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ACCESS TO HEALTH CARE AND THE OUT-OF-POCKET BURDEN OF THE EUROPEAN ELDERLY

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Abstract

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Provision of access to health care is a desirable feature of health care systems. Access to health care is caused to be restricted whether out-of-pocket burden is too high. The paper focuses on the European elderly with restricted access to health care and evaluates their health care burden and determines factors affecting the burden. The data from the Survey of Health, Ageing and Retirement in Europe from the fifth wave is used. The methods of descriptive and multivariate analysis are applied. A linear regression model with a bootstrapped method is used. The results showed that inequalities in access to health care exist. Unmet need is a critical issue in Estonia and Italy. The highest burden is found in Estonia, Italy and Belgium. Chronic diseases and limitation in activities significantly contributes to health care burden. Expenditure on drugs, outpatient and nursing care have a significant effect on the burden. The effect is found to be insignificant for inpatient care. Income and the employment status is a preventing factor.

Keywords: elderly, unmet need, health care, out-of-pocket payments, access to health care, health care burden, SHARE

INTRODUCTION

Access to health care is recognized as one of the basic principles of many health care systems in developed countries (EC, 2010; Terraneo, 2014; Devaux, 2013) and a key dimension of social inclusion (Jürges, 2015). Equity in health care is defined as equal access to available care for equal need, equal utilisation for equal need and equal quality of care for all (Whitehead, 1991). In other words, people should have access to health care without any barriers. It means not only without financial barriers (insufficient income) but also without geographical, time and other barriers (such as age, race, gender, education) (Whitehead, 1991; Gutmann, 1981). Even if most countries aim at provision of an equal access to health care, many studies proved that equal access to health care services is not always achieved (Terraneo, 2014; Devaux, 2013; Koolman, 2007).

Access to health care shall be explored from the point of view of financial reasons, long waiting times, health care provider network, fear of treatment, etc. (see for example Koolman, 2007). Nevertheless, this paper focuses only on financial access to health care – a restriction of access to health care due to financial reasons is explored. People do not meet their need for health care as a reason of price of health care they have to pay. The decision about the amount of demanded care is defined as a function of income determining how much we are willing and able to purchase (Murray *et al*., 2000). Even in countries with universal coverage, some out-of-pocket payments (OPP)[1] are implemented,

1 Out-of-pocket payments (OPP) are defined as payments of individuals (health care consumers) paid directly out of their pocket (directly from their budget) for health care services which are partly of fully exempted from generally agreed and covered health care package. Out-of-pocket payments include direct payments for health care not covered from any prepaid scheme (health insurance, taxes) and copayments (coinsurance, deductible) for partly prepaid and covered health care services (also known as cost sharing).

thus, individuals (households) have to spend a part of their budget on health care. Many studies showed that out-of-pocket payments are the most regressive way of spending for health care (Saltman and Figueras, 1997; Võrk *et al*., 2010; Hopkins and Cumming, 2001; Arhin-Tenkorang, 2001; Yardima *et al*., 2010; Xu *et al*., 2009). Therefore, individuals (households) with lower income are more sensitive to the price of health care and access to health care is caused to be restricted (WHO, 2004). In combination with other characteristics such as age and presence of chronic illness, cost sharing might cause financial barriers to consume care. Whether income and health status are positively correlated, low-income consumers are influenced the most (Hopkins and Cumming, 2001).

A number of studies showed that the most vulnerable groups are the elderly (especially people over age 65) (Hong and Kim, 2000; Yardima *et al*., 2010; De Graeve *et al*., 2006; Habicht *et al*., 2006; Klavus and Kapiainen, 2008; Economou, 2010; Xu *et al*., 2009). For obvious reasons (with an increasing age the health condition decreases and older individuals tend to consume more health care services), the elderly face higher out-of-pocket payments and spend a higher share of their income than households with younger and economically active members (Berki, 1985; Rasell *et al*., 1994; Wyszewianski, 1986). On the top of that, the studies also determined as vulnerable groups the unemployed, single households (especially pensioners), disabled, chronically ill members and low-income households (Võrk *et al*., 2010; Xu *et al*., 2009).

Whether out-of-pocket payments reach a particular extent which endangers the household's ability to maintain its customary standard of living (Berki, 1986), it can result in pushing households into the poverty and/or postponing or preventing households from access to health care.

