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# The Choice between Publicly and Privately Financed Health Care Systems in the Context of Access to Health Care Services in Rural Areas of West Pomerania Voivodship

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Dorota Rdzanek[1], Marek Bulsa[2]

***Abstract:***

***Purpose:*** *The subject of the research was to gain various aspects of access to health services in rural areas. The aim of the survey was to identify the factors which determine the choice of a given type of health service, specifically, factors related to the socio-demographic characteristics of the respondents, and also to their different assessments of the health care system.*
***Approach/Methodology/Design:*** *The study was conducted at the turn of November 2019 and February 2020. The research sample included 646 adults respondents who permanently reside in rural areas and who gave informed consent. The publication uses the method relating to the different types of reports and quantitative and qualitative data. In order to answer the research questions, statistical analyses were carried out using IBM SPSS Statistics 25 software, which was used to perform a linear regression analysis by means of the stepwise method.*
***Conclusions:*** *The results obtained in many places confirm previous findings on access to health care services in rural areas of contemporary Poland. The level of medical services provided in many respects causes dissatisfaction of patients.*
***Practical Implications:*** *The research results can be used by institutions in the process of creating a more customized approach to the improving the quality of health care in rural areas. The presented results are important because institutions responsible for health protection they make it possible a more effective change design in the field of management related to health care.*
***Originality/Value:*** *This article presents the possible directions for change in health care system in rural areas.*

***Keywords:*** *Healthcare system, rural healthcare, public healthcare, rural social surveys.*

***JEL codes:***

***Paper type:*** *Research article.*

[1]*University of Szczecin, Institute of Political Science and Security Studies, Orcid: 0000-0002-0966-4925, dorota.rdzanek@usz.edu.pl,*
[2]*University of Szczecin, Institute of Sociology, Orcid: 0000-0001-8135-2240, marek.bulsa@usz.edu.pl,*

## 1. Introduction

Over the last few years, the health status of rural populations has been steadily improving. However, there are still many aspects associated with the functioning and the use of health services in rural areas that leave much to be desired. Differences between rural and urban areas are still noticeable, especially in the field of access to health services. Better preventive care and wider access to medical services are systemic solutions which are both necessary and expected by the inhabitants of rural areas.

Access to health services varies for different social groups. It is amply demonstrated in the literature that these inequalities also affect rural areas when compared to urban areas. Inequalities include quality gaps, limitations in access, and inefficient use of health care services (Weinhold and Gurtner, 2014). These inequalities may include access to specialist doctors and hospitals, in particular.

Lower levels of urbanisation are correlated with poorer infrastructure of most types: from road networks to health care infrastructure. In Poland, the health care system has undergone concentration in recent decades, which has also had an adverse effect. Similarly negative processes have impacted the public transport network in rural areas. As a result, the rural population is less mobile (Jarczewska and Jarczewski, 2015).

Many countries exhibit large and growing rural/urban disparities in health and mortality, including indicators such as mortality from the most common causes of death, poorer self-rated physical and mental health, and higher rates of most chronic diseases, functional limitations, and chronic pain, to name a few (Jensen *et al.,* 2020). These inequalities in access to health care services can lead to ramifications such as worse health status of rural populations. Life expectancy of disability-free residents in Poland was 64.83 years for the urban population and 63.98 years for the rural population (Bem *et al.,* 2013). Older people residing in the Polish countryside rated the physical component of health-related quality of life significantly lower than the mental component (Mirczak, 2020).

Inequalities in access to health services are often exacerbated by lower income and education level. However, the exact causal mechanisms that lead to poorer health status in rural areas are not entirely clear or straightforward. We now know that education is particularly important for health behaviour and health status. This is partly because education determines socioeconomic status, individual income, and lifestyle or social circles, which acts as a direct point of reference (Sowa, 2010).

Apart from access to health services, the health status of rural residents may also be influenced by specific circumstances linked to farm work, or other kinds of infrastructural problems (e.g., sanitation and heating) (Michalski, 2002). The situation is further complicated by the ongoing phenomena of depopulation and

ageing (Wesołowska, 2016). All this runs counter to the idealised image and positive assessment of rural areas as an area where people live in harmony with nature in a healthy environment (Wójcik, 2020).

