Research letter

Hypertension, self-perceived health status and use of primary care services

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Policies for dealing with the costs of primary care visits are of considerable public interest.[1] There is debate about the extent to which the frequency of visits to a physician is driven by patients' demand and physicians' recall patterns. Roos and colleagues[2] analysed administrative databases and concluded that patient health factors are important in determining the numbers of visits to general practitioners by patients with hypertension. Connelly and colleagues[3] reported that patients' perceptions of their own health were associated with their frequency of use of health care services. To further explore this issue, I used information collected in a survey of patients attending a fee-for-service primary care clinic in Toronto. The research was approved by a University of Toronto Human Subjects Review Committee.

I mailed a quality-of-life questionnaire to all patients 45 to 74 years of age who had attended the family medicine clinic at least 3 times during 1996–1997, with at least 1 visit in each year. The questionnaire included the SF–12 quality-of-life instrument,[4] which measures self-perceived health status, mood and limitations due to emotional problems and physical health. Summary scales, providing scores in the physical and mental domains of quality of life, have been standardized to a mean of 50 and standard deviation of 10 in the general population. The survey was mailed to 1064 subjects, 668 women and 396 men. Responses were received from 565 subjects (53%).

For each respondent, the number of visits during the second full year, 1997, was extracted from clinic billing files. All patients for whom a billing diagnosis of hypertension was submitted at least once during the period 1996–1997 were assumed to be hypertensive. *K*-means cluster analysis[5] was used to examine how the respondents were grouped among 4 clusters according to scores for the mental and physical domains of the quality-of-life instrument. The clusters identified by the analysis corresponded to combinations of high and low scores on the physical and mental component scales. High scores on these scales represent high levels of perceived physical and mental health. Table 1 presents the mean numbers of visits to the clinic in 1997 according to cluster position and whether or not the patient had a diagnosis of hypertension. Within both groups (those with and those without a diagnosis of hypertension), the mean number of visits increased with worsening self-perceived physical and mental health. In addition, patients with physician-diagnosed hypertension had more visits during the year than patients in the same cluster without hypertension (data not shown). This pattern was verified in a multiple linear regression analysis, adjusted for the age and sex of the patients (data not shown).

Table 1: Numbers of visits to a Toronto family medicine clinic in 1997 in relation to diagnosis of hypertension and scores on the physical and mental component scales (PCS and MCS respectively) of the SF-12 quality-of-life instrument[4]

	Hypertension status; patient and visit numbers*					
	No diagnosis of hypertension			Diagnosis of hypertension		
		No. of visits			No. of visits	
Cluster†	No. of patients	Mean	Median	No. of patients	Mean	Median
High PCS, high MCS	184	3.03	2	77	3.65	3
High PCS, low MCS	57	3.84	2	10	6.50	5.5
Low PCS, high MCS	63	4.63	3	33	5.97	5
Low PCS, low MCS	47	4.87	4	31	8.58	7
Overall	351	3.70	2	151	5.36	4

*Patients with missing responses for 1 or more of the 12 items on the SF-12 instrument were excluded.
†The centres of the cluster regions were as follows: cluster 1 (high PCS, high MCS), PCS = 52.6, MCS = 54.3; cluster 2 (high PCS, low MCS), PCS = 53.7, MCS = 34.2; cluster 3 (low PCS, high MCS), PCS = 34.2, MCS = 57.7; and cluster 4 (low PCS, low MCS), PCS = 29.4, MCS = 34.9.

These data, obtained from a survey of patients at an academic family medicine clinic, confirm that visit frequency is related to both physician-diagnosed and self-perceived patient health factors. One limitation of the study was the response rate of 53%. I assumed that respondents might differ from nonrespondents with respect to quality-of-life scores or visit frequency, but that the relations between these variables observed among respondents were generalizable. I focused specifically on hypertension as a condition that would generate recall visits, but among all patients, those with poorer self-perceived health tended to make more visits.

This study was supported by a grant from the American Academy of Family Physicians Foundation.

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Competing interests: None declared.

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