ORIGINAL ARTICLE

Access to and continuity of primary medical care of different providers as perceived by the Finnish population

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Abstract

Objective. To study people's views on the accessibility and continuity of primary medical care provided by different providers: a public primary healthcare centre (PPHC), occupational healthcare (OHC), and a private practice (PP). **Design.** A nationwide population-based questionnaire study. **Setting.** Finland. **Subjects.** A total of 6437 (from a sample of 10 000) Finns aged 15–74 years. **Main outcome measures.** Period of time (in days) to get an appointment with any physician was assessed via a single structured question. Accessibility and continuity were evaluated with a five-category Likert scale. Values 4–5 were regarded as good. **Results.** Altogether 72% had found that they could obtain an appointment with a physician within three days, while 6% had to wait more than two weeks. Older subjects and subjects with chronic diseases perceived waiting times as longer more often than younger subjects and those without chronic diseases. The proportion of subjects who perceived access to care to be good was 35% in a PPHC, 68% in OHC, and 78% in a PP. The proportion of subjects who were able to get successive appointments with the same doctor was 45% in a PPHC, 68% in OHC, and 81% in a PP. A personal doctor system was related to good continuity and access in a PPHC. **Conclusions.** Access to and continuity of care in Finland are suboptimal for people suffering from chronic diseases. The core features of good primary healthcare are still not available within the medical care provided by public health centres.

Key Words: Continuity of care, family practice, health service accessibility, healthcare quality assessment

Access to and continuity of care are among the basic goals of primary care [1]. Difficulties in getting an appointment can be a major barrier to patients [2]. Increased accessibility of physicians working in primary care is related to better health and lower cost [3]. In the strict sense, continuity of care means the patient can see the same healthcare worker or team of health professionals repeatedly [4]. Patients and general practitioners value continuity of care [5,6], which is related to better outcome of patient care, especially for individuals suffering from chronic diseases and poor health [7,8].

In Finland, public primary healthcare centres (PPHC), occupational healthcare (OHC), and private practices (PP) are the main sources through which outpatients can consult a physician without

referral. PPHCs organized by the municipality represent the main primary healthcare system [9]. The charge for visiting a physician is €11 per visit or €22 per year. A personal doctor system was introduced in the

Access to and continuity of care are basic goals of primary care. Continuity of care is especially important for people with chronic diseases.

- In Finland, public primary healthcare centres do not reach these goals from the perspective of the ageing population.
- At present, both accessibility and continuity of care seem to be best available to the working-age population who do not suffer from chronic diseases.

1980s, when there were problems with access and continuity. In this system the patient is assigned to a doctor responsible for the care of the population in his or her neighbourhood. Today the personal doctor system covers two-thirds (68%) of the population [10].

Over 90% of all employees in Finland are covered by OHC provided by their employers. Employers usually purchase occupational health services from a private provider or a municipal health centre [9]. The Social Insurance Institution reimburses employers for 50% of their OHC costs. Employees are not charged for using the services.

Private healthcare services supplement public healthcare. In 2002, private healthcare costs accounted for about 14% of total healthcare expenditures. Part of the cost of private healthcare is reimbursed to clients by the Social Insurance Institution. In 2004 there were 18 000 working-age doctors in Finland (population 5.2 million). Eleven hundred of them worked full-time as private doctors, and 4400 ran a private practice outside their regular working hours [9].

Finnish patients have been satisfied with the health services provided by primary healthcare [11,12]. However, there have been no nationwide population-based studies on different primary healthcare providers. We conducted a study of opinions on the accessibility, use, and quality of outpatient medical care. In this article we describe how the individuals in the sample population assessed accessibility and continuity of care provided by primary care physicians. Accessibility was defined as perceived waiting time in general and, specifically, as the possibility of accessing a physician from a particular provider. Continuity was defined as the perceived possibility of getting successive appointments with the same doctor from a particular provider. We analysed how accessibility and continuity of primary care by a physician is perceived by patients suffering from a chronic disease.

