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ORIGINAL ARTICLE

Hospitalization of injured immigrants in Poland – Demographic profile and diagnosis

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Abstract

Introduction and objective. More and more immigrants gradually come to Poland. Little is known, however, about their health situation or their injuries. The objective of this study was to analyse the cases of hospitalization of immigrants due to injuries in 2008–2010, including the number and demographic characteristics of the patients, as well as the nature of injury according to ICD-10 (S00-T98).

Material and methods. The analysis was conducted on the basis of data from the General Hospital Morbidity Study. All the cases of hospitalization due to injuries were covered by the analysis, and a group of foreigners was compared to the general population.

Results. The number of foreigners hospitalized due to injuries ranged from 4.6–21.2 thousand in the subsequent years. The share of hospitalization due to injuries equalled 8.2–11.9% of all foreigners' hospital stay. The majority were males, but the proportion of females gradually increased up to 36.7% in 2010. The average age of the hospitalized gradually decreased to the age of 35.2 in 2010. The structure of the nature of injury was different from that of the general population. Prevailing types of injuries were minor injuries of wrist, hand, ankle and foot. Open wounds of the head were also common.

Conclusions. Results of the analysis indicate the most important tendencies related to immigrants' injuries. Further research, as well as monitoring the foreigners' health status is necessary. Taking preventive measures is essential among the most vulnerable group – male immigrants aged 15–19.

Key words

Immigrants, hospitalization, injuries, Poland

INTRODUCTION

According to The International Organization for Migration, the global migrant population increased from 150 to 214 million people in the years 2000–2012. Estimates show that by 2050, the number of international migrants will have risen to 405 million [1]. The increase in the rate of migration is caused, among others, by demographic disparities, climate change, global political and economic dynamics, and the technological and information revolution. The main causes of migration are seeking work and better living conditions. In 2010, The International Labour Organization estimated that economically-active migrant workers, together with their families, accounted for 90% of all international migrants.

Estimation of the total number of foreigners who currently reside in Poland is difficult because of the open borders. The existing system of official statistics does not provide accurate data. Forms of the legalization of the stay are varied, and the procedures are complicated. Official data of the Office for Foreigners refer to different types of residence permits in the appropriate accounting periods. For instance, in 2011, residence in Poland was legalized by over 40 thousand foreigners (of whom 29.653 were granted a resident's permit for a specified period of time), while a further 77 thousand received national visas or an invitation [2].

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The number of irregular immigrants is several times greater. In the period between January – June 2012, there was a possibility to legalize the stay of persons who were in in Poland illegally. Applications from 9,521 persons were registered, which is a higher number than during the amnesties in 2003 and 2007–2008 altogether. The great majority of applications (77.6%) were made in the Mazowieckie Province [3].

According to OECD data for 2004–2009, the foreign-born labour force in Poland ranged from 43.2–58.8 thousand people. This group accounted for approximately 0.3% of the labour force in the country. Current data indicate increasing foreign employment in Poland, mostly in agriculture, construction, retail and wholesale trades. The number of work permits indicates that one-third of work permits were granted to Ukrainians, and almost one-fifth to Chinese. The other main countries of origin of foreign workers were Vietnam, Nepal, Belarus and Turkey [4].

Migration and its broader social and political context pose numerous threats to the health of migrants. Information on immigrants' health varies by country and type of data [5]. The data indicate higher rates of fatal and non-fatal injuries compared to native populations [6]. This is due to the employment of immigrants working in higher risk occupations, lower knowledge of the local language and education attainment, the lack of occupational safety and health (OSH) training to recognize the hazards, and lack of services, programmes and resources available for newcomers that relate to employment standards [7, 8, 9, 10]. Risk of occupational injury for foreign-born workers is 2.13 times higher than that for native workers [11].

Despite the growing influx of foreigners to Poland, their health situation is still unexplored. Only a few studies were conducted in centres for refugees and among low-count groups of irregular migrants. Therefore, the authors of this study investigated the problem of hospitalization of foreigners in Poland in 2008–2009 [12].

OBJECTIVE

Analysis of cases of hospitalization of injured immigrants in 2008–2010 in Poland on the basis of data from the General Hospital Morbidity Study. The analysis included: a) the number of hospitalizations; b) demographic profile of hospitalized immigrants; c) nature of injury (diagnosis), i.e. the type of injury according to ICD-10.

MATERIAL AND METHODS

The General Hospital Morbidity Study (GHMS) has been irregularly conducted in Poland since the mid-1950's. Since 2000, data on all hospitalization cases have been collected, with the exception of those treated in psychiatric hospitals or wards, and patients from hospitals for the uniformed services. The source of information in GHMS is a statistical record created in the hospital. The research is a part of the national Public Statistic Research Programme.

Patients who were treated for injuries and poisoning (ICD-10 = S00-T98), were selected from all hospitalized cases. Cases of foreigners' hospitalizations are marked using a different code from that used for the Polish population, which allowed the extraction of the group of foreigners.

Among the immigrants and general population the following were analysed: a) the number; b) gender and age of the hospitalized; and c) injuries structure. Due to the lack of reliable information on the number of immigrants in Poland (lack of denominator), the admission rate was not calculated. In the description of the results the words 'foreigners' and 'immigrants' are used interchangeably.

RESULTS

Number of immigrants' hospitalizations. Hospitals in Poland reported annually 57.0–178.3 thousand immigrants' hospitalizations due to all causes in 2008–2010 (Tab. 1). This accounted for 0.9%, 2.4% and 2.2% of all hospitalizations in subsequent years. