Frequent Attenders in Family Practice in Croatia: Retrospective Study

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Aim. To determine the number of “frequent attenders” in family practice offices in Croatia according to the number and proportion of frequent attender visits in the total number of visits, and to follow up the frequent attenders and the number of visits they made over a period of three years.

Methods. The retrospective study involved 8 family practice offices in Northern Croatia. The number of visits to family practice was determined for 4,312 patients aged over 18 years. There were 1,826 men (42.3%) and 2,486 (57.7%) women. The follow up period lasted from January 1, 1997 to December 31, 1999. The borderline value that divided the frequent from non-frequent attenders was the value at the third quartile of the number of visits in a single age-sex group of patients.

Results. We recorded a total of 58,088 visits of patients older than 18 years to 8 family practice offices in the three-year period. In 1997, out of 4,312 patients who made a total of 17,938 visits, 944 (22%) frequent attenders made 11,257 (63%) visits. In 1998, there were a total of 20,350 visits made, with 966 (22%) frequent attenders making 12,145 (60%) visits. In 1999, a total of 20,725 visits were made, with 988 (23%) frequent attenders making 12,259 (59%) visits. The differences in the distribution of frequent vs non-frequent attenders according to age and sex were not statistically significant in any of the three study years (chi-square, p=0.727). Older men and older women were not more often frequent attenders than younger men and younger women, respectively. Out of 4,312 patients, 1,714 (40%) were frequent attenders in one of the three study years. Of these, 884 (21%) were frequent attenders in one year, 476 (11%) in two years, and 354 (8%) in all three subsequent study years. Out of 4,312 patients, 1,762 (41%) patients in 1997, 1,139 (26%) in 1998, and 1,116 (26%) patients in 1999 did not make a single visit to a family physician.

Conclusion. Frequent attender visits make a great proportion of the total number of visits to family practice offices in Croatia, a country with a health care system in transition. Eight percent of patients remained being frequent attenders during all three study years.

Key words: family practice; office visits; adult; Croatia
the frequent attender according to the number of visits above the upper quartile or percentile (8-10). Since there has been no adequate methodological approach developed to study a frequent attender phenomenon, the results of the studies dealing with this problem largely differ (11). Furthermore, there have been few follow-up studies into the dynamics of frequent attender visits to a family practice office that lasted longer than a year. This is the reason why it is not clear whether a frequent attender is only a short-term phenomenon or a typical characteristic of some patients or diseases (12,13).

Some studies focused on the factors causing frequent patient visits: marital or social problems (usually both), female sex, and older age (14,15). Where morbidity is concerned, the most frequent causes of frequent visits to physician’s office were chronic diseases (8,12,13). The decisive factor for frequent visits was not severity of chronic disease, but administrative and social requirements imposed on the physician and chronically ill patient (case mix) (3). However, depressive and neurotic patients make visits to physician’s office more frequently, as well as severely ill patients in need for support (15,16). Frequent attenders have often been labelled as “heartsick patients” who complain for reasons that are not medically explained (3,18,19). There are several factors related to the physician which influence the attendance rate—the number of practices, doctor’s characteristics (the age, sex, experience, education), and practice style (the use of appointment system) (19,20). Taking care of frequent attenders is time-consuming and represents a professional stress to a family practice team. Previous studies have shown that there are 3-6% of frequent attenders per family practice office, with 1-3% of them making 6-20% of a total number of visits (19-21).

In the countries with transitional health care system, the phenomenon of frequent attender has not been investigated (22). The aim of this study was to determine the number of frequent attender patients in family practice in the context of a transitional health care system, as well as the proportion of frequent attender visits in a total number of visits, and to follow up these parameters over three subsequent years. Another aim was to assess the appropriate methodological approach to determine a frequent attender, which would take into account age and sex related specificities of health care users.

Methods

We retrospectively analyzed the number of visits in 8 family practice offices in northern Croatia over a period of 36 months.

Subjects

The study involved 8 family practice offices located in the cities, suburbs, and villages in the northern Croatia (Karlovac, Otočac, Požega, Samobor, Sveti Nedelja, and Velika). The sample of family physicians was selected from physicians participating in the CroDiaGP project (23), which investigates the quality of health care delivered to patients with diabetes mellitus in Croatia. All physicians participating in the project and their colleagues in group family practices were invited to join the study. Out of a total of 12 physicians 8 responded (6 female and 2 male). Four of them were specialists in family medicine, whereas others did not have postgraduate education or specialization. The median age of physicians was 42 years (range 30-58 years). The years of service ranged between 4 and 35 years (median, 19 years).