With reference to what was mentioned above, it is worth paying attention to elderly people especially. Not only the characteristic of being elderly per se is risky but also the combination of other characteristics such as higher morbidity, presence of chronic illnesses and low income (as a result of economic inactivity in retirement age) determine them as the most vulnerable group. Whether the elderly forgone health care consumption due to health care costs, the issue should be a subject of a deeper analysis and a more detailed discussion not only at the research/academic level but also at the level of policy makers.

This paper focuses only on the elderly with unmet need for health care (restricted access to health care), in other words, on the most vulnerable from the most vulnerable. The objective of the paper is to evaluate the burden of the elderly with restricted access to health care in the selected European countries and to determine factors affecting their burden.

MATERIALS AND METHODS

Used Data

The data from the fifth wave of the Survey of Health, Ageing and Retirement in Europe (SHARE) is used (Börsch-Supan, 2015). SHARE is a unique survey focusing on people aged 50 and older. SHARE contains micro-level panel data of economic, social and health factors that accompany and influence ageing processes (Börsch-Supan *et al*., 2013). In wave 5, 14 European countries are covered (Austria, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Italy, Netherlands, Slovenia, Spain, Sweden, Switzerland, Luxemburg). Besides others, an extensive health care module is integrated in the fifth wave which allows international comparisons in two areas: health care utilization (in the last 12 months), including unmet need, and health insurance coverage and out-of-pocket expenditure (Malter and Börsch-Supan, 2015). The target population are persons born in 1962 or earlier, and persons who are a spouse/partner of a person born in 1962 or earlier (all households with at least one member belonging to the target population of individuals). To collect the data, so called CAPI (computer-assisted personal interviewing) was used. The fifth wave of survey was conducted in 2013 and the fieldwork was completed in November 2013. The survey is based upon probability samples with full population coverage. All the methodological aspects related to the SHARE survey are discussed in Börsch-Supan *et al*. (2013) and special methodological issues related to wave 5 in Malter and Börsch-Supan (2015).

Methods

The analysis includes only individuals aged 50 and more with at least one type of unmet need due to financial burden (N = 5862). SHARE includes three variables based on subjective evaluation of the restriction of access to health care. The respondents were asked:

- Was there a time in the past 12 months when you needed to see a doctor but could not because of cost? (unmet need for doctor visit)
- In the last twelve months, to help you keep your living costs down, have you postponed visits to the dentist? (unmet need for dentist)
- In the last twelve months, to help you keep your living costs down, have you gone without or not replaced glasses you needed because you could not afford new ones? (unmet need for glasses)

Firstly, an overview of the seriousness of unmet need according to a type of unmet need among European countries is briefly discussed.

Secondly, the burden of the elderly with unmet need is explored and compared among countries. The burden of elderly is defined as a share of equalized income spent on a particular type of health care services. Equalized income is adjusted by household size. The burden is analysed separately

for each type of health care service (inpatient care, outpatient care, drugs, nursing care including home care). Differences in means of the observed continuous variables between countries are tested using the method of one-way ANOVA (analysis of variance). Robust tests of equality of means (Welch and Brown-Forsythe) are performed (Field, 2013). As a part of descriptive analysis, equalized income quintiles are constructed. Other descriptive statistics are available on request.

Finally, several regression models are run in order to determine the factors affecting the health care burden of the elderly with unmet need. The dependent variable expressing the health care burden of individuals with unmet need (OPP_burden) is used. According to the theory and previous research, the explanatory variables which could have an effect on the burden are included. Various models combining various explanatory variables are run and their goodness of fit is compared. I tried to incorporate explanatory variables determining age and gender but all of them were found insignificant, therefore, they are excluded from the final model. Health status is found to be correlated with limitation in activities (obviously because of health status). Therefore, I decided to include in the model the variable of limitation in activities and number of chronic disease as the model showed improvement.

The following basic socio-economic characteristics are included in the final model: current job situation (retired; employed or self-employed; unemployed; permanently sick or disabled; homemaker; other), marital status (married, married but separated, never married, divorced, widowed), education (lower, secondary and higher), household size and household income. As a proxy for health care need I dealt with health variables such as number of chronic diseases (chronic) and limitations with activities because of health condition (limited and not_limited). In order to distinguish the effect of each type of health care expense, I included the variables of out-of-pocket payments for inpatient care (inpa_OPP), outpatient care (outpa_OPP), drugs (drugs_OPP) and nursing care (nursing_OPP). Constructing the model it is important to take into account that access to health care and the out-of-pocket burden of the elderly are strongly influenced by health care, social and legal system in each country. Furthermore, traditions, customs and social values can be different in each country. In order to cope with these differences, the dummies for each country were included as a proxy for different policy and social framework. The final model is as following:

$$\begin{aligned} OPP\_burden_i = {} & \alpha + \beta_1 income_i + \beta_2 household\_size_i + \\ & \beta_3 job\_situation_i + \beta_4 marital\_status_i + \beta_5 education_i + \\ & \beta_6 limitation\_activity_i + \beta_7 chronic_i + \beta_8 inpa\_OPP_i + \\ & \beta_9 outpa\_OPP_i + \beta_{10} drugs\_OPP_i + \beta_{11} nursing\_OPP_i + \\ & \beta_{12} country_i + \varepsilon_i, \end{aligned} \quad (1)$$

The assumptions of the linear regression model were tested. As a result of violation of the assumption of normality and homoscedastic residuals – usual problem with health expenditure data, the method of bootstrapping was used. This method enables to derive robust estimates of standard errors and confidence intervals for estimates of regression coefficient (Field, 2013). The software IBMP SPSS Statistics has been used for data processing.

I: *Share of the elderly with unmet need for health care in the selected countries.*

Country	unmet need			
	doctor	dentist	glasses	total
Denmark	0.5 %	4.0 %	2.6 %	5.3 %
Switzerland	1.3 %	3.3 %	3.3 %	6.1 %
Austria	1.6 %	4.2 %	4.1 %	7.3 %
Sweden	0.9 %	4.4 %	4.3 %	7.6 %
Luxembourg	3.0 %	4.0 %	4.4 %	7.7 %
Netherlands	1.5 %	4.2 %	5.5 %	8.2 %
Belgium	3.1 %	5.3 %	5.5 %	9.6 %
Czech Republic	3.9 %	7.3 %	5.9 %	11.9 %
Germany	4.3 %	6.0 %	7.5 %	12.6 %
Slovenia	1.1 %	5.2 %	11.6 %	14.0 %
France	4.0 %	8.6 %	8.5 %	14.3 %
Spain	3.9 %	16.5 %	13.4 %	22.1 %
Italy	10.7 %	20.6 %	17.7 %	28.8 %
Estonia	17.0 %	35.1 %	25.9 %	45.2 %
Count	6305739	8533679	8070211	13405799
% within Country identifier	5.0 %	10.4 %	9.9 %	16.4 %

Source: SHARE, 5th wave, own calculations

RESULTS

The results demonstrate that financial constraints in access to health care exist (see Tab. I). On average, 16.4 % of the population of elderly reported at least one type of unmet health care need. The most serious type of health care service is unmet need for dentists (10.4 %) and glasses (9.9 %). The share of the elderly with unmet need ranges between countries from 5.3 % of the elderly in Denmark to 45.2 % of the elderly in Estonia. The highest share of the elderly for all types of unmet need is in Estonia. The second highest share is in Italy both in a cumulative way and according to each type of unmet need. Spain is on the third place with the exemption of unmet need for doctor services (higher unmet need for doctor visits is in Germany and France and the same level is in the Czech Republic).

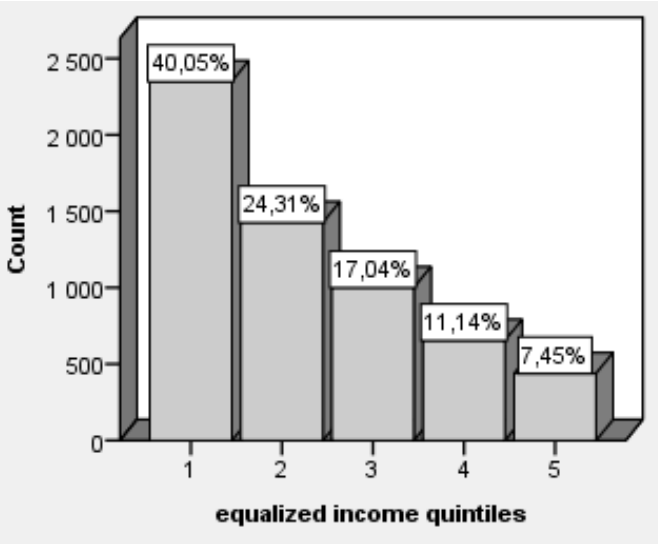
The results confirm that restriction of access to health care is not any negligible issue. Therefore, further attention is paid only to the elderly with unmet need. It is expected that the elderly facing unmet need (caused by financial reasons) have some budget constraints. Fig. 1 shows a share of the elderly with unmet need according to equalized income quintiles. It is obvious that these elderly come from the poorest quintile (40.05 %). Thus, the low income is a characteristic of the elderly with unmet need.

Fig. 2 offers a different picture and shows some noticeable differences between countries. In countries such as Spain, Italy, the Czech Republic, Slovenia and Estonia the elderly with unmet need are the poorest elderly (the majority from the first income quintile). Except Italy the number of the elderly from the richest quintile is very low. On the contrary, in Luxembourg and Switzerland the majority of the elderly with unmet need is from the richest quintile. In other countries mostly the third and fourth income quintile is predominant. What is to derive from these differences?

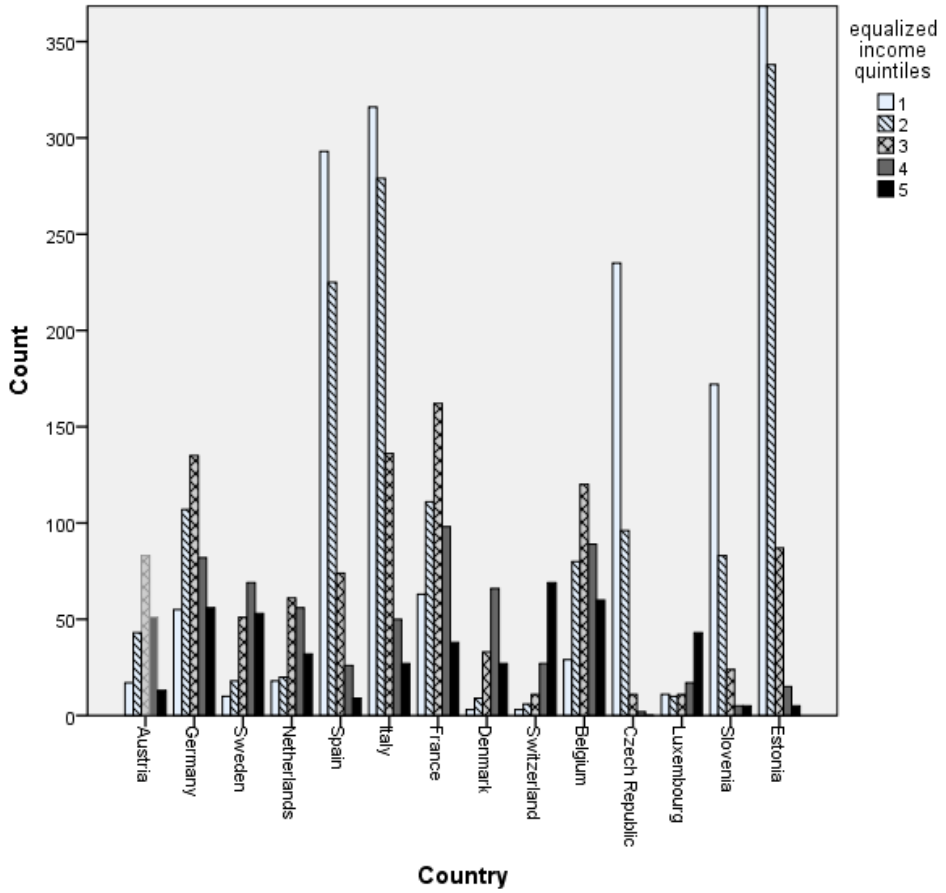
Obviously, further research on country specifics is necessary, however, it seems that in the countries represented by the richest elderly with unmet need the protection from high out-of-pocket payments (exemption from cost sharing, extensive insurance programme, etc.) is targeted better at the poorest elderly especially.

Tab. II presents the burden of the elderly with unmet need. The average out-of-pocket burden is 5.92 %. Comparing between countries the elderly from Italy (10.04 %), Estonia (7.64 %) and Belgium (7.32 %) face the highest burden. The rest of the countries are below the average. The lowest burden is found in Slovenia (1.76 %), the Netherlands (2.06 %) and Denmark (2.34 %). Looking at the value of standard deviation it is evident that there are huge differences within countries. Nevertheless, such differences were expected as this paper focuses on the elderly with unmet need as a vulnerable group.

From the point of view of health care type burden the highest burden is caused by outpatient care (3.31 %), however, the average burden is strongly influenced by the outpatient burden in Italy (6.02 %). The elderly in Estonia spent the most on drugs (5.71 % versus 1.73 % on average) followed by Belgium with 3.09 %. Belgium also showed the highest burden for nursing care (1.81 % versus 0.77 % on average). Inpatient care burden is the least important among countries (0.11 % on average); the highest inpatient burden was found in Belgium (0.59 %) and the second highest in the Czech Republic (0.35 %). In other countries, the average inpatient care burden is low with almost no burden in Estonia, Spain and Slovenia (all 0.02 %). This is a positive result as inpatient care belongs to a type of health care which is considered as specialized care with justified necessity of treatment.



1: *Equalized income quintiles of the elderly with unmet nee*
Source: SHARE, 5th wave, own calculations



2: *Equalized income quintiles of the elderly with unmet need according to the countries.*
Source: SHARE, 5th wave, own calculations

II: *The out-of-pocket payment burden among European elderly with unmet need (in %).*

Country	OPP_burden		outpatient_ burden		drugs_burden		inpatient_burden		nursing_burden	
	mean	st. dev.	mean	st. dev.	mean	st. dev.	mean	st. dev.	mean	st. dev.
Italy	10.04	18.45	6.02	13.16	2.86	4.13	0.02	0.62	1.14	11.22
Estonia	7.64	9.73	1.63	4.05	5.71	7.62	0.13	0.74	0.17	2.08
Belgium	7.32	8.87	1.84	2.84	3.09	3.75	0.59	2.38	1.81	5.15
Austria	5.46	11.69	2.82	9.49	1.36	2.70	0.30	1.68	0.98	4.51
Spain	5.22	11.18	3.07	9.81	1.67	2.44	0.02	0.34	0.48	4.35
Czech Republic	4.58	6.24	1.47	3.00	2.68	3.77	0.35	2.12	0.08	0.95
Luxembourg	4.55	6.62	3.19	6.00	1.10	1.56	0.10	0.40	0.17	0.68
Switzerland	3.78	6.27	2.69	4.69	0.81	1.79	0.16	0.67	0.12	0.62
Germany	3.40	7.40	1.71	4.91	0.88	1.31	0.25	0.99	0.57	4.83
Sweden	3.02	4.53	1.43	2.11	0.84	0.92	0.18	0.93	0.57	3.24
France	2.95	6.88	1.54	5.21	0.56	1.19	0.10	0.74	0.75	3.85
Denmark	2.34	3.68	1.07	2.26	1.06	1.56	0.07	0.78	0.14	0.83
Netherlands	2.06	3.52	0.87	1.82	0.63	1.58	0.08	0.77	0.47	1.77
Slovenia	1.76	6.99	0.97	4.48	0.53	1.42	0.02	0.40	0.24	4.76
Total	5.92	12.94	3.31	9.43	1.73	3.11	0.11	0.84	0.77	7.27

Source: SHARE, 5th wave, own calculations
Note: the differences in the mean between countries are statistically significant at $p < 0.05$; tests available on request

The results of regression analysis are presented in Tab. III. It was found that an increasing number of chronic diseases (0.264 p.p., $p < 0.01$) and some limitations in activities because of health status (0.506 p.p., $p < 0.05$) increase significantly the burden of the elderly with unmet need for health care. Regarding health care variables in the model, out-of-pocket payments for drugs contributed the most to the burden of the elderly. With each 100 Euro of health care payment the burden increases by 1.5 p.p. (0.015 p.p.; $p < 0.01$). Contrarily, out-of-pocket payments for inpatient care do not have any significant influence on the burden.