In recent decades, we have witnessed the trends of liberalisation, commercialisation, and privatisation of public services, which have not spared health care either (Polakowski *et al.,* 2019), although since 2016 there have been legislative changes moving towards halting or even reversing these trends (Kolwitz, 2016) – albeit with limited success. In the Polish health care system, as a rule, access to costly specialist services has been limited by introducing the institution of a general practitioner, who acts as a kind of gate-keeper: their preliminary examination decides on possible referral to a specialist or hospital for treatment (Sowa, 2010).

One could pose the hypothesis that the more medical services are privatised and the higher the costs become, the greater the social inequalities in access to these services will be. It has been suggested that problems with the availability (waiting times) and quality of publicly financed services increase the demand for private medical services (Paszkowska, 2011).

Studies in Poland show that the use of health care services is correlated with the level of education, material status, and place of residence: better educated people, from households with higher per capita income, who live in larger towns and cities, use medical services more often. Poles use health services and benefits under the national health insurance most frequently when they need to consult a general practitioner, and much less frequently when they seek the advice of a specialist or undergo laboratory tests. What is notable among the services of specialists in Poland is the wide scope of privatisation and the charges for dental services. A relatively large number of Poles have sought and continue to seek treatment from specialists outside this system. The exclusive use of public health care services is more commonly declared by older respondents, residents of small and medium-sized cities with a population of up to 100,000, less-educated respondents, and those less satisfied with the material conditions of their households, with an income of between PLN 1000 and PLN 1999 per capita (Omyła-Rudzka, 2020).

## 2. Objectives

The purpose of the study was to describe various aspects of access to health services in rural areas. Firstly, an attempt was made to define the issue of access to health services in terms of location and transport. Striving to characterise the self-reported opinions and behaviour of rural residents on access to health services, we looked at a number of aspects: in particular, the choice between publicly and privately-funded health care services. The aim of the survey was to identify the factors which determine the choice of a given type of health service: specifically, factors related to the socio-demographic characteristics of the respondents, and also to their different assessments of the health care system. The respondents' responses were intended to

provide an answer to the question of how often and for what reasons the inhabitants of rural areas choose private health care services, as opposed to those provided by the National Health Fund (NHF).

## 3. Materials and Methods

### 3.1 Samples and Procedures

The material for the study was information collected during a questionnaire survey conducted between November 2019 and February 2020. The study involved 646 adults who permanently reside in rural areas and who gave informed consent. The mean age of the respondents was 32 years. In terms of education, 43.8% of the participants had finished secondary school, whilst 50% had a university degree. Women constituted 75.3% of those surveyed. The respondents varied considerably in terms of income per family member in the household.

All respondents answered at least 16 questions about themselves and, in particular, about different aspects of access to health care. An additional 4 questions were addressed to those with at least one child under the age of 15 in their care, based on the assumption that this might significantly affect the frequency and patterns of use of health services. The forms of the questions were varied, with some using a 7-point Likert scale. A number of questions concerned various aspects of the choice between health care services financed by the NHF and by the private sector. The respondents were asked, for example, to specify whether they often choose not to see a family doctor, whether they often choose to see a private doctor instead of an NHF doctor, and which specialists they consult privately. One of the main inquiries, formulated as a yes/no question, was whether the respondents felt that they were treated worse by a doctor because they lived in the countryside.

### 3.2 Statistical Procedure and Analysis

In order to answer the research questions, statistical analyses were carried out using IBM SPSS Statistics 25 software, which was used to perform a linear regression analysis by means of the stepwise method. The significance level in this section was set at $\alpha = 0.05$. All data related to this research is available online.

