectives may differ from those of providers. (4,5)
- This study sought to understand factors that affect Type 2 Diabetes Mellitus (T2DM) patients' perceptions of care quality and the impact of out-of-pocket (OOP) costs on treatment adherence.

Methods

- This study was conducted with members of PatientsLikeMe (PLM), an online patient-powered research network. Over a four-week period in April and May 2016, a sample of PLM members aged 18 or over who reported US residence, and Type 2 diabetes were invited to complete an online questionnaire.
- The questionnaire included 31 questions covering demographics, treatments for T2DM, care experiences, attitudes and preferences related to care quality, cost, and impact of cost of care on financial decisions.
- Multiple choice questions were analyzed using descriptive statistics; open-ended questions were analyzed for themes using conventional content analysis. (6)

Results

• A total of 1,649 PLM users were invited to participate in the survey and 496 of these opened the survey invitation. Responses (including partial responses) were received from 376 US-based respondents, of whom 296 completed the entire survey.

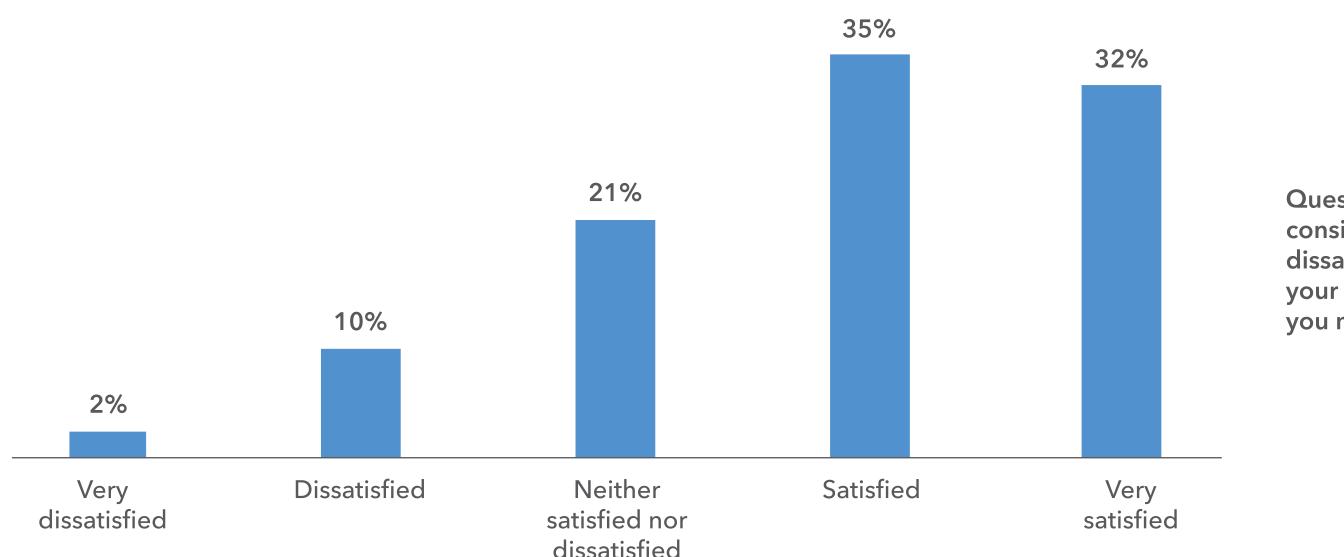
Table 1: Participant characteristics (n=296)

Characteristic		n (%)
Sex:	Female (%)	207 (70%)
Age (years):	Mean (SD)	57.4 (10.1)
Duration of T2D in years: (n=252)	Median (IQR)	9 (13)
Race:	White	263 (89%)
Ethnicity:	Hispanic	13 (4%)
Insurance Type:	Direct Employer Medicaid Medicare Military None Other VA	17 (6%) 105 (36%) 37 (13%) 102 (35%) 6 (2%) 8 (3%) 6 (2%) 4 (4%)
Location:	Urban area Suburban area Rural area Other	58 (20%) 125 (42%) 102 (36%) 11 (4%)
N Fo	anagement* eral/Primary care Endocrinologist Jurse practitioner ot-care specialist Pharmacist Cardiologist iabetes educator Dietitian Psychologist	232 (78%) 75 (25%) 46 (16%) 38 (13%) 28 (10%) 28 (10%) 22 (7%) 18 (6%) 15 (5%)

Participant characteristics

- Majority of respondents were female (70%) and white (89%), with mean age of 57.4 and median disease duration of nine years. About half (48%) were on Medicare/Medicaid. The majority see a primary care doctor for their T2DM. (Table 1)
- Two-thirds of participants were "satisfied" or "very satisfied" with their T2DM providers. (Figure 1)