There were 14,400 patients registered in 8 family practice offices. The study sample included every other patient on the alphabetical list of those older than 18 years. The patient sample did not include pregnant women and patients who had major injuries in the study period, because these patients had objective needs for a greater number of visits, which thus did not fulfill the criteria for frequent attender visits. The final patient sample included 4,312 patients. The data were collected from patient files in the family practice offices. The patients’ age at the beginning of this study was taken as the age limit for the inclusion in the study.

Method

For each patient in the sample, we determined the number of visits to a family practice office for each year, ie, 1997, 1998, and 1999. The definition of a visit used in this study was taken from Morbidity Statistics from General Practice (2), which defines a visit as a “face to face” encounter between a family physician and a patient in a physician’s office or at a patient’s home. In our study, we analyzed only the visits to family practice offices. Home visits, emergency visits, after-hours office visits, and visits to other private practitioners were not included in the analysis. The follow-up period lasted from January 1, 1997 to December 31, 1999.

The study was carried out in two parts. In the first part, a standard number of patient visits was determined according to their age and sex. For each study year, 9 age-sex groups were formed and the number of visits, median, and mean value with standard deviation (mean±SD) were calculated for each group. The borderline value of the number of visits dividing frequent from non-frequent attender was calculated for each age-sex group. In the second part of the study, the criteria for a frequent-attender patient and a frequent-attender visit were determined. The frequent-attender patient was a patient whose number of office visits was above the third quartile (Q3) for his or her age-sex group. Visits made by such patients were considered frequent-attender visits. The visits below the third quartile in age-sex group of patients were considered as resulting from an objective need for a physician’s help.

Statistical Analysis

Data on the number of visits within a general population were analyzed with descriptive statistics. The Q3 value of the number of visits for each age-sex group was calculated according to the method described by Westhead and Svab (8,9). The differences between frequent and non-frequent attenders in the sample were tested with chi-square test. The level of statistical significance was set at p<0.005. Statistical package used for data analysis was the SAS System for Windows, release 8.02 (SAS Institute Inc., Cary, NC, USA).

Results

In the three-year period, 1,826 male (42.3%) and 2,486 female (57.7%) patients made a total of 58,088 visits to 8 family practice offices.

In each study year, there were 9 age-sex groups of patients. The visits below the third quartile in an age-sex group of patients were considered as resulting from an objective need for a physician’s help. The value of Q3 ranged between 3.0 and 13.0, being lower in younger groups and increasing with age (Table 1). For women, Q3 showed linear increase with age, whereas for men it oscillated. Q3 value for each age-sex group of patients increased linearly from the first (ie, 1997) to the third (ie, 1999) year of the study. In patients over 70 years of age, there was a decrease in all of these parameters (Table 1).

There was a total of 17,935 visits (mean±SD, 4.2±5.6 per patient) made in 1997, 19,720 visits...
There were not more frequent attenders among older than younger men just as there were not more frequent attenders among older women than among younger ones.

Out of 4,312 patients included in the study, 2,598 (60.3%) were not frequent attenders continually over the three years of the study. There were 884 (20.5%) patients who were frequent attenders in only one year: 290 (6.7%) in 1997, 261 (6.1%) in 1998, and 333 (7.7%) in 1999. There were 476 (11%) patients who were frequent attenders for over two years of the study: 175 (4.1%) in 1997 and 1998, 125 (2.9%) in 1997 and 1999, and 176 (4.1%) in 1998 and 1999. There were 354 (8.2%) patients continually categorized as frequent attenders in a family physician’s office during all three years of the study (Fig. 2).

