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# Analysis of Senior Population Visits to Physical Medicine in Croatia

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## ABSTRACT

*The aim of the study was to analyze the senior population when deciding to choose either going to the private or public physical medicine practice in Croatia. 240 patients (public and private group, 120 participants each) from the Croatian medium large county Primorje–Gorski kotar, were enrolled from 6 physical medicine practices (3 public and 3 private). Between December 1<sup>st</sup> 2009 and January 31<sup>st</sup> 2010, in the public and private practices seniors aged 65 to 85 years were 64.17%, 52.40% respectively, of all interviewed participants in single group. The results showed that in Croatia majority of seniors visiting the physical medicine were females in revisit and dependents of government health insurance. Study suggested the great influence of: general practitioner, closeness to home and time of the appointment for patients going to public physical medicine, while in private peers and sooner appointment outweigh. In either practice seniors were satisfied with the overall quality of health services and graded the best average-higher in favor for the private. Elderly Croatian residents showed to be the important feature in physical medicine and rehabilitation and to participate actively in their health issues. Following those results, we will perform the study in the rest of the country and compare it to this data. That could enable the specific improvement for the health care of seniors in Croatia.*

**Key words:** senior population, physical medicine and rehabilitation, private and public medical practice, Primorje – Gorski kotar County, Croatia

## Introduction

The healthy aging is a worldwide trend. National strategies are established for health promotion and disease prevention due to the overgrowing elderly population, like program Healthy People 2020 in USA<sup>1</sup>. Indeed, the Croatian population is very old. The population over the age 65, in 2004 reached 16.64%, and by the year 2025 elderly population will probably reach more than 30%<sup>2,3</sup>. The number of seniors with acquired functional deficits, comorbidities or living alone in single-person household rises<sup>4</sup>, therefore resulting in decrease of activity and participation. Engagement in regular physical exercise showed to lower risk of health-related incidents in seniors<sup>5,6</sup>.

The Primorje-Gorski Kotar County is one of medium large in Croatia, with coastal, mainland and island areas. Population of 305,505 residents inhabited in 2001. Of these 16.19% aged 65 and older<sup>7</sup>. Similar to rest of medical practices in Croatia, the private and public physical medical practices are financed through: private health insurance, private investments and/or directly by pa-

tients; and government health care budget and compulsory health insurance or national public health fundings, respectively<sup>8</sup>. Patients' direct payments in the public practice are insignificant.

The purpose of the study was to analyze the senior population when deciding to choose either going to the private or public physical medicine practice in Croatia.

## Subjects and Methods

### Subjects

In total, 240 participants were included in the study: 120 participants from the public- and 120 from the private physical medicine practice. In 2010, coexisted 5 private and 13 public medical practices providing physical medicine and therapy<sup>8</sup>. Participants were chosen randomly from the sample groups: 1. public and 2. private practices in the Primorje–Gorski Kotar County. Each

sample group consisted of 3 representative practices. Private physical therapy practices run by physiotherapist or other allied professionals were excluded. Only private practices with physical and rehabilitation medicine (PRM) specialist/-s were included. Therefore equal to the public practices, in which physiotherapists are always in close collaboration and mentorship with the PRM specialists. Subjects were provided with information on the study and signed consent was requested. Additionally, participants were asked to fill in the questionnaire, while they were in the waiting room either for the check up or for the physical therapy. Fieldwork was conducted between December 1<sup>st</sup> 2009 and January 31<sup>st</sup> 2010. The questionnaires were delivered and data collected in person. Two patients from the private practice, refused to participate in the study and none from the public. Next two random patients agreed to join the study.

### Questionnaire

The questionnaire fulfilled all required structure for the statistical data analysis and was designed solely for the purpose of the study. The questionnaire was composed of the three sections: 1. general/patients data (5 questions/multiple choices); 2. attitudes of the participants towards the personnel and practice (6 statements and 3 questions); 3. grading the quality of consumed physical therapy and medical assistance (4 statements and 4 questions). In the second and third section, a Likert scale was used for grading from 1 – insufficient to 5 – excellent.