## 4. Results

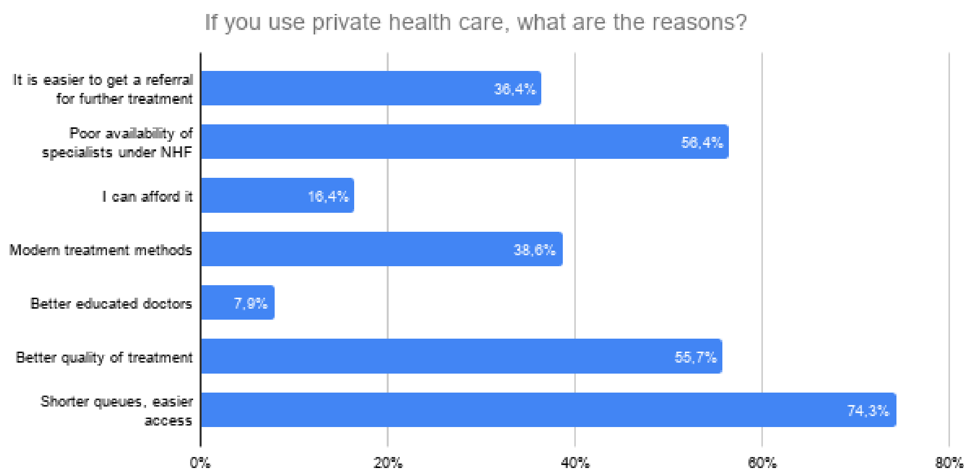
Among the respondents, 72.6% declared that there is no outpatient clinic or primary care doctor, often called a family doctor in Poland, in their village. The commute to a general practitioner is between 5 and 10 km for most respondents. The most common way of getting to a family doctor is by private car; only 8.9% of the participants reported using public transport for this purpose. The majority of the surveyed subjects (76.7%) had used the services of a GP within the last 6 months

before the survey, while 40.4% had seen an NHF-funded specialist and 60.3% had gone to a private specialist.

Approximately one third (30.8%) of the respondents indicated that they suffered from a chronic disease, defined as a disease which lasts for a long time and which can be managed, but not cured. The most frequently cited chronic diseases were allergy and asthma, cardiovascular diseases, and thyroid diseases. As regards specialists visited privately, the respondents most often listed a dentist, as well as an ophthalmologist and a gynaecologist. It is worth stressing that the vast majority of participants (95.2%) declared that they do not feel they are treated worse by a doctor because they come from the countryside. Among the respondents with children, the answers pointing to more frequent use of private health care when treating children were equal to the number of answers pointing to more frequent visits to a doctor under the National Health Fund.

The most prevalent reason for using private treatment was easier access and shorter queues than for doctors within the NHF (74.3%). More than half of the respondents also mentioned poor availability of specialists within the NHF (56.4%) and better quality of treatment (55.7%). All data are presented in Figure 1.

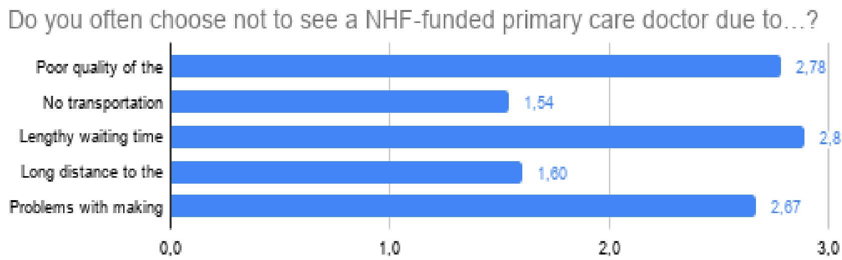
***Figure 1.*** *Percentage of people who gave specific reasons for using private healthcare*




***Source:*** *Own study.*

The most frequently cited reasons for not making appointments with a primary care doctor were lengthy waiting times for an appointment, poor quality of services, and problems with making an appointment. The exact distribution of averages is presented in Figure 2.

***Figure 2.*** *Mean responses regarding the reasons for choosing not to see a primary care doctor under the NHF (Error bars represent standard deviation)*




***Source:*** *Own study.*

In order to investigate rural residents' reasons for using private medical services instead of the National Health Fund, a linear regression analysis was performed. Sociodemographic variables were introduced as independent variables, as well as reasons for opting for private services instead of NHF ones. Due to the large number of predictors (12 predictors), the stepwise method was used. The results of the analysis are presented in Table 3.

