

# Selected areas of health and health care utilization by immigrants living in the Czech Republic

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## Abstract

**OBJECTIVE:** This investigation examined to what extent a selected group of immigrants in the Czech Republic receive healthcare for primary prevention and inpatient care. A partial aim of the research was to confirm the connection between immigrant health and their social situation.

**METHODS:** Using a quantitative study technique, 1,014 legally established immigrants (Vietnamese, Polish, Ukrainian, Russian, and Slovak) between 18–65 years of age were interviewed. The selection of respondents was conducted using purposive selection. The stratification of the group was determined by nationality, age, and gender.

**RESULTS:** Long-term illnesses were found significantly more frequently among Ukrainian immigrants and less frequently among Vietnamese immigrants. About half of the respondents had visited a GP and dentist in the previous year and 11.5% of respondents had been hospitalized in inpatient departments. Most of the surveyed immigrants had public health insurance (77.9%), one-fifth had contractual health insurance (19.6%) and 2.5% did not have health insurance. In statistical terms, Vietnamese, Ukrainian, and Russian immigrants had commercial insurance more often than Polish and Slovak immigrants. The utilization of public health insurance and healthcare among immigrants grew significantly in correlation with length of residency. The use of GPs for preventive health care also grew in correlation with knowledge of the Czech language. We found that less than nine percent of immigrants reported needing hospitalization for an illness, but were not hospitalized.

**CONCLUSION:** Currently, immigration represents one of the most burning and sensitive global challenges. The outcome of this research clearly shows that improving immigrant Czech language skills and giving all legally established immigrants access to Czech public health insurance are important steps needed to increase access to healthcare for immigrants in the Czech Republic.

## INTRODUCTION

Health is a state of complete physical, mental, and social well-being and not merely the absence of disease (WHO 1946). This definition of health, which is enshrined in the introduction of the Preamble to the Constitution of WHO, illustrates the indivisibility and interdependence of human rights and the rights of every individual to health (Leary 1994). Freedom from discrimination, the right to information, the freedom of speech, autonomy in decision-making and adequate education are all inextricably linked to the right to the highest degree of health, i.e., health potential. The concept of social health includes the pursuit of the lowest abortion rate and infant mortality, the right of a child to develop in healthy conditions, and creating conditions that would ensure appropriate health care to all people. Developed countries have enshrined the principles of social solidarity in their legislation. In general, the principle of social solidarity is based on a concept, which while not first used by Karl Marx, was made famous by him in his Critique of the Gotha Program (1875), where each individual contributes to society according to their capabilities, but draws from society according to their needs. The right to solidarity regarding access to health care is enshrined in many international and national standards. The determinants of health can be characterized as personal, social, economic, and environmental factors that affect the health of individuals, groups of people, or the whole society (Janečková and Hnilicová 2009). Social determinants of health are related to the environment into which people are born and live. According to Vacková *et al.* (2014), it is a multidimensional concept that involves collaboration of many disciplines, especially sociology, medicine, epidemiology, and social medicine, where the combinations of their postulates creates a complete concept regarding disease development and preventive procedures leading to full bio-psycho-social and spiritual welfare and unity according to the above mentioned WHO definition. Education, income, work conditions, quality of housing, social status and social inclusion or exclusion are a source of risk, which reflects the differences in the level of health that exist between different social classes and groups (Wilkinson and Marmot 2005; Brabcová and Vacková 2013). Large differences in health are perceived as unethical and contrary to human conscience. One of the causes of health inequalities is the vulnerability of certain groups in society. Immigrants are a vulnerable social group that has specific health needs, and who often face restricted access to health care. This also relates to the fact that immigrants are often excluded groups within a society (Kajanová *et al.* 2009). That is why the main aim of the present study was to evaluate the usage of emergency and inpatient care by immigrant groups and find relationships between selected indicators of the social environment and immigrant health.

## MATERIALS AND METHODS

The study was conducted using a quantitative survey method. As a research tool, a standard questionnaire was used, which was translated into the native languages of all five surveyed immigrants – Vietnamese, Slovak, Russian, Ukrainian, and Polish. To ensure the accuracy of the interpretation of the terms used in the various questions of the questionnaire, the questionnaire was translated twice. Information for the questionnaire was processed using SPSS 16.1 software and the descriptive statistics of classification of the first, second, and third type. The dependency rate of the selected characters was based on the chi-square test and correlations (Spearman correlation coefficient). The significance level was set at  $p = 0.05$ .

The study sample was represented by adult immigrants living in the Czech Republic (CZ) with Vietnamese, Slovak, Russian, Ukrainian, and Polish nationalities.

The respondents were contacted through partner organizations dealing with immigration in the South, Central, Pilsen, Ústí, Moravia, South Moravia, and Hradec Králové regions, and in Prague.

Given the impossibility of determining the real distribution of immigrants in the Czech Republic (i.e., the registered residence need not automatically be the real residence of an immigrant) it was not possible to identify a representative group of immigrants by region. Therefore, intentional reference, or snowball sampling was used for the selection process. The respondents were selected using three stratification criteria – gender, age (under 30 years of age, 31–50 years of age, 51 years of age and over) and length of residence (up to 5 years, 5–10 years, 10–15 years, and 15 years and over). Vacková and Brabcová (2012) showed that length of residence is an important stratification criterion through which the character and the way of life of foreigners in the Czech Republic changes.

1014 questionnaires were completed. The data was collected between 2013–2014 with the consent of respondents, who were informed about the purpose of the study and assured anonymity.

## RESULTS

Affordable health care is a fundamental pillar of social solidarity in developed countries. With regard to this study, health care utilization included four items. The questions were focused on immigrant use doctors for primary and preventive care (i.e., dentist and GP), hospital stays, and the unmet need for hospitalization. Respondents state of health was evaluated with a question focused on the incidence of long-term illnesses lasting more than 6 months. The influence of social environment on the occurrence of disease and access to health care was tested by means of socio-demographic indicators, such as the nationality of immigrants, age, length of residence in the Czech Republic, knowledge of the Czech language, and working conditions.

Approximately, one fifth of immigrants reported they had suffered from a chronic disease for more than 6 months (20.2%). A significantly greater number with long-term illnesses were found among Ukrainian immigrants, a significantly lesser number was found among Vietnamese immigrants ( $p = 0.028$ ). The Vietnamese most often reported occupations in services and trade (78.4%), while Ukrainians were mostly reported working as unskilled labor (34.7%) or held jobs in industry (25.4%). Ukrainian immigrants were also found to be exposed to higher noise ( $p < 0.001$ ), dust ( $p < 0.001$ ) and chemical exposures at the workplace relative to other immigrants ( $p = 0.009$ ). No other statistically significant links connected with individual sociodemographic characteristics were identified.

During statistical testing, our focus was on confirming the connection between illnesses of respondents and age and length of residence in the CZ. To evaluate the degree of linearity, the Spearman correlation coefficient was used, which can take on values from  $-1$  to  $+1$ . The higher the absolute value, the stronger the relationship among variables. From the correlation matrix it is clear that all nationalities confirmed a *positive correlation* between age and morbidity. This means that the risk of disease increased as the age of the immigrant increased. While not surprising, the relationship was not uniform with the strongest relationship found for Ukrainian immigrants. It is interesting that a positive relationship between the length of stay in the Czech Republic and the appearance of a long-term illness was found only in Polish immigrants (Table 1).

The correlation coefficient takes on values in the interval from  $-1$  to  $+1$ . The closer the absolute value of the coefficient is to 1, the stronger the linear relationship between variables in terms of direct (positive) or indirect (negative) proportionality.

**Tab. 1.** The relationship between long-term illnesses of immigrants and age and the length of residence

Nationality	The relationship of the variables	Age	Length of stay
Vietnamese	Long-term illness	<i>Correlation</i>	0.206
		Significance	0.008
Ukrainian	Long-term illness	<i>Correlation</i>	<b>0.278</b>
		Significance	0.000
Russian	Long-term illness	<i>Correlation</i>	0.236
		Significance	0.003
Slovak	Long-term illness	<i>Correlation</i>	0.226
		Significance	0.003
Polish	Long-term illness	<i>Correlation</i>	<b>0.267</b>
		Significance	0.008

Note: The table shows only statistically significant relationships ( $p \leq 0.05$ ).