Material and methods

Population and data collection

A questionnaire survey of 10 000 Finns aged 15 to 74 years was carried out between May and August 2004. A random sample was taken from the Finnish Population Register as a part of a study called "Quality of Finnish Physician Services in 2004". A four-page postal questionnaire and a stamped addressed envelope were sent to each member in the sample. The respondents returned the questionnaires to a research company, which read them optically and sent the files to the University of Kuopio. The files were verified by comparing the

codes entered with the figures on the questionnaire. After two reminders, 6437 acceptable questionnaires were received.

The questionnaire was based on previous studies [13,14] and a pre-study conducted in a Finnish health centre. The perceived time of waiting for an appointment with a physician in general was recorded. Satisfaction with services as a quality factor of different physician care providers was evaluated by the respondents with a 15-item list of questions. The subjects were asked to record whether they had any of the 17 listed common chronic diseases or risk factors (hyperlipidemia, elevated blood pressure) requiring treatment and follow-up by a physician. Information on whether the respondents belonged to a personal doctor system in their municipalities was obtained from the register of General Practitioners of Finland [10].

Data management

The perceived time of waiting for an appointment with a physician in general was asked with a structured question: "When you need medical help, how soon can you get an appointment?" If the respondents had used the physician services of a particular provider during the preceding 12 months, they were asked to assess accessibility and continuity of care separately for a PPHC, OHC, and a PP: "How easy is it to get an appointment" (indicator for access to care) and "Possibility to get successive appointments with the same doctor" (indicator for continuity of care). These were assessed with a five-category Likert scale (from very poor = 1 to excellent = 5). We grouped the responses into two categories: (1) very poor, poor, or moderate (= not good), and (2) good or excellent (= good).

The results are presented in frequencies and percentages. We used linear-by-linear association tests to assess whether there was a linear trend between the number of chronic diseases and accessibility and continuity, separately for the different providers [15]. Differences between a personal doctor system and a non-personal doctor system in public primary healthcare were assessed using chi-squared tests. To further assess the relationship between having chronic diseases and accessibility and continuity, we used multivariate logistic regression analysis. Other covariates in the analysis were age, gender, working status (not for OHC), and personal doctor system (not for OHC and PP). The results of the regression analysis are presented as odds ratios (OR) with 95% confidence intervals (95% CI). P-values of less than 0.05 were regarded as significant. SPSS for Windows, Release 11.5 was used for data analysis.

The Ethics Committee of Kuopio University Hospital approved the study.

Results

The response rate was 64% ($n=6437$). The mean age was 46 years. Almost one in every four ($n=1478$) respondents was aged 60–74 years. The proportion of males was 44%. Altogether 56% of the subjects were working. The proportions of unemployed, studying, and retired subjects were 5%, 10%, and 23%. A total of 7% were working part time or studying. Two-thirds ($n=4438$) of the respondents had visited a physician at a public primary healthcare centre, a third ($n=2256$) had accessed occupational healthcare, and almost half ($n=2875$) had seen a private physician in the preceding 12 months. Of the respondents, 69% belonged to a personal doctor system.

A total of 61% of the respondents had at least one chronic disease or a risk factor requiring physician care or follow-up. The three most common chronic conditions were elevated blood pressure or hypertension, dyslipidemia, and osteoarthritis. The mean age of the subjects with at least three chronic diseases was 60 years, while the mean age was 36 years among subjects without chronic diseases. Of the subjects with three chronic diseases, 26% were working, the corresponding percentage being 63% among subjects without chronic diseases. The number of visits to physicians working in a public primary health centre and the private sector was associated with the number of chronic diseases.

Almost three-quarters of the respondents (72%) thought they could get an appointment with a physician within three days (Table I). Subjects with a chronic disease perceived waiting times as longer significantly more often than those without chronic diseases. Waiting times for subjects aged 15–59 years were shorter than for subjects aged 60–74 years (Figure 1). In both age groups the proportion of subjects with longer perceived waiting times increased with the number of chronic diseases.

More subjects who used the private sector (78%) and OHC (68%) stated that they had good access to care than did those who used a PPHC (35%) (Table II). There was a trend towards worsening access to care from all providers as the number of chronic diseases increased. People living in municipalities with a personal doctor system at the public health centre perceived access to care as slightly better than did those without access to a personal doctor system.

