

Determinants of frequent use of open consultations: a study on patient demographics, chronic conditions, and utilization patterns in primary care

Cláudia A. Leitão^{a,b}, Sílvia R. Santos^{b,c}, Ana S. Aguiar^{d,e}, Vera L. Sousa^a, Helder A. Lanhas^a, Filipe M. Alves^f

Abstract In Portugal, open consultations (OCs) in primary health care address urgent medical needs, constituting 40–50% of family doctor activity. Frequent attenders (FAs), often presenting nonacute issues, significantly contribute to health care overuse. This study aimed to identify factors associated with frequent OC use in a primary health care unit during 2022. A retrospective cross-sectional analysis was conducted on 4,269 adult patients, with frequent attendance defined as four or more consultations (≥ 90 th percentile). Sociodemographic and clinical factors, including age, sex, employment, chronic conditions, and multimorbidity, were examined using binomial logistic regression. FAs ($n = 570$, 13.4%) accounted for 36.2% of all consultations. Significant associated variables included female sex (OR = 1.417), economic insufficiency (OR = 1.323), and multimorbidity (OR = 1.678). Conditions such as musculoskeletal (OR = 2.146), psychological (OR = 2.040), and neurological (OR = 1.550) disorders were strongly linked to frequent attendance. While FAs represent a minority of patients, their disproportionate use of OC services underscores the need for targeted interventions, such as individualized care plans and resource optimization, to balance demand and availability. These findings highlight critical areas for policy and practice to enhance health care efficiency.

Keywords: primary health care, open consultation, frequent attenders, health care utilization, health services misuse, Portugal

Introduction

The same-day unscheduled consultation, also known as open consultation, is intended for cases with short duration of symptoms and that require quick and urgent resolution.¹ It is thus a crucial type of consultation within the scope of primary health care (PHC), as it responds to population health needs; serves as a first point of contact; and contributes to the effective management of resources, sustainability, and quality of the Portuguese National Health Service (SNS).²

Despite its central role in PHC and the hierarchical organization of the SNS, representing around 40–50% of a family doctor's care activity, the open consultation is often used for nonacute conditions that would be better suited for scheduled consultations.^{2–4} In this regard, previous studies have highlighted frequent attenders as a common source of unnecessary medical contacts.⁵

The definition of frequent attenders is not unanimous because of the multidimensional nature of the phenomenon.⁶ However, the top decile of users in a distribution of consultations over a period, usually 12 months, has been shown to be a good discriminator of frequent attenders, regardless of sex or age.^{7–9}

Internationally, frequent attenders in PHC account for a significant portion of demand (30–50%) and drive-up costs through increased prescriptions and hospital referrals.^{6,10–12} For health care professionals, they are a common source of frustration, stress, and burnout.^{5,13,14} From the user's perspective, frequent attenders experience higher rates of temporary work disability, early retirement, lower quality of life, and dissatisfaction with care, which can strain the therapeutic relationship.^{14–17} Understanding their characteristics and the factors influencing their health care use is crucial to developing tailored strategies that optimize resource use.

In the context of scheduled consultations in PHC, several studies have shown the influence of multiple determinants on the pattern of health care use.^{18,19} These determinants can be categorized according to Andersen's behavioral model of health care utilization (1968, last updated in 2013) into three groups: 1) predisposing factors such as sex, age, marital status, family structure, and educational level; 2) enabling factors such as employment status, income, access to health care, having a health subsystem, and place of residence; and finally, 3) need factors that

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^a Unidade de Saúde Familiar (USF) Manuel Rocha Peixoto, ULS Braga, Braga, Portugal, ^b Escola de Medicina da Universidade do Minho, Braga, Portugal, ^c Serviço de Patologia Clínica. Hospital de Baga, ULS Braga, Braga, Portugal, ^d EPIUnit ITR, Instituto de Saúde Pública da Universidade do Porto, Universidade do Porto, Porto, Portugal, ^e Estudo das Populações—Instituto de Ciências Biomédicas Abel Salazar, Universidade do Porto, Porto, Portugal, ^f Administração Central do Sistema de Saúde, Lisboa, Portugal

* Corresponding author: Escola de Medicina da Universidade do Minho, Universidade do Minho, Campus de Gualtar - 4710-057 Braga. E-mail address: claudialeitao@med.uminho.pt