The second study objective was to evaluate the utilization rate of primarily preventive health care by immigrants in relation to the type of health insurance they had and their knowledge of the Czech language.

About 53.9% of respondents had been to their GP in the previous year, and 52.9% had been to a dentist. Women visited dentists ( $p < 0.001$ ) and general practitioners ( $p = 0.004$ ) significantly more often than men. The length of residence in the CZ also influenced how often immigrants visited doctors. This trend was evident in the frequency of visits to dentists ( $p = 0.001$ ). We found that 44.4% of immigrants who had lived in the Czech Republic for less than 5 years had visited a dentist in the previous year, while 57.0% of immigrants living in the CZ for more than 10 years had made dentist visits. Polish and Slovak immigrants visited dentists and GPs statistically more often than Vietnamese, Ukrainian, and Russian immigrants ( $p < 0.001$ ).

Most surveyed immigrants had public health insurance (77.9%), one fifth of them had contractual health insurance (19.6%) and 2.5% had no health insurance at all. In terms of statistics, Vietnamese, Ukrainian, and Russian immigrants had commercial health insurance significantly more often than Polish and Slovak immigrants ( $p < 0.001$ ). Statistically, the utilization of public health insurance by immigrants grew significantly relative to (1) the length of residence, and (2) utilization of health care ( $p < 0.001$ ).

During statistical testing, we focused on confirming the hypothesis that the type of health insurance affected access to health care. From the correlation matrix (Table 2), it is clear that for those Vietnamese, Ukrainian, and Russian respondents, who arranged commercial health insurance for themselves, there was a relationship between the frequency of visits to doctors and the type of health insurance. We found that immigrants, who could not enter the public health insurance system and

**Tab. 2.** The relationship between the type of health insurance and frequency of visits to doctors for primary preventive care.

Nationality	The relationship of the variables	Visits to a dentist	Visits to a GP
Vietnamese	Health insurance type	<i>Correlation</i>	<b>0.183</b>
		Significance	0.050
Ukrainian	Health insurance type	<i>Correlation</i>	<b>0.292</b>
		Significance	0.005
Russian	Health insurance type	<i>Correlation</i>	<b>0.289</b>
		Significance	–
Slovak	Health insurance type	<i>Correlation</i>	–
		Significance	–
Polish	Health insurance type	<i>Correlation</i>	–
		Significance	–

Note: The table shows only statistically significant relationships ( $p \leq 0.05$ ).

**Tab. 3.** The relationship between immigrant proficiency with the Czech language and a willingness to visit a GP and the ability to fully comprehend the information provided by the doctor.

Nationality	The relationship of the variables	Comprehension of information	Visits to a dentist	Visits to a GP	
Vietnamese	Knowledge of Czech language	<i>Correlation</i>	<b>0.345</b>	<b>0.329</b>	0.189
		<i>Significance</i>	0.000	0.000	0.050
Ukrainian	Knowledge of Czech language	<i>Correlation</i>	0.167	0.241	0.249
		<i>Significance</i>	0.023	0.001	0.001
Russian	Knowledge of Czech language	<i>Correlation</i>	0.275	0.254	0.168
		<i>Significance</i>	0.000	0.001	0.041
Slovak	Knowledge of Czech language	<i>Correlation</i>	0.175	0.272	<b>0.306</b>
		<i>Significance</i>	0.050	0.001	0.000
Polish	Knowledge of Czech language	<i>Correlation</i>	<b>0.412</b>	0.257	-
		<i>Significance</i>	0.000	0.001	-

Note: The table contains only statistically significant relationships ( $p \leq 0.05$ ).

were dependent on commercial health insurance, used the health care system significantly less than respondents with public health insurance.

The correlation coefficient takes on values in the interval from  $-1$  to  $+1$ . The closer the absolute value of the coefficient is to 1, the stronger the linear relationship between variables in terms of direct (positive) or indirect (negative) proportionality.