**Table 1.** Third quartile (Q3) values of patient visits to family physicians according to age-sex groups in 1997, 1998, and 1999

<table>
<thead>
<tr>
<th>Research</th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age group (years)</td>
<td>No.</td>
<td>Q3</td>
<td>No.</td>
</tr>
<tr>
<td>Men:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20</td>
<td>45</td>
<td>3.5</td>
<td>18</td>
</tr>
<tr>
<td>20-29</td>
<td>311</td>
<td>3.0</td>
<td>335</td>
</tr>
<tr>
<td>30-39</td>
<td>315</td>
<td>4.0</td>
<td>304</td>
</tr>
<tr>
<td>40-49</td>
<td>341</td>
<td>7.0</td>
<td>328</td>
</tr>
<tr>
<td>50-59</td>
<td>309</td>
<td>6.0</td>
<td>332</td>
</tr>
<tr>
<td>60-69</td>
<td>317</td>
<td>9.0</td>
<td>311</td>
</tr>
<tr>
<td>70-79</td>
<td>141</td>
<td>8.3</td>
<td>166</td>
</tr>
<tr>
<td>80-89</td>
<td>27</td>
<td>9.0</td>
<td>32</td>
</tr>
<tr>
<td>90-100</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1,826</td>
<td></td>
<td>1,826</td>
</tr>
</tbody>
</table>

| Women: | | | | | | |
| <20 | 55 | 4.0 | 22 | 5.0 | 8 | 2.8 |
| 20-29 | 401 | 4.0 | 395 | 5.0 | 378 | 5.0 |
| 30-39 | 419 | 5.0 | 413 | 6.0 | 402 | 5.0 |
| 40-49 | 434 | 7.3 | 435 | 8.0 | 438 | 6.0 |
| 50-59 | 422 | 8.0 | 425 | 8.0 | 417 | 9.0 |
| 60-69 | 439 | 9.0 | 434 | 10.0 | 440 | 10.0 |
| 70-79 | 269 | 10.0 | 304 | 10.0 | 326 | 11.0 |
| 80-89 | 46 | 8.3 | 55 | 12.0 | 72 | 8.0 |
| 90-100 | 1 | 0 | 3 | 10.0 | 5 | 13.0 |
| Total | 2,486 | | 2,486 | | 2,486 | |

*The third quartile in an age-sex group of patients represents the borderline value between frequent and non-frequent attenders (8.9%).

(4.7 ± 5.7 per patient) made in 1998, and 20,433 visits (4.8 ± 5.7 per patient) made in 1999 (Fig 1).

In 1997, 944 (21.9%) frequent attenders made 11,257 (62.8%) visits (11.9 ± 6.6 per patient). In 1998, 966 (22.4%) frequent attenders made 12,145 (59.7%) visits (12.6 ± 6.6 per patient). In 1999, 988 (22.9%) frequent attenders made 12,259 (59.5%) visits (12.4 ± 6.5 per patient) (Fig. 1). Out of 4,312 patients, 1,762 (41%) patients in 1997, 1,139 (26%) in 1998, and 1,116 (26%) patients in 1999 did not make a single visit to a family physician (Table 2, Fig. 1).

We found no differences in the number of frequent attenders between different age groups of female and male patients at any year, chi-square, p>0.727.

![Figure 1](image.png)

**Figure 1.** The proportion of visits made by frequent attenders and by non-frequent attenders in the total number of visits according to the sex of the patients. FA – frequent attenders; M – male; F – female.

**Figure 2.** Continuity of patient classification into frequent vs non-frequent attender during the three years, 1997-1999. FA – frequent attender.

**Discussion**

Our study showed that in 1997, 22% of patients were frequent attenders, making 63% of all visits to family practice offices, whereas in 1998 and 1999, 22% and 23% of these patients made 60.0% and 59.0% of visits, respectively.

There was no significant difference between frequent and non-frequent attender visits according to age either among male or female patients. Older patients, irrespective of their sex, did not make more frequent attender visits than younger patients. Also, we found that 40% of patients were frequent attenders at least for one year. Out of them, 21% were frequent attenders for one year, 11% for two years, and 8% for all three years.

There are no data on frequent attenders in family medicine practice in Croatia, so we have to compare our results with those from other countries. Thus, a similar study carried out in Slovenia (18) showed that 24% of frequent attenders made 54.8% of visits. According to the same methodology for determining a frequent attender, 20% and 25% of frequent attenders in England and Finland made 50% and 55% of visits, respectively (10,14). According to our study, the number of visits per patient in Croatia during 1997 was 4.1 as it was in Poland. The number of visits per patient in Netherlands and Japan was 5.7 and 5.6, re-
spective (4). Research shows that frequent attenders in Croatia make much more visits than non-frequent attenders in the studies carried out in Slovenia, England, and Finland.