Continuity of care was most commonly perceived as good in the private sector (81%) (Table III). In general, the percentage of subjects who perceived continuity of care as good increased slightly with the number of chronic diseases in a PPHC and OHC. Continuity of care was perceived as being better in the public primary healthcare centres with a personal doctor system.

Table IV shows the results of logistic regression analysis of good access and continuity in a PPHC. Suffering from chronic diseases was inversely associated with good access to a physician. Age and gender were not related to access. Being unemployed or retired was associated with good access. Having chronic diseases was not related to continuity of care in a PPHC. Being retired and studying were related to good perceived continuity. Involvement with a personal doctor system was related to good access and especially to good continuity in a PPHC.

Suffering from chronic diseases was not related to good access or continuity in OHC. In a PP, chronic diseases were inversely related to good accessibility (one chronic disease, OR=0.79, 95% CI 0.61–1.01; two chronic diseases, OR=0.64, 95% CI 0.48–0.86; three or more chronic diseases, OR=0.57, 95% CI 0.42–0.79).

Discussion

In this population-based study, subjects with chronic diseases perceived waiting times to be longer and accessibility or continuity to be worse than subjects without a chronic disease. Accessibility and continuity were assessed as suboptimal in public primary

Table I. Perceived waiting times for an appointment with any physician by number of chronic diseases (all subjects).¹

	No chronic diseases n (%)	One chronic disease n (%)	Two chronic diseases n (%)	Three or more chronic diseases n (%)	Total n (%)
0–3 days	1795 (81)	1158 (74)	641 (66)	521 (55)	4115 (72)
4–7 days	191 (9)	170 (11)	135 (14)	160 (17)	656 (12)
1–2 weeks	146 (7)	137 (9)	122 (12)	147 (15)	552 (10)
>2 weeks	71 (3)	91 (6)	79 (8)	127 (13)	368 (6)
Total	2203 (100)	1556 (100)	977 (100)	955 (100)	5691 ² (100)

¹Linear-by-linear association test for a trend, $p < 0.001$. ²For this analysis the total number of missing values was 746.

Figure 1. Perceived waiting times for an appointment with a physician by age and number of chronic diseases.

healthcare centres, although a personal doctor system was related to better access and continuity.

The response rate was moderate. The proportion of females and older respondents was greater than that in the general population. Chronic morbidity and use of medical care was slightly more common in this study sample than in a previous population-based study from Finland [16]. It is possible that people who make more visits to physicians are more willing to respond to this type of survey than those with less need for medical care. It has been suggested that less

satisfied patients are less willing to respond, which results in an overrepresentation of responses from satisfied subjects [17]. Despite these limitations, the results of our study can be generalized to the Finnish population. Some recall bias is possible. However, a longer period of time between the actual visit and the time of assessment can result in a more objective and more critical response compared with assessments conducted immediately after the visit [14].

A recently published OECD Review of Health Systems stated that among the most important

Table II. Proportion of subjects who perceived access to a physician as good among those who had used the services during the preceding 12 months.

	Included in analysis ¹ n	No chronic diseases n (%)	One chronic disease n (%)	Two chronic diseases n (%)	Three or more chronic diseases n (%)	Total n (%)
Public primary healthcare ($p=0.049^2$)	3733	450 (36)	356 (37)	233 (33)	272 (33)	1311 (35)
No personal doctor system (ns^2)	1266	146 (36)	112 (33)	71 (28)	84 (31)	413 (33)
Personal doctor system (ns^2)	2467	304 (37)	244 (39)	162 (35)	188 (34)	898 (36)
	ns^3	ns^3	$p=0.045^3$	ns^3	$p=0.022^3$	
Occupational healthcare ($p=0.044^2$)	1951	528 (70)	441 (69)	226 (65)	131 (64)	1326 (68)
Private practice ($p<0.001^2$)	2523	738 (82)	556 (79)	346 (74)	332 (74)	1972 (78)

¹Subjects with any missing values concerned in this analysis were excluded. ²Linear-by-linear association test for a trend. ³Chi-squared test. ns = non-significant ($p \geq 0.05$).

Table III. Proportion of subjects who perceived access to the same physician as good among those who had used the services during the preceding 12 months.