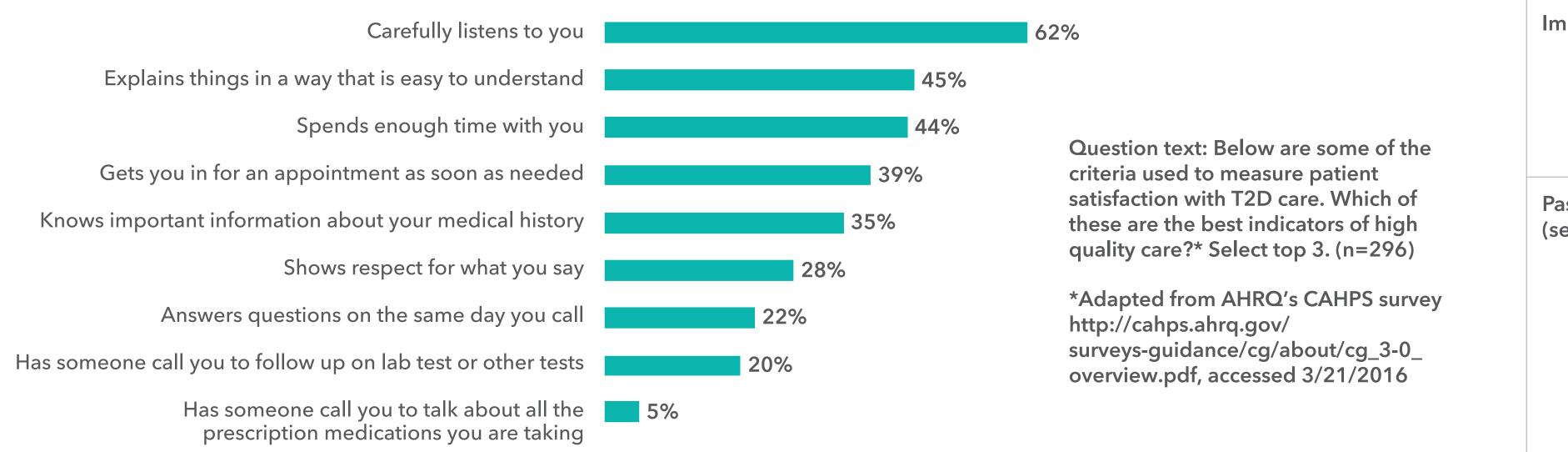
Fig. 1: Patient satisfaction with T2DM care providers



Question text: All things considered, how satisfied or dissatisfied are you with the way your care providers are helping you manage your T2D? (n=296)

Quality of care: Patient perspectives

Fig. 2: Patient-rated most important patient satisfaction criteria for T2DM care*