The possible explanation for the current situation in Croatia could be found in the family physician’s position in the health care system, and health care regulations which may have an influence on the number of frequent visits. Since the Croatian health care system is in transition, we may find several explanations for the results we obtained. Family medicine in transitional countries mostly serves to refer patients to specialist and subspecialist health care, as it has been doing for decades before the transition (24). This fact can be linked to some already known facts about the frequent attender: the frequent attender consumes health care on two levels (primary and secondary), undergoes more unnecessary specialist examinations, and receives more unnecessary prescriptions. All this increases the number of visits to family practice offices. Consequently, the patient loses her or his trust in the family physician, insists on being referred to a specialist, and the family physician solves the problem of the frequent attender by complying and “referring him or her further” (9,10,25).

Another reason for a higher number of frequent attenders in Croatia could be found in the studies showing that what stands between the patient and a physician is the disease. Patient’s and physician’s expectations from the visit are different. The patient usually assesses his or her condition as more serious than the physician does, and perceives a fewer number of procedures performed by the physician than the physician does, ie, the patient perceives 2.5 procedures performed by physician compared with 3.5 procedures perceived by the physician (5). In a family practice office in Croatia, where health care system is oriented toward specialist care and characterized by 60% of frequent attender visits, a visit is short, includes few procedures, and patient’s expectations from the visit are lower (3,5,25,29). It has been shown that a patient assesses the role of a family physician on the basis of his or her previous experience with the content of the visit (5). If the family physician has not really solved any of the patient’s health problems, the patient will seek health care on a specialist level.

Further reason for a greater proportion of frequent attender visits in Croatia as found in our study can be partly explained by still felt consequences of the recent war, because the years when our study was performed were characterized by the increase in psychosomatic and socio-economic factors contributing to the increase in the number of frequent attender visits (7,8,10,27).

As other studies, we did not find any significant differences between frequent and non-frequent visits according to the patients’ age in both sexes (8-10,28).

The results of studies analyzing the upper 3% of frequent attenders according to age and sex show that there are more frequent attenders among older age groups and among women (11,28). Recent research has imposed the need for a redefinition of the frequent attender and frequent attender visit, and application of more sophisticated statistical methods in the analysis of this problem (11).

There are few follow-up studies in frequent attenders that lasted longer than one year. The proportion of frequent attenders during the three years of our study was large, almost 40%. We found that 19% of patients were frequent attenders for two years and 8% of them for three years. Ward et al (12) analyzed two periods in two consecutive years and identifies 22% of frequent attenders who make a very high number of visits in both of the observed periods. The patients were diagnosed with chronic cardiac diseases and hypertension and belong to an older age group. Another follow-up study that lasted for 20 years found that after 5 years, the majority of frequent attenders returned to a standard number of visits (13). Neal et al (19,21) suggest that family physicians need strategies to help them deal with long-term frequent attenders and those making a very high number of visits. If the majority of frequent attenders revert to normal attendance in a year, the mentioned strategies will not be necessary. Since chronic illness appears to be the major cause of frequent visits perhaps it is the strategies for chronic disease management that will relieve the problem (21,28). The methodology of determining a frequent attender according to the number of visits per age-sex groups and quartiles revealed another valuable parameter – coverage of patients by the family practice office. It is well known that the number of visits to physician’s office influences the number of frequent visits. Family practice offices with more visits have more frequent visits (18-20). However, the literature does not state whether frequent visits influence the coverage of patients.

The small coverage of patients by family practice can be caused either by the unavailability of the family practice (mostly, inability to make an appointment), or the fact that patients avoid it because they do not receive health care of the adequate content (29,30). In transitional countries, both the physician and the patient sometimes find themselves “outside” the health care system and insurance (25). Since the consequences of war are still felt in Croatia, the small coverage may be explained by the refuge and migrations caused by the war (27). Without a detailed analysis of causes and consequences, it is difficult to reach any plausible conclusion. In Croatian health care system, unfortunately, a frequent attender is equally deprived as the patient that does not seek family physician services at all.

Although the aim of our work was not to analyze the association between the coverage of patients and the frequent attender visits, we may speculate that the “overload” of physicians due to frequent visits decreases the physician’s availability to other patients, and thus decreases the overall coverage of patients. However, this assumption should be further investigated.

The main limitations of our study were the circumstances in which it was carried out, ie, transitional health care system and postwar period, which can both influence the number of visits, as it has been shown by previous research (21,26,27). Thus, the in-
creased number of frequent visits identified in our study must be interpreted only in the context of transition and postwar circumstances.

References


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