The household size is the other factor increasing the burden of the elderly. If the number of household members increases by one member the burden increases by 2.059 p. p. ($p < 0.01$). The marital status found to be significant. Comparing to individuals living in a marriage with a spouse the individuals who were never married or were divorced faced a significantly higher burden. Other important factors to explore are income and current job situation. The results showed that with an increasing income the burden of the elderly decreased. A working status is a preventing factor and protects from a high burden – employed/self-employed

III: *Factors affecting the burden of the elderly with unmet need.*

Explanatory variables	B		95 % Confidence Interval	
			Lower	Upper
(Constant)	–2.706	**	–4.602	–0.813
income in thousand eur	–0.030	**	–0.042	–0.022
household size	2.059	**	1.627	2.529
employed_selfemployed	–0.798	**	–1.336	–0.170
unemployed	–0.173		–0.895	0.728
sick_disabled	–0.276		–0.933	0.523
homemaker	0.767		–0.157	1.880
other	–0.759		–1.719	0.317
married_separated	1.167		–0.739	2.804
never_married	0.878	*	–0.008	1.519
divorced	0.834	*	0.071	1.434
widowed	0.753		–0.104	1.821
chronic	0.264	**	0.112	0.419
not_limited	–0.506	*	–0.914	–0.049
inpa_OPP	0.003		–0.001	0.008
outpa_OPP	0.010	**	0.009	0.012
drugs_OPP	0.015	**	0.012	0.018
nursing_OPP	0.009	**	0.007	0.014
higher education	–0.720	*	–1.339	–0.209
secondary education	–0.198		–0.582	0.302
Austria	–1.452		–2.960	–0.280
Germany	–1.293	*	–2.319	–0.262
Sweden	–2.145	**	–3.193	–1.192
Netherlands	–1.153	*	–1.951	–0.184
Spain	–1.093		–2.320	0.184
France	–1.173	*	–2.233	–0.009
Denmark	–2.244	**	–3.289	–1.167
Switzerland	–3.229	**	–5.135	–1.288
Belgium	–3.168	**	–4.868	–2.149
Czech Republic	0.578		–0.389	1.477
Luxembourg	–8.169	**	–11.570	–5.140
Slovenia	–0.959		–2.100	–0.016
Estonia	2.744	**	1.830	3.708

Source: SHARE, 5th wave, own calculations
Note: $R^2 = 0.56$; significance level at * 5 % ** 1 % ; with 95 % bias corrected confidence intervals
Reference categories: retired; living in marriage or registered partnership; limited; lower education; Italy.

individuals had a lower burden by 0.798 p.p. than retired individuals ($p < 0.01$). Education found to be important as well. Individuals with higher education were more protected from a high burden comparing to individuals with lower education.

The dummies for each country were incorporated in the model as a proxy for differences in country's social and policy framework. Comparing to the reference category (Italy) being from Estonia increases burden by 2.744 p. p. ($p < 0.01$). The results for Austria, the Czech Republic, Spain and Slovenia were found to be insignificant. The individuals from remaining countries are much better protected from a high burden than individuals from Italy and Estonia. It seems that the best protected were the elderly with unmet need from Luxembourg (– 8.169; $p < 0.01$).

DISCUSSION

It was shown that inequalities in access to health care exist and that the differences in the out-of-pocket burden widely differ. A question arises if only the level of out-of-pocket payments matters?

Tab. IV demonstrates that the share of out-of-pocket payments does not necessarily have to correlate with the burden. Even if the share of out-of-pocket payments is the highest in Switzerland according to the presented findings it seems that health care services are accessible for Swiss elderly.

On the contrary, the share of out-of-pocket payments is high in Spain, Belgium, Estonia and Italy and the level of out-of-pocket payments corresponds to the level of unmet need and related burden. A high level of unmet need due to high out-of-pocket payments was also indicated for individuals over 18 years old from these countries by the results from Survey of Income and Living Conditions (see Koolman, 2007).