***Table 3.*** *Linear regression model using the stepwise method that predicts the reasons for using private medical services instead of NHF services*

| Model | Predictor | *B* | *SE* | *Beta* | *t* | *p* | *F* | *p* | $R^2$ | $R^2$ |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | (Constant) | 3.40 | 0.23 | | 14.87 | **<0.001** | 32.93 | <0.001 | 0.188 | |
| | Poor quality of services | 0.40 | 0.07 | 0.43 | 5.74 | **<0.001** | | | | |
| 2 | (Constant) | 2.24 | 0.40 | | 5.60 | **<0.001** | 23.71 | <0.001 | 0.252 | 0.063 |
| | Poor quality of services | 0.41 | 0.07 | 0.45 | 6.20 | **<0.001** | | | | |
| | Income | 0.24 | 0.07 | 0.25 | 3.46 | **0.001** | | | | |
| 3 | (Constant) | 0.91 | 0.72 | | 1.26 | **0.211** | 17.84 | <0.001 | 0.277 | 0.025 |
| | Poor quality of services | 0.42 | 0.07 | 0.46 | 6.37 | **<0.001** | | | | |
| | Income | 0.22 | 0.07 | 0.23 | 3.22 | **0.002** | | | | |
| | Education | 0.41 | 0.19 | 0.16 | 2.19 | **0.030** | | | | |

***Note:*** Dependent variable: Answer the question "*How often do you decide to see a private doctor instead of a National Health Fund doctor?"*
***Source:*** *Own study.*

The stepwise regression algorithm built a three-step model. We found that the most important predictor of switching from NHF treatment to private treatment was the assessment of NHF services as poor-quality (Beta positive) – this was the basis on which the first model was built, explaining 18.8% of the variance in the dependent variable. Income was added in the second block: adding this predictor to the model increased the percentage of explained variance by 6.3% (to 25% in total). A positive Beta value indicates a more frequent switch from public health services to private treatment with an increase in income per family member.

Education emerged as the final significant predictor: including this dependent variable in the model was followed by an increase in the explained variance by 2.5% (27.7% in total). Again, the value of the Beta coefficient turned out to be positive, indicating a more frequent change of treatment with increasing education level.

## 5. Conclusions

The results obtained in many places confirm previous findings on access to health care services in rural areas of contemporary Poland. It is a typical characteristic of rural areas that there is no direct access to a doctor in most of them. The crisis of the public transport system in less-populated areas also means that rural residents need to use private means of transport, most often personal cars. On the other hand, these were not the factors that determined their decision not to use public health care services (perhaps because they also apply to private treatment to a similar extent).

The factors underlying the choice of privately financed health care services concern both the evaluation of these services and the attributes relating directly to the respondents. It can clearly be seen that respondents who opt out of publicly funded health care services have a critical view of their quality. The fact that income and education also have an impact on decisions regarding access to health care services (in this case, choosing not to use publicly funded services) has also been broadly reported in the literature. It is worth noting that the effect of education was to some degree independent of income. This may be related to a greater awareness of the importance of caring for one's health or choosing the most effective treatment methods. In access to specialists through private financing, there was a clear differentiation depending on the area of specialisation. Private dental services are certainly more frequently used. The majority of respondents have recently used the services of specialist doctors, and these visits were more often privately financed.

The most commonly stated reason for choosing this type of treatment was the shorter waiting time. It should be pointed out, however, that the choice of private health care services may, on the one hand, prove the patient's high income, but, on the other hand, it is often treated as evidence of poor availability and quality of public health care services.

The fact that the patients from rural areas did not report a sense of inferior treatment may be considered surprising. Perhaps this was influenced by the characteristics of the study group, with a much higher proportion of people with secondary-school and higher education, as well as a lower age than is typical for a community living in rural areas.

An interesting circumstance in the context of further research is the period of the study, which was immediately before the introduction of restrictions associated with the COVID-19 pandemic. It can be conclusively stated that during this ongoing period, there has been a drastic change in access to all types of health care. This

change can be studied in two ways: by comparing the current situation to the period immediately before the pandemic, as this study has made possible, or by comparing changes in access to health care in rural and urban areas.

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