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encompass health status/illness and self-perception of health/illness. The expanded model also includes psychosocial factors such as social support and personality traits.¹⁸⁻²¹

A 2013 Portuguese study profiling frequent attenders at a family health unit in Matosinhos found that they were more likely to be female and have chronic medical and psychiatric conditions, multimorbidity, advanced age, and low level of education.²² This profile is consistent with international findings.^{6,9,19,22} Globally, a higher utilization of primary health care is also linked to living in rural areas; being alone, unemployed, and retired; or facing socioeconomic challenges.^{6,9,16,23}

Although there are several studies on frequent attenders in the context of PHC in general, as well as hospital emergency services, no data are available on the profile of frequent attenders in the context of open consultations in Portugal. Understanding these patients is essential for designing health policies that optimize resource allocation to meet existing demand. This study aims to examine the factors associated with frequent use among patients attending open consultations at the USF Manuel Rocha Peixoto of the ULS of Braga in 2022.

Methodology

Study design and participants

This study was designed as an observational, analytical (retrospective), and cross-sectional study. The study population included adult patients registered at the USF Manuel Rocha Peixoto, ULS Braga, Portugal, who had used the open consultation at least once in 2022. Exclusion criteria were pregnancy and death during the period under analysis.

A total of 4,374 users of open consultations were identified. Of those, 63 occasional users (individuals not registered at USF Manuel Rocha Peixoto), 39 pregnant women, and 3 deceased patients were excluded because of their irregular or noncontinuous patterns of use, which were not representative of the general population under study. This resulted in a final sample of 4,269 users (Fig. 1).

Data collection

Data were collected using the SIARS (Sistema de Informação das ARS), SCG (Sistema de Controlo de Gestão), and MIM@UF

(Módulo de Informação e Monitorização das Unidades) platforms. The SIARS and SCG platforms were designed to measure indicators used for evaluating primary care units. The MIM@UF module complements the daily production data of these units, enabling the generation of detailed reports and listings at the patient level. This allows health care professionals to analyze patient data, production output, medication prescriptions, and complementary diagnostic and therapeutic procedures and calculate relevant indicators.

The data were obtained from a secondary source (Training, Research, and Professional Development Office of ACeS Cávado I—Braga) and delivered to the research team in a fully anonymized manner, ensuring data protection, according to the Portuguese General Data Protection Regulation and Personal Data Protection Law.

To define a frequent attender, the distribution of the number of consultations over the analysis period was evaluated. Users with a number of consultations equal to or greater than the 90th percentile were considered frequent attenders.⁷⁻⁹

The analysis included sociodemographic variables—sex, age, residence (rural versus nonrural according to the new Administrative Division of Parishes of 2013, described in the Rural Development Program 2014–2020), education level, employment status (active, inactive, retired, student), exemption from copayments, and the respective reason (to assess economic insufficiency)—and clinical variables, including the diagnosis of chronic diseases (based on an adapted version of a list of chronic diseases according to International Classification of Primary Care, 2nd edition [ICPC-2] coding described by O'Halloran) and multimorbidity (defined as the presence of 3 or more chronic diseases).²⁴⁻²⁷ For each user, the number of scheduled consultations in 2022 was also quantified.

Statistical analysis

Statistical analysis was performed using Statistical Package for the Social Sciences (SPSS Statistics) v.28.0.1. A significance level of 0.05 was adopted to determine statistical significance.

For univariate analysis, categorical variables were compared using the Pearson χ^2 test. When applicable, post hoc analysis was performed on multiple comparisons with *P*-values modified using

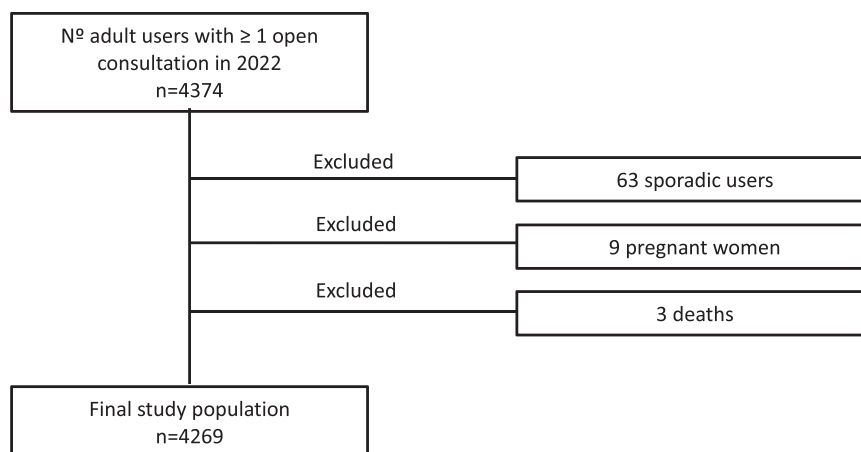


Figure 1. Flowchart of the study population and reasons for exclusion. A total of 4374 patients attended open consultations at Family Health Unit (USF) Manuel Rocha Peixoto in 2022. From those, 75 were excluded according to the reported exclusion criteria. Final study population = 4269.

the false discovery rate (FDR) approach. For continuous variables, the Student *t* test was used.

To identify variables associated with frequent use, a binomial logistic regression model was applied, with variable selection using the backward LR (likelihood ratio) test method. The initial model included 23 variables: biological sex, age, residence, employment status, number of scheduled consultations, economic insufficiency, multimorbidity, and chronic disease diagnosis according to ICPC-2 chapters registered in the active problems list (“General and Unspecified (A);” “Blood, Blood Forming Organs and Immune Mechanism (B);” “Digestive (D);” “Eye (F);” “Ear (H);” “Cardiovascular (K);” “Musculoskeletal System (L);” “Neurological (N);” “Psychological (P);” “Respiratory (R);” “Skin (S);” “Endocrine/Metabolic, Nutritional (T);” “Urological (U);” “Pregnancy, Childbearing, Family Planning (W);” “Female Genital (X);” and “Male Genital (Y).” Model assumptions were validated beforehand. The linear relationship between continuous variables and the logit (log-odds) of the dependent variable was checked using residual plots and the Box–Tidwell test. To analyze multicollinearity among independent variables, the variance inflation factor (VIF) and tolerance were evaluated, with multicollinearity defined as VIF greater than 10 and/or tolerance less than 0.1. Standardized residuals were used to detect outliers, removing observations with absolute values greater than 1.96.

The variable “education level” had 88% of missing data, so it was not included in the analysis. Regarding the remaining variables, missing data were minimal. Five of the seven variables had no missing data. The other two variables had missing rates of 0.45% and 0.54%. Therefore, missing data were excluded case by case.

Results

Number of consultations and definition of frequent attenders

The total number of open consultations during the period of analysis was 8711. The 90th percentile of the consultation count distribution was 4, defining a frequent attender (FA) as a patient with a number of consultations equal to or greater than this value ($n = 570$, 13.4% of the population). Although they represent only 13.4% of the population, FAs were responsible for 36.2% of the total consultations ($n = 3150$).

In the studied population, the median (MD) number of open consultations and scheduled consultations was 1. When comparing groups, frequent attenders had a statistically significantly higher number of open consultations compared with nonfrequent attenders (NFAs) (FA: 5 [4;6]; NFA: 1 [1;2]; $P < 0.001$, Mann–Whitney U test). Regarding scheduled consultations, no differences between groups were found.

Sociodemographic data

The average age of the study population was 49 years (standard deviation [SD] 18), with the majority being female (61%), residing in nonrural areas (95.6%), and without economic insufficiency (75.1%). Approximately half of the patients were professionally active (52.3%). When comparing groups, there were no statistically significant differences in age and place of residence. Frequent use of the open consultation is associated with being female (OR = 1.581, 95% CI: 1.306–1.913, $P < 0.001$) and having economic insufficiency (OR = 1.418, 95% CI: 1.169–1.720, $P < 0.001$) (Table 1). There are also differences between FAs and NFAs in relation to professional status ($P <$

0.023; $\phi_c = 0.047$). Post hoc analysis showed that professionally inactive individuals had 82% higher odds of being FAs compared with students (OR = 1.820, 95% CI: 1.152–2.875, $P = 0.028$) and active individuals had 60% higher odds compared with the same group (OR = 1.60, 95% CI: 1.050–2.441, $P = 0.102$).