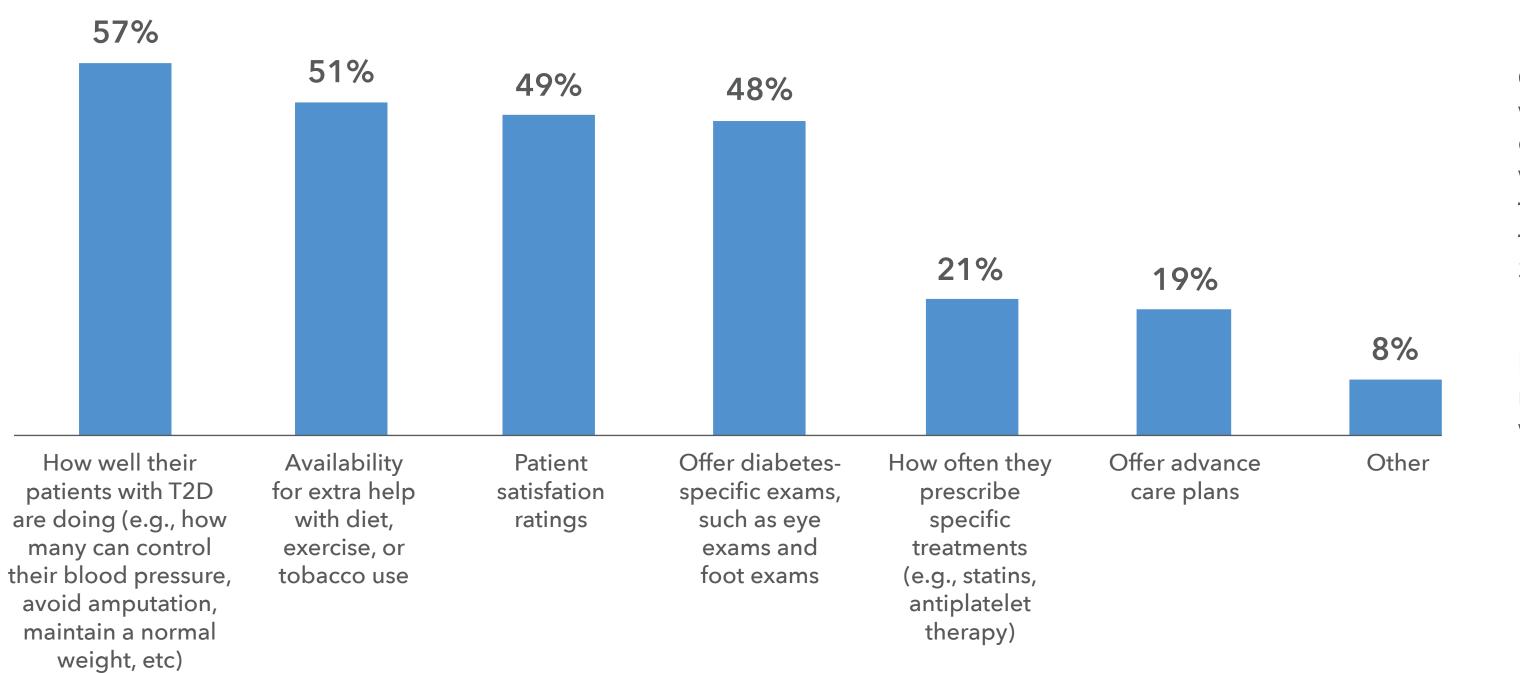


Fig. 3: Most important criteria in selecting a new provider

Question text: If you were looking for a new doctor, what measure would be most important for you to know about them? Please select up to 3. (n=296).

based on a literature review and consulta with experts

• When asked to choose the three best indicators of health care quality from a list, respondents most frequently selected: provider listens carefully (62%), explains things in a way that is easy to understand (45%), and spends enough time (44%). (Figure 2)

• When seeking a new provider, respondents would most like to know a provider's patient outcomes (57%) and availability of support services (e.g., tobacco cessation and diet management) (51%). (Figure 3)

• In their own words, respondents described high quality care as emphasizing the doctor-patient interaction, specific informational and support resources, and administrative factors. (Table 2)

Table 2: Main themes used by respondents to describe high quality care (n=296)

Theme	Description	n
Provider-Patient interaction	Aspects of the interaction between provider and patient, such as listening and communicating, individualized goal-setting, and showing compassion	59
nformation and education	Specific information or education needs that providers should provide, format of information	51
Care administration	Includes administrative aspects of care such as coordination of services, means of communication, and frequency of visits and follow-up	29
Support and resources	Specific support services available to patients	29
Patient-centered approach	bach Taking a holistic approah to the patient or understanding the patient's individual context	
Clinical measures	Specific tests or measures that participants want providers to use	24
Jp-to-date care	Perception that providers are up-to-date on treatments and care approaches	8

Question text: How would you describe high quality T2D care? What should providers be doing to make sure they are offering their patients the highest quality of care?

*Categories not mutually exclusive

Burden of out-of-pocket T2DM expenses

Table 3: Financial impact of T2DM out-of-pocket expenses (n=296)

inancial impact			
ledian monthly spending on T2DM care, Mean (IQR) (n=162)		\$100 (160)	
mpact of T2DM spending on other expenses*	Extremely	Extremely 56 (19%)	
	Very much	85 (28%)	
	Moderately	75 (25%)	
	Slightly	37 (13%)	
	Not at all	44 (15%)	
ast 12 month financial changes made as a result of T2DM esselect all that apply)	expenses**		
Spent less on food, l	neat, or basic expenses	93 (31%)	
Increased credit card debt carried month to month		69 (23%)	
Used less medication than was prescribed		57 (19%)	
C	Other financial changes	73 (25%)	
Borrowed money from a fr	iend or family member	38 (13%)	
	No financial changes	118 (40%)	