As part of the study into the effect of language proficiency, we examined passive, active, spoken, and written use of the language. Subjectively, the worst proficiency in the Czech language was found in Vietnamese immigrants and the highest proficiency was found in Polish and Slovaks immigrants. According to Vacková (2012), proficiency with the Czech language improves with length of residence. Those most disadvantaged by lack of proficiency were those who had resided in the Czech Republic from 1 to 4 years. From the correlation matrix (Table 3), it is clear that proficiency with the Czech language strongly affects both willingness to visit a GP and the ability to fully comprehend the information provided by the doctor. It is interesting that this relationship was confirmed by all nationalities including Slovaks, whose native language is most similar to Czech.

The correlation coefficient takes on values from  $-1$  to  $+1$ . The closer the absolute value of the coefficient is to 1, the stronger the linear relationship between variables in terms of direct (positive) or indirect (negative) proportionality.

In the year prior to the study, 11.5% of the respondents had been hospitalized in inpatient departments. There were no significant ties to socio-demographic characteristics such as gender, nationality, age, or length of residence in the Czech Republic. Our attention focused on an evaluation of the so-called unmet needs for hospitalization. The respondents were asked if they had experienced a health problem that should have been treated in a hospital, but for some reason,

they had chosen not to admit themselves to the hospital. Less than nine percent of immigrants admitted that this situation had occurred (8.8%). Ukrainian and Russian immigrants responded 'yes' most often, while Polish immigrants responded 'yes' least often. The most common reason for not admitting themselves to hospital was lack of time (26.3%), financial cost of treatment (5.1%), fear of treatment (10.1%), rejection by the medical facility (5.1%), concerns about the language barrier (7.1%), and inadequate health insurance coverage (5.1%).

## DISCUSSION

The aim of this study was to evaluate the use of outpatient and inpatient health care among 5 specific immigrant groups and determine if there were any relationships between selected indicators of social environment and immigrant health. Assumptions regarding mutual determination of the health status of immigrants and their social situation were rooted in the concept of social determinants of health (Wilkinson and Marmot 2005; Marmot and Allen 2014). Our research sample consisted of the five largest immigrant groups residing in the Czech Republic: Slovaks, Ukrainians, Vietnamese, Russians, and Poles.

Health is the most precious human commodity. The right to health is a basic human right, which should be granted to everybody without discrimination on the grounds of race, religion, political belief, or economic and social conditions. In our study, health status was evaluated by just one indicator – the incidence of long-term illness (lasting longer than 6 months) in the year preceding the study.

Approximately one fifth of immigrants reported that they had suffered from long-term illnesses lasting more than 6 months. Most of them were Ukrainian immigrants. In contrast to other immigrant groups, the cause of the higher incidence of long-term illnesses among

Ukrainians could easily be associated with the typical working conditions of Ukrainian immigrants. According to Pořízková (2010), immigrants from less developed countries mainly work in the tertiary sector of the Czech labor market. These jobs tend to be more dangerous, demanding and exhausting jobs, particularly in agriculture, forestry and heavy industries (Jánská, 2006; Jelínková, 2011; Brabcová *et al.* 2014; Džúrová and Drbohlav 2014). Our study found that Ukrainians most commonly held unskilled blue-collar jobs or industry positions. In addition, Ukrainian immigrants reported a higher degree of noise, dust, and chemical pollution exposure than the other surveyed immigrant groups. According to Siqueira and Jansen (2012), immigrants are also exposed to adverse working environments, which also increase health risks.

Numerous studies have confirmed a link between the length of immigrant residency and their state of health (McDonald and Kennedy, 2004; Newbold, 2005; Gushulak, 2007). This is called *the healthy immigrant effect*; when immigrants arrive in a host country they may have a better health status than the majority population. However, this advantage is lost over time and corresponds to length of residence, i.e., their health deteriorates rapidly as their stay extends (Brabcová and Záleská, 2013). In our study, the relationship between the length of residence of immigrants and their state of health (incidence of long-term illness) was seen only in Polish immigrants (Table 1). However, the health status of immigrants can be influenced by a number of factors rooted in the social environment, such as inadequate working environments, language barriers, lack of healthcare, the lower social status of immigrants in the host country (Olišarová *et al.* 2014) or the degree of social support (Urban and Kajanová 2014). Statistical testing demonstrated a correlation between the subjective opinion of immigrants relative to their socio-economic status in the CZ and the incidence of long-term illnesses. The lower social status of immigrants was an indicator that a disease was more likely to develop.