Clinical data

In the study population, more than half of the users had no chronic condition (55.3%). On the contrary, 32.7% met the criteria for multimorbidity (Table 2). The five most represented ICPC-2 chapters listed as active chronic diseases were “Endocrine/Metabolic, Nutritional (T)” (35.3%); “Musculoskeletal System (L)” (25.0%); “Psychological (P)” (21.2%); “Cardiovascular (K)” (18.4%); and “Digestive (D)” (10.7%) (Table 2). When comparing groups, FAs had a significantly higher number of chronic conditions compared with NFAs (FAs: 4.18 [SD 3.77], NFAs: 1.86 [SD 2.93]; $P < 0.001$, Student *t* test). This also translates into differences between groups concerning the presence of multimorbidity, with a strong association between having multimorbidity and being FA (OR = 3.936, 95% CI 3.279–4.726, $P < 0.001$) (Table 2).

Analyzing the five most represented ICPC-2 chapters, a significant association between these and frequent use of the open consultation was found ($P < 0.001$). Chapters T, L, and P showed a strong association with being FA (Table 2). Chapters D and K showed a moderate association (Table 2).

In the chapter “Musculoskeletal System (L),” the most common conditions were “Back syndrome with radiating pain (L86)” ($n = 508$; 11.9%), “Shoulder syndrome (L92)” ($n = 306$; 7.2%), and “Osteoarthritis of knee (L90)” ($n = 254$; 5.9%). L86 shows a strong association with being FA while L92 and L90 show a moderate association (Table 3).

Exploring the “Psychological” (P) chapter, the most frequent conditions were “Depressive disorder (P76)” ($n = 419$; 9.8%), “Tobacco abuse (P17)” ($n = 338$; 7.9%), and “Anxiety disorder/anxiety state (P74)” ($n = 321$; 7.5%). All showed a significant association with frequent use of the open consultation, with a strong association for depressive disorder and anxiety disorder and a moderate association for tobacco abuse (Table 3).

Other ICPC-2 chapters represent a low frequency (less than 6%). Among these, the “Neurological (N)” chapter is the most represented with 5.6% ($n = 239$), with a moderate and significant association with being FA ($P < 0.001$, OR = 3.337, 95% CI 2.502–4.452). Specifically, within this chapter, the most representative conditions were migraine (OR = 3.488, 95% CI 2.240; 5.432, $P < 0.001$) and carpal tunnel syndrome (OR = 3.068, 95% CI 1.928; 4.880, $P < 0.001$).

Variables associated with frequent use of the open consultation

Of the 23 variables included, after 16 stages of elimination, a final model with 8 variables was obtained (Table 4). The model has an accuracy of 86.5%, explaining 14% of the variance ($P < 0.001$). Among the variables included in the model, only the presence of chronic disease related to the ICPC-2 chapter “Blood, Blood Forming Organs and Immune Mechanism (B)” is not associated with frequent use of the open consultation. Having a disease from the “Musculoskeletal System (L)” chapter (OR = 2.146, 95% CI: 1.657–2.779, $P < 0.001$) or from the “Psychological (P)” chapter (OR = 2.040, 95% CI: 1.626–2.560) approximately doubles the chance of being FA. In addition, having a disease from the “Nervous

Table 1

Descriptive and univariate analysis results of sociodemographic variables between frequent attenders (n = 570) and nonfrequent attenders (n = 3699) of open consultations at Family Health Unit (USF) Manuel Rocha Peixoto in 2022

	Global n = 4269	Frequent attender n = 570	Nonfrequent attender n = 3699	P	Effect size	Odds ratio (OR) CI 95%
Age (y)						
Mean (SD)	49 (17.9)	50 (16.8)	49 (18)	.103	—	—
Biological sex, n (%)						
Male	1665 (39%)	171 (30%)	1494 (40.4%)	<.001	$\phi = 0.072$	1.581 [1.306–1.913]
Female (1)	2604 (61%)	399 (70%)	2205 (59.6%)			
Residency n (%)						
Nonrural	4080 (96.1%)	548 (96.3%)	3532 (96.1%)	.772	—	0.933 [0.586–1.488]
Rural (1)	166 (3.9%)	21 (3.7%)	145 (3.9%)			
Economic insufficiency (EI)						
No	3207 (75.1%)	394 (69.1%)	2813 (76%)	<.001	$\phi = 0.054$	1.418 [1.169–1.720]
Yes (1)	1062 (24.9%)	176 (30.9%)	886 (24%)			
Professional status n (%)						
Active	2224 (52.3%)	299 (52.6%)	1925 (52.3%)	.023	$\phi = 0.047$	1.600 [1.050–2.441]*
Nonactive	986 (23.1%)	148 (26.1%)	838 (22.8%)			1.820 [1.152–2.875]*
Retired	633 (14.8%)	85 (15.0%)	548 (14.8%)			1.598 [0.983–2.596]*
Student (1)	407 (9.5%)	36 (6.3%)	371 (10.0%)			

The *t*-test (*t*) was used for continuous variables and the Pearson chi-square test (χ^2) for categorical variables; the reference group is marked with (1). Values in bold indicate statistically significant results for $P < .05$ and 95% confidence interval (95% CI) and the respective strength of association (effect size).

* Post hoc analysis was performed on multiple comparisons with *P*-values modified using the false discovery rate (FDR) approach.

φ, Phi; OR, odds ratio; SD, standard deviation.

System (N)” chapter increases this chance by 55% (OR = 1.550, 95% CI: 1.134–2.118, $P = 0.006$). The presence of 3 or more diseases (multimorbidity) increases the chance of being FA by approximately 68% (OR = 1.678, 95% CI: 1.244–2.265). With less impact, there is a relationship between sex, age, and the presence of economic insufficiency and frequent use of the open consultation. Being female increases the probability of being FA by approximately 42% (OR = 1.417, 95% CI: 1.159–1.733, $P < 0.001$), and having economic insufficiency increases this risk by approximately 32% (OR = 1.323, 95% CI: 1.076–1.626, $P = 0.008$). For each 10-year

increase in age, the probability of being FA decreases by 10% (OR = 0.990, 95% CI: 0.984–0.995, $P < 0.001$).

Discussion

The primary objective of this study was to identify the factors associated with frequent attendance in open consultation users at primary care level.

The results revealed that frequent use of open consultations is associated with being female and experiencing economic

Table 2

Descriptive and univariate analysis results of clinical variables between frequent attenders (n = 570) and nonfrequent attenders (n = 3699) of open consultations at Family Health Unit (USF) Manuel Rocha Peixoto in 2022

	Global n = 4269	Frequent attender n = 570	Nonfrequent attender n = 3699	P	Effect size	Odds ratio (OR) CI 95%
Count of chronic diseases						
Mean (SD)	2.17 (3.16)	4.18 (3.77)	1.86 (2.93)	<.001	$d = 0.757$	—
Multimorbidity						
Yes	1395 (32.7%)	347 (60.9%)	1048 (28.3%)	<.001	$\phi = 0.236$	3.936 [3.279–4.726]
No	2874 (67.3%)	223 (39.1%)	2651 (71.7%)			
Endocrinology (T), n (%)						
Yes	1509 (35.3%)	331 (58.1%)	1178 (31.8%)	<.001	$\phi = 0.187$	2.964 [2.475–3.549]
No	2760 (64.7%)	239 (41.9%)	2521 (68.2%)			
Musculoskeletal (L), n (%)						
Yes	1066 (25%)	287 (50.4%)	779 (21.1%)	<.001	$\phi = 0.230$	3.801 [3.168–4.561]
No	3203 (75%)	283 (49.6%)	2920 (78.9%)			
Psychological (P), n (%)						
Yes	904 (21.2%)	255 (44.7%)	649 (17.5%)	<.001	$\phi = 0.226$	3.804 [3.160–4.580]
No	3365 (78.8%)	315 (55.3%)	3050 (82.5%)			
Cardiovascular (K), n (%)						
Yes	787 (18.4%)	177 (31.1%)	610 (16.5%)	<.001	$\phi = 0.128$	2.281 [1.872–2.779]
No	3482 (81.6%)	393 (68.9%)	3089 (83.5%)			
Digestive (D), n (%)						
Yes	457 (10.7%)	112 (19.6%)	345 (9.3%)	<.001	$\phi = 0.114$	2.377 [1.881–3.005]
No	3812 (89.3%)	458 (80.4%)	3354 (90.7%)			

The *t*-test (*t*) was used for continuous variables and the Pearson chi-square test (χ^2) for categorical variables. Values in bold indicate statistically significant results for $P < .05$ and 95% confidence interval (95% CI) and the respective strength of association (effect size). Multimorbidity was defined as ≥ 3 diseases.