### Statistical analysis

Descriptive statistics were performed for the analysis of descriptive data. Questions varied in quantity and quality, moreover consisted of open and close variants (dichotomy, multiple choices, scales grading). The relationships of practice's characteristics and other variables were studied, and the regression procedure resulted only on the factors which achieved statistical significance ( $p < 0.05$ ). Statistical analyses were made using the Statistical Package for the Social Sciences (version 15, SSPS inc., Chicago, IL, USA)

## Results

### General data

In the public and private medical practices 64.17% and 52.40% of all participants respectively, were senior participants aged 65 to 85 years. In both practices, none of participants were older than 85 years. Furthermore, in compared to males, females visited both practice more (65.83% in public and 58.33% in private) and were superior in public.

### Characteristics of visits

About a third of participants (37.50% in public vrs. 32.50% in private practice) visited practice for the first time. Thus, the majority (public 62.50%; private 67.50%)

came for the revisit, i.e. check up and follow up. In addition to, the reasons are shown in Figure 1. The main intention of the visit in public practice was check up and physical therapy (30.00%), in contrast to private, where was service satisfaction (27.50%). Some participants skipped or left unanswered (39.17% public; 36.67% private). The participants identified three crucial reasons for choosing the practice: in public – recommendation of general practitioner, proximity to the household and getting sooner appointment; in private – recommendation of friend, acquaintances or family; getting sooner appointment and by chance (Figure 2).

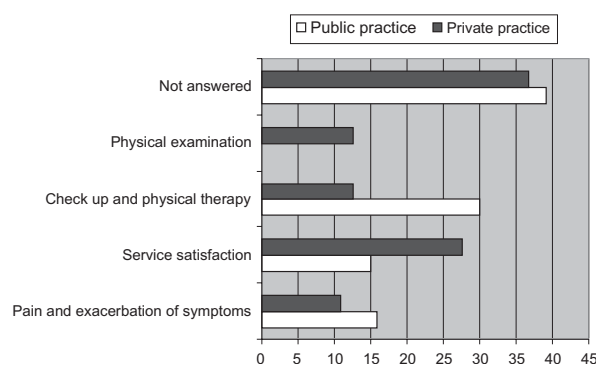


Fig. 1. Participants' reasons for the revisit.  
Data shown as percent.

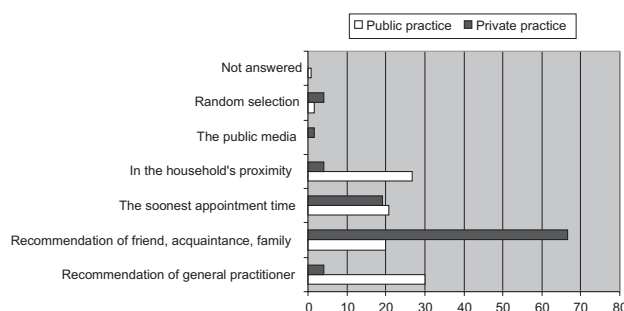


Fig. 2. Participants' reasons for choosing the practice.  
Data shown as percent.

### Grading of the medical practice

The participants graded nearly equal either practices, thus the private better with statistical significance, in category of PRM specialist quality characteristics: 1. kindness, 2. cordiality, 3. communication, 4. professionalism and 5. proficiency (public 4.92 vrs. private 4.98,  $p = 0.031$ ). The same trend was observed in grading the nurses (public 4.67 vrs. private 4.87,  $p = 0.011$ ) in the same quality characteristics, as well the physiotherapists (Figure 3).