According to Derose *et al.* (2009), immigrants use healthcare less than the majority population. This insufficient use of healthcare may be associated with immigration status or language barriers. The second objective of our research was to evaluate the frequency of healthcare use by immigrants. Immigrant access to the Czech public healthcare system is conditioned by immigration status (country of origin, type of residence status, economic activity). Immigrants who do not come from countries inside the EU (or as it is sometimes called, “come from third countries”), are not employed, do not have a permanent residence in the Czech Republic, do not ask for international protection, and are not refugees, cannot enter the public health insurance system. Subsequently, large groups of immigrants (especially business owners) rely on commercial health insurance. Studies have found

that commercial insurance does not provide proper consideration of immigrant health needs (Hnilicová and Dobiášová 2009; Džúrová *et al.* 2014).

Statistically, immigrants from Vietnam, Ukraine, and Russia used commercial insurance significantly more often than Polish and Slovak immigrants. The respondents who had commercial medical insurance confirmed the relationship between the type of healthcare insurance and use of the health care system. We found that if immigrants could not enter the public health insurance system, they used primary preventive care significantly less than respondents who had public health insurance (Table 2).

According to McDonald and Kennedy (2004), after entering a host country immigrants learn the language of the new country. The longer they stay, the better they understand the healthcare system, and consequently the more they use the healthcare system. Research has confirmed a link between the consumption of healthcare, length of residence, and proficiency with the Czech language (Table 3). It was interesting that all 5 groups of immigrants (including Slovaks) reported that a higher proficiency with the Czech language increased the frequency of their visits to dentists and general practitioners. Gabrielová and Brabcová (2015) reported that even Slovak immigrants had trouble understanding Czech doctors, mainly with regard to terminology, even though the Czech and Slovak languages are very similar. Bártlová *et al.* (2014) stated that patients are entitled to receive understandable information from a doctor, and in a language they can understand. Only a patient who is properly educated and informed about their health condition can be effectively treated.

According to our results, 11.5% of respondents had been admitted to a hospital in the Czech Republic in the year prior to the interview. Eurostat (Statistical Office of the European Community Countries) tracks the percentage of unrealized medical tests or surgery despite there being a necessity for them. The Czech Republic achieved one of the lowest values (0.9%) and compared well with other countries, such as Finland (0.3%), the Netherlands (0.2%) and Austria (0.7%) (Eurostat, 2012).

In our investigation, immigrants were asked if there were any occasions in the previous year when they were not admitted to hospital even though their health condition required it. Less than nine percent of immigrants responded ‘yes’ to this question (8.8%). Ukrainian and Russian immigrants answered ‘yes’ most often; Polish immigrants answered ‘yes’ least often. Nonetheless, it happened ten times more to immigrants than it did to the majority population, and suggests that some inequalities still exist with regard healthcare access between immigrants and the Czech population. Immigrants reported the following reasons for not being hospitalized: lack of time, fear of treatment, fear of the

language barrier, inadequate coverage by health insurance companies.

## CONCLUSION

Our research found that immigrants who meet the legal requirements for entry into the CZ public health insurance system were significantly more likely to use healthcare than immigrants who were dependent on commercial health insurance. We also found that Czech language proficiency significantly affected willingness to use the CZ healthcare system. Measures to remove inequalities in accessing healthcare include improving language proficiency of immigrants, allowing all legally established immigrants to have access to public health insurance, and the cultivation of a multicultural and responsive healthcare system that respects linguistic, cultural, social, religious, and gender diversity of immigrants.

### Conflict of interest

*The authors report no conflicts of interest.*

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