φ, Phi; ICPC-2 chapters—T, Endocrine/Metabolic, Nutritional; L, Musculoskeletal System; P, Psychological; K, Cardiovascular; D, Digestive; OR, odds ratio; SD, standard deviation.

Table 3
Descriptive and univariate analysis results of the most prevalent conditions from ICPC-2 chapters (“Musculoskeletal System [L]” and “Psychological [P]”) between frequent attenders (n = 570) and nonfrequent attenders (n = 3699) of open consultations at Family Health Unit (USF) Manuel Rocha Peixoto in 2022

	Global n = 4269	Frequent attender n = 570	Nonfrequent attender n = 3699	Statistic	P	Effect size	Odds ratio (OR) CI 95%
Musculoskeletal System (L), n (%)							
Back syndrome with radiating pain (L86)	508 (11.9%)	149 (3.5%)	359 (8.4%)	$\chi^2 = 127.25$	<.001	$\phi = 0.173$	3.293 [2.652–4.088]
Shoulder syndrome (L92)	306 (7.2%)	90 (2.1%)	216 (5%)	$\chi^2 = 73.484$	<.001	$\phi = 0.131$	3.023 [2.322–3.936]
Osteoarthritis of knee (L90)	254 (5.9%)	77 (1.8%)	177 (4.1%)	$\chi^2 = 67.169$	<.001	$\phi = 0.125$	3.108 [2.340–4.127]
Psychological (P), n (%)							
Depressive disorder (P76)	419 (9.8%)	127 (2.9%)	292 (6.8%)	$\chi^2 = 115.487$	<.001	$\phi = 0.164$	3.345 [2.656–4.213]
Tobacco abuse (P17)	338 (7.9%)	91 (2.1%)	247 (5.8%)	$\chi^2 = 58.433$	<.001	$\phi = 0.117$	2.655 [2.050–3.439]
Anxiety disorder/anxiety state (P74)	321 (7.5%)	105 (2.5%)	216 (5%)	$\chi^2 = 112.429$	<.001	$\phi = 0.162$	3.641 [2.829–4.687]

The Pearson chi-square test (χ^2) was used. Values in bold indicate statistically significant results for $P = .05$ and 95% confidence interval (95% CI) and the respective strength of association (effect size). ϕ , Phi; ICPC-2 chapters—L, Musculoskeletal System; P, Psychological; ICPC-2 codes—L86 Back syndrome with radiating pain; L90, Osteoarthritis of knee; L92, Shoulder syndrome; OR, odds ratio; P17, tobacco abuse; P74, anxiety disorder/anxiety state; P76, depressive disorder; SD, standard deviation.

insufficiency.^{6,9,22,28,29} These results are consistent with several national and international studies about frequent attenders of scheduled consultations and emergency departments.^{6,9,22,28,29} However, owing to the specificities of open consultations, no international studies were found on this type of consultation and, nationally, data only exist on scheduled consultations. The closest we can find to the reality of open consultations is a Norwegian study on out-of-hours services, which reveals that women are overrepresented among urgent care patients both in the short and long term.²⁸ Economic insufficiency is also associated with high utilization of consultations in primary care services, although results are inconsistent and dependent on the type of health care system in place.^{19,30-32} The link between economic insufficiency and this pattern of resource use may relate to the higher vulnerability of this group to physical and mental health conditions.¹⁷ In addition, low economic resources may hinder the use of paid medical care, contributing to greater use of free primary care services.

The number of chronic diseases is intimately related with frequent attendance in this study. International literature consistently links chronic diseases to higher health care use, showing a positive correlation between the number of conditions and increased utilization.^{9,17,19} Multimorbidity similarly correlates with high urgent care use, both in the short and long term.²³ A 2013 Portuguese study also found that frequent primary care users often have chronic conditions.²² This trend persists in out-

of-hours services and emergency care, both nationally and internationally.^{28,33,34} Patients with multiple chronic conditions may exhibit this pattern of use because of higher health needs, potential decompensation, and a need for closer monitoring in scheduled consultations.

Among chronic conditions, our study showed that having musculoskeletal, psychological, and neurological conditions relates with frequent use of urgent care.