The greater part of participants (80%) in both practices, were satisfied with the provided physical medicine service. About 65% of the participants from public practice were satisfied with the waiting room interior, whe-

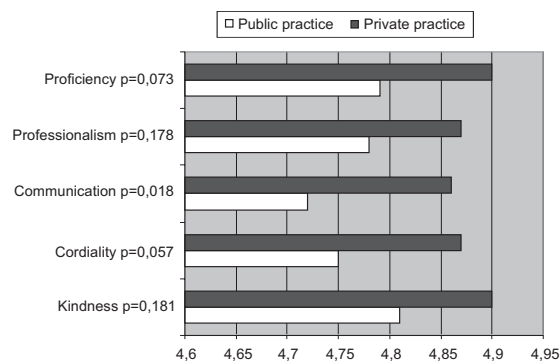


Fig. 3. Participants' grades of the physiotherapists' quality characteristics. Data are shown as average grade and p-value.

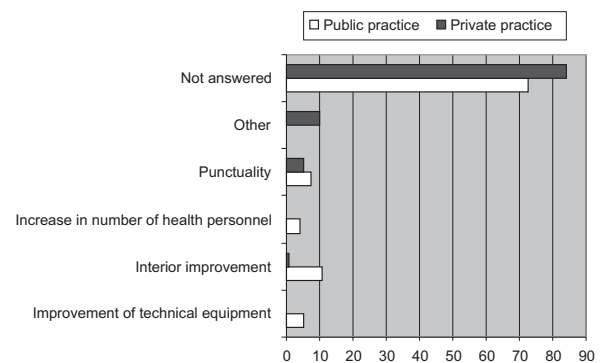


Fig. 4. Participants' suggestions for the improvement of the health services quality and inter-personnel rapport.

reas roughly all from private (97.50%). Also, those who were unsatisfied named rusty interior for the main reason. At the time of the interview, waiting period for the physical therapy after administration was in public max. 15 days for the about 83% of participants, and max. 10 days for all in private. When the overall quality of health services was graded the both practices received best average grades (4.69 public vs. 4.91 private,  $p < 0.001$ ). Though, the evaluation was statistically more favorable for the private practice, whose all participants were almost completely satisfied. The participants' proposals for the quality improvement of health service and interpersonal relationships are shown in Figure 4.

## Discussion

Since the majority of participants in both study groups, public and private, were older than 65 years, we believe a representative sample was achieved, and relevant conclusion about seniors' visits to physical medicine in Croatia could be extrapolated.

Our results correlate, as we anticipated, with the demographic characteristics of Croatian population, which is very old and predominantly female. This is the year of Croatian citizen census update, the collection data are still in process of analysis and the numbers would be probably higher<sup>7</sup>. Moreover, traditionally in Croatia, females tend to run the household and take care of children, thus in the same time work full time, resulting in no spare time and lack of rest. Additionally, degenerative changes in musculoskeletal systems like osteoarthritis are the leading cause of pain in general practitioner practice<sup>11,12</sup> and are advanced beyond the age 40<sup>13–15</sup>. Our participants mostly go to physical medicine for the revisits in either practice. In public practice, those are check up and physical therapy, presumably, consequences of chronic recurrent degenerative diseases. Contrary, in private practice the service satisfaction attracts most of the patients. However, the overall quality of health services and personnel grading (PMR specialist, nurse and physiotherapist) was graded the best average in both practices and in favor for the private. In our opinion, changes in the organization of public practice e.g. punctuality,

longer visit duration, would result in equal service satisfaction in both practices. In this study, the participants identified three crucial reasons for choosing the either practice (Figure 2). Participates visiting the public practice showed, first to believe in general practitioner's opinion, than look for the practice in the household's proximity and finally they want to resolve the health issue as soon as possible. The influence of peers i.e. friends, acquaintances or family showed to be the most relevant in private practice. However, it follows the ability to get the sooner appointment and random selection of practice, which give rise to the further investigation study.

Study results showed the surprisingly short period for waiting to the physical therapy in either practice. We believe this is correct for the private practice. Since there are no available published data for the period of waiting for the physical therapy, according to our work experience in public practice, this is usually even longer. Sometimes lasts up to 4 to 6 weeks or somewhere for more months. The question arises whether this result reflects the general trend in Croatia or it reflects solely Primorje-Gorski kotar County.

Higher portion of older females in public physical medicine practice does not surprise, knowing the socioeconomic status of retired population. The financial support for the older participants in the private practice needs to be discussed, whether is patient's savings, children and/or siblings payment support or adequate pension due to the single household.

Our results were similar to the global population trends<sup>4</sup> and transition in the global market of health services in past few decades. Adjustment in the range of services is crucial for the new situation of continuous extension of life expectancy<sup>7,8</sup>, therefore providing some new services and health facilities. In developed countries there is the higher prevalence of elderly population, including the growing number of small families with a few members and full time employment of each family member capable for work. Furthermore increasing number of employed females and the more active lifestyles of the elderly<sup>4</sup> bring the need for opening the hospices and rehabilitation centers, as well as the combined ones. These facilities would provide quality health care and attention

for the elderly<sup>8</sup>. Recently, those trends are observed in the Croatian health system. Therefore the initiative for the implementation of palliative care system and hospices has been developed and opinion poll confirmed the idea<sup>9,10</sup>.

## Conclusion

In Croatia, senior population, predominantly females, showed to be majority of patients visiting the public or private PMR practices, mostly for the revisit. General practitioner and location of the practice seem to influence the patient's choice for visiting the public practice. While in private, peers and sooner appointment out-

weigh. The satisfaction of overall quality of health service and personnel grading (PMR specialist, nurse and physiotherapist) are the best average in either practices, though higher in private.

Elderly Croatian residents are important feature in physical medicine and rehabilitation and participate actively in their health issues. They rate the qualities of either practice above average and due to economic factor visit private practice less. This study was subset of planned larger for the whole country. Therefore, the further step is to analyze the rest of the country and to identify the main etiological reason/s to visit physiatrist and to compare it to our data.

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## ANALIZA POSJETA STARIJE POPULACIJE U ORDINACIJAMA FIZIKALNE MEDICINE U HRVATSKOJ

### SAŽETAK

Cilj ovog istraživanja bio je analiza odluke osoba starije životne dobi pri odabiru posjete javnoj ili privatnoj ordinaciji fizikalne medicine u Hrvatskoj. Uključeno je 240 pacijenata (po 120 sudionika u javnoj i privatnoj skupini) iz 6 ordinacija fizikalne medicine (po 3 javne i privatne) s područja Primorsko-goranske županije, srednje po veličini u Hrvatskoj. U vremenu od 01. prosinca 2009. do 31. siječnja 2010, starija populacija od 65 do 85 godina, činila je 64,17% u javnim i 52,40% u privatnim ordinacijama, od ukupnog broja sudionika u svakoj skupini. Dobiveni rezultati ukazuju da u Hrvatskoj u posjetama ordinacijama fizikalne medicine većinu osoba starije životne dobi čine žene, korisnice državnog zdravstvenog osiguranja, u ponovnom posjetu. Istraživanje otkiva veliki utjecaj: obiteljskog liječnika, blizine mjestu stanovanja i vremena termina u odabiru odlaska u javne ordinacije, dok za privatne prvaže preporuka istomišljenika i raniji termin. U obje ordinacije osobe starije dobi bile su zadovoljne s općom kvalitetom zdravstvene usluge i ocjenile su ih iznad prosječno – bolje u korist privatnih. Starije hrvatsko stanovništvo pokazalo se važnim čimbenikom u fizikalnoj medicini i rehabilitaciji, te aktivnim sudionikom u rješavanju njihovih zdravstvenih problema. Slijedeći ove rezultate, provest ćemo istraživanje u ostatku države i usporediti ih s ovim podacima, što će omogućiti ciljano poboljšanje zdravstvene skrbi osoba starije dobi u Hrvatskoj.