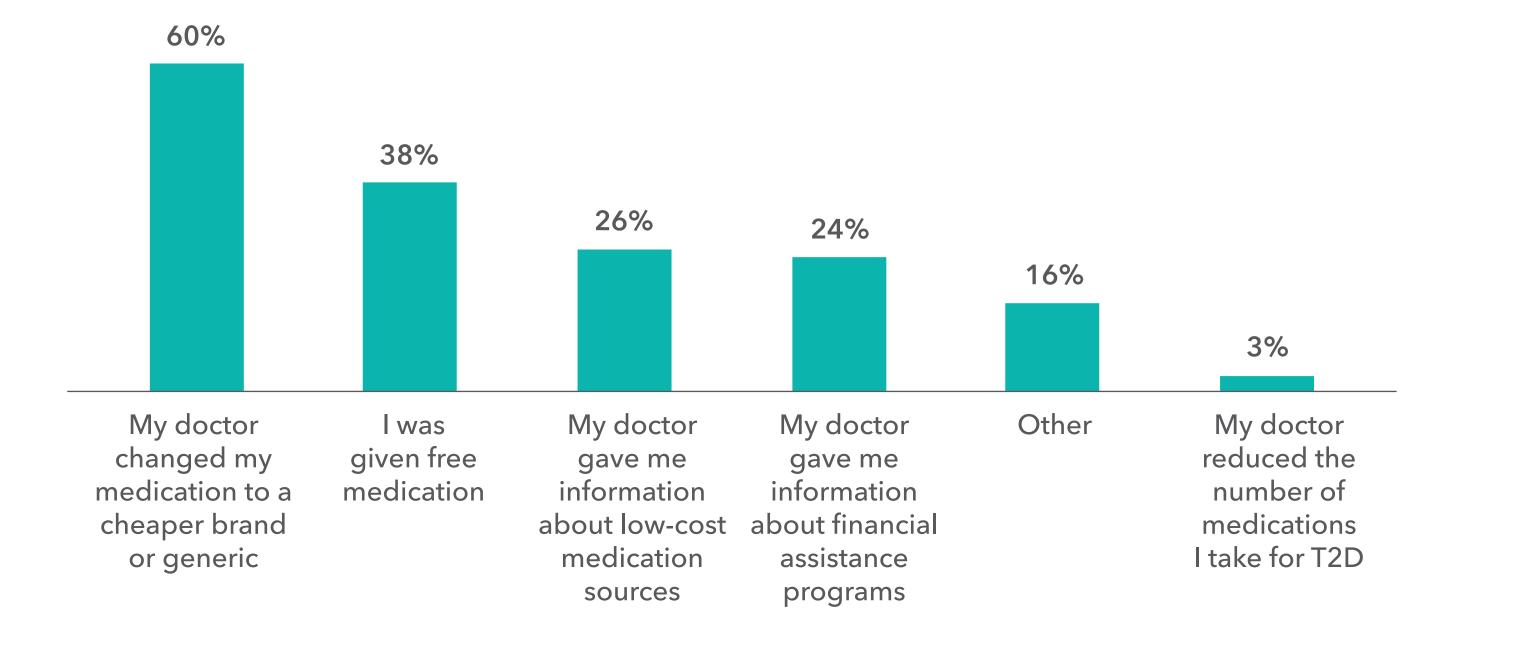
***Question text: To what** extent does the amount of money you spend on out-of-pocket medical expenses affect other financial decisions you make? (n=296)

****Question text: Which** financial decisions have you had to make in the past 12 months in order to pay for your T2D out-of-pocket medical expenses (e.g. prescriptions, doctor visits medical supplies, etc.)? Please select all that apply (n=296)



- About half (47%) of respondents reported that out-of-pocket (OOP) T2DM expenses affected their other financial decisions "extremely" or "very much." (Table 3)
- In the last 12 months, 60% made financial changes due to OOP T2DM expenses. (Table 3)
- In the last 12 months, 19% reported using less medication than was prescribed due to OOP T2DM expenses (Table 3)

Fig. 4: Actions taken after discussing OOP T2DM costs with doctor



Question text: What did your doctor suggest when you discussed problems related to T2D out-ofpocket expenses? Please select all that apply. (n=123 patients who had made financial changes)

• Among respondents who had made financial changes to pay for T2D costs in the past 12 months, 42% have talked to their providers about OOP cost problems. Over half of conversations (63%) led to changes in treatment regimen. (Figure 4)

Conclusion

- High quality care for patients means that in addition to healthcare outcomes, providers must listen and be responsive to their individual health needs holistically, provide specific and actionable recommendations for lifestyle modifications, and spend enough time to assess, incorporate, and support these aspects of care over time.
- The OOP cost burden of T2DM management impacts adherence to treatment and forces patients to make other financial changes to afford treatment.

Limitations

- The results of this study may not be generalizable due to the low sample size and as a result of convenience sampling.
- PatientsLikeMe represents a population that may be more engaged in disease management and may not be representative of the broader population of individuals with T2DM.

Citations

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