Musculoskeletal disorders are frequently associated with frequent use in multiple studies, particularly in active-age patients.^{23,28} This may be related to the tendency of patients with such conditions to experience acute episodes, especially in physically demanding work environments. Therefore, promoting positive ergonomic habits to prevent biomechanical wear is essential.³⁵ Once established, early treatment, both pharmacological for pain control and nonpharmacological for physical rehabilitation, is crucial for improving functional recovery, preventing disability, and avoiding chronicity.³⁶

In our study, mental health disorders are also associated with frequent use of urgent care. A Portuguese study revealed that over half of the frequent users of scheduled consultations in a Family Health Unit (USF) had a chronic psychiatric condition.²² Internationally, this type of condition consistently shows a positive relationship with frequent attendance, both in the short and long term.^{28,37,38} Factors associated with this pattern of use may correlate with higher levels of anxiety, negative life events, illness behavior, and somatization, making effective intervention in these factors important, as it may contribute to reducing health care resource use and costs.³⁸

Neurological conditions classified as chronic diseases also seem to associate with frequent use of open consultations. Among ICPC-2 categories, migraine and carpal tunnel syndrome show the strongest associations. Migraine, with its chronic and fluctuating nature, often leads to more urgent care visits. Carpal tunnel syndrome, common in working-age individuals involved in repetitive wrist tasks, may also drive frequent visits, especially in our sample where the median age is around 50 years and over half are professionally active. Worsening work-related symptoms likely prompt visits for evaluation, treatment, or work incapacity certification.

Interestingly, frequent use of urgent care decreases with age in this population, contrasting with literature that typically links older age to higher use.^{6,22,28} However, German studies using advanced methods such as fixed-effects regressions found that increasing age reduces frequent attendance.¹⁹ This discrepancy

Table 4
Results of binomial logistic regression for predicting frequent attender status of open consultations

	Sig	Exp (B)	Exp (B) CI	
			Lower	Upper
Biological sex (1 = female)	<.001	1.417	1.159	1.733
Age	<.001	.990	.984	.995
Economic insufficiency (1 = yes)	.008	1.323	1.076	1.626
Multimorbidity (1 = yes)	<.001	1.678	1.244	2.265
Chapter B disease (1 = yes)	.090	1.639	.926	2.903
Chapter L disease (1 = yes)	<.001	2.146	1.657	2.779
Chapter N disease (1 = yes)	.006	1.550	1.134	2.118
Chapter P disease (1 = yes)	<.001	2.040	1.626	2.560

For the biological sex variable, the reference is female; for other categorical variables, the reference is having the condition (yes). Values in bold indicate statistically significant results for $P = .05$ and 95% confidence interval (95% CI). Exp (B), odds ratio; ICPC-2 chapters—B, Blood, Blood Forming Organs and Immune Mechanism; L, Musculoskeletal System; N, Neurological; P, Psychological.

may be due to our younger, predominantly working-age population and the study's focus on acute care consultations, unlike broader studies on primary care usage.

Strengths, limitations, and future perspectives

As far as we know, this is the first national study to profile frequent attenders of open consultations. It was conducted in an urban USF of ULS Braga, with a type B operational model, thus having characteristics very similar to various USFs nationally. However, the restriction of the analysis to a single unit prevents generalization of the results to the entire primary care user population. It would be interesting in the future to apply this analytical model to other USFs within ULS and across the country.

Despite the significant sample size and the attempt to conduct an analysis representing the annual pattern of open consultations (avoiding potential biases related to seasonal demand), the restriction of the study period to one year may be limiting, as there is growing evidence that the pattern of frequent attendance is transient.¹² Thus, a longitudinal evaluation of frequent attenders would be valuable to identify persistent frequent users.

Finally, being a frequent user does not necessarily mean being an overuser (i.e., using resources inappropriately). Therefore, a complementary analysis of the reasons for consultations among frequent users would be relevant.

Conclusion

This study allowed for the profiling of frequent users of open consultations, who often present with chronic conditions subject to acute episodes, such as musculoskeletal and psychiatric conditions. Despite representing a small fraction of the demand, these users consume a significant number of resources. Understanding these characteristics is essential for developing personalized and cost-effective strategies, benefiting both the health care system (SNS) and, especially, the individual patient.

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