	Included in analysis ¹ n	No chronic diseases n (%)	One chronic disease n (%)	Two chronic diseases n (%)	Three or more chronic n (%)	Total n (%)
Public primary healthcare (p = 0.001 ²)	3701	509 (42)	430 (44)	310 (43)	412 (50)	1661 (45)
No personal doctor system (ns ²)	1259	116 (30)	105 (31)	68 (27)	105 (38)	394 (31)
Personal doctor system (p = 0.003 ²)	2442	393 (48)	325 (52)	242 (52)	307 (57)	1267 (52)
		p < 0.001 ³	p < 0.001 ³	p < 0.001 ³	p < 0.001 ³	p < 0.001 ³
Occupational healthcare (p = 0.048 ²)	1922	484 (66)	442 (69)	239 (70)	147 (72)	1312 (68)
Private practice (ns ²)	2469	703 (80)	703 (82)	372 (81)	361 (82)	2004 (81)

¹Subjects with any missing values concerned in this analysis were excluded. ²Linear-by-linear association test for a trend. ³Chi-squared test. ns = non-significant (p ≥ 0.05).

problems facing the Finnish healthcare system were the long waits for an appointment with a health centre physician and the non-equitable access to general practitioners [18]. In the present study, the majority of subjects believed they could obtain an appointment within three days, which can be regarded as acceptable. However, 16% of the respondents thought they may have to wait more than a week, and furthermore this percentage was twice as high among older subjects with chronic diseases. Only a third of the respondents evaluated access to public primary healthcare as good. Thus, our results support the OECD reports [18,19] based on international comparisons of healthcare indicators.

The population of Finland is ageing and the number of people with chronic diseases continues to increase. The responsibility for treatment of

exacerbations of COPD, for example, has been found to be shifting to general practitioners [20]. Continuous care allows the doctor to build knowledge regarding the patient and his or her previous history and illness [4]. For a person suffering from chronic disease, it is important to have easy access to a personal doctor in the case of a worsening condition. The personal doctor system in public primary healthcare was related to better access and continuity. Attempts to make this system available to the entire population are justified.

One reason for health centres' problems is a shortage of permanent physicians in some areas of Finland. Since the beginning of March 2005, health centres have had to provide a health professional's assessment of the need for care, even in non-urgent cases, within three working days. There have also

Table IV. Access to and continuity of care: Results of logistic regression analysis concerning physician care in a public primary healthcare centre.

	Access to physician perceived as good		Access to the same physician perceived as good	
	OR (95% CI)	p-value	OR (95% CI)	p-value
Number of chronic diseases				
No chronic diseases	1.0		1.0	
One	0.98 (0.81 to 1.17)	0.785	1.07 (0.89 to 1.28)	0.486
Two	0.74 (0.59 to 0.92)	0.007	0.88 (0.71 to 1.09)	0.238
Three or more	0.69 (0.54 to 0.87)	0.002	1.03 (0.82 to 1.30)	0.788
Age (years, continuous)	1.01 (1.00 to 1.01)	0.150	1.00 (1.00 to 1.01)	0.868
Gender				
Men	1.0			
Women	1.06 (0.92 to 1.22)	0.413	1.13 (0.98 to 1.30)	0.082
Working status				
Working	1.0		1.0	
Studying	1.26 (0.94 to 1.71)	0.128	1.65 (1.23 to 2.23)	0.001
Unemployed	1.34 (1.02 to 1.76)	0.036	0.89 (0.67 to 1.17)	0.387
Retired	1.28 (1.02 to 1.60)	0.031	1.70 (1.37 to 2.12)	<0.001
Other	1.27 (0.97 to 1.66)	0.086	1.56 (1.19 to 2.04)	0.001
Personal doctor system				
No	1.0		1.0	
Yes	1.18 (1.02 to 1.37)	0.024	2.36 (2.03 to 2.73)	<0.001

been projects creating new task profiles for primary care teams [21]. These reforms may be reducing the long waiting times at health centres [18]. Furthermore, the balance between continuity and access should be the focus of health policy, development of the healthcare system, and education of healthcare professionals.

Access to and continuity of care in Finland are suboptimal for people suffering from chronic diseases. The core features of good primary healthcare are still not available in the medical care provided by public health centres.

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