In Estonia and Belgium various copayments (user charges) and supplements for health care services are a common part of the health care system. Previous research was done in the field of access to health care and out-of-pocket burden. The vulnerable groups were defined and recommendations were drawn for policy makers in order to improve protection and access to health care (for Belgium see De Graeve *et al.*, 2006, Schokkaert *et al.*, 2008, Gerkens and Merkur, 2010; for Estonia Habicht *et al.*, 2006, Koppel *et al.*, 2008, Võrk *et al.*, 2010, Thomson *et al.*, 2011). Nevertheless, it seems that space for improvement still persists.

In Italy the principle of universal coverage is applied. As result of financial crisis an increase in cost sharing occurred in 2011 (Ferré *et al.*, 2014). Cost sharing is implemented for diagnostic procedures, pharmaceuticals, specialist visits and for unjustified interventions provided in hospital emergency departments. On the top of that, patients pay directly for dental services, over-the-counter medicines, diagnostic services and a majority of specialist visits. People are often encouraged to opt for privately paid services in order to secure faster access or to choose a provider (Ferré *et al.*, 2014). Similarly in Spain, a universal and free access to health is declared. However, cost sharing applies for drug prescriptions and dental and optical care services are excluded from the coverage (García *et al.*, 2010). Even if some exemptions are applied mostly to people aged 65 and over it is obvious from the results that inequality in access to health care for the elderly exists and policy makers should take action in order to improve the current situation.

IV: *OPP level in the observed countries in 2013 (in % of total health expenditure).*

Austria	15.81	Italy	18.01
Belgium	19.91	Luxembourg	10.8
Czech Republic	15.71	Netherlands	5.39
Denmark	12.79	Slovenia	12.11
Estonia	18.89	Spain	22.8
France	7.4	Sweden	16.32
Germany	12.89	Switzerland	25.88

Source: European Health for All Database, 2014

Further research at the country level is necessary in order to provide a detailed insight into such complicated systems as health care systems definitely are.

CONCLUSION

Limitations in access to health from the point of view of financial burden exist among European elderly and widely differ between countries. The restriction of access is the most serious issue in Estonia, Italy and Spain, however, the differences according to the type of health care service have to be taken into account as well.

Limitations in access to health are obviously linked to the financial situation of the elderly. The majority of the elderly facing unmet need comes from the poorest income quintiles. Especially in countries such as Spain, Italy, the Czech Republic, Slovenia and Estonia the poorest are hit the most. On the contrary, a high share of the richest elderly foregoes health care in the countries such as Switzerland and Luxembourg. This finding could indicate two aspects: a positive one – the social (health care) system applies protective features for the poorest elderly and this feature works very well because in that country the poorest elderly have an ensured access to desirable health care; and a negative one – the social (health care) system protects only the poorest and the burden is high for the richest. As a result, the rich elderly become a vulnerable group paradoxically.

Evaluating the burden of the elderly with unmet need the biggest share of the budget spent on out-of-pocket payments is determined in Italy, Estonia and Belgium. Costs for outpatient care and drugs contribute the most to the burden. The burden caused by nursing care are not negligible neither. The results of descriptive analysis are also confirmed by the results of multivariate analysis. A set of factors affecting the out-of-pocket burden of the elderly with unmet need was determined. The number of chronic diseases and limitation of activities caused by worse health status significantly influence the burden from the point of view of health variables. Regarding health care variables expenditure on drugs, outpatient and nursing care have a significant impact. The size of the household and marital status is relevant as well. On one side, the higher the number of the elderly in household the higher burden is. On the other side, never married and divorced elderly are a risk group. On the contrary, an increasing income, higher education and employment status prevents significantly the elderly with unmet need from the high burden.

In order to improve access to health care of the elderly with unmet need further research should focus on an analysis of chronic diseases and related burden. On the basis of results, recommendation for policy makers should be drawn. The country focus is highly desirable as health care/social systems are different in each country with different policy features for protection of the most vulnerable groups. The participation of the elderly on the labour market seems to be an important aspect as well. Nevertheless, this topic is a subject of other research focus.

It is to highlight that the results suggest some common patterns for the observed countries, nevertheless, it is also obvious that each country has its own specifics. The findings presented in the paper provide a basic overview of the situation in each country and point out to a fact that country specific research should be done. The analysis of seriousness of unmet need among elderly, extent of their out-of-pocket burden and changes in factors affecting the burden is a desirable knowledge background for evaluation and decision making about provision of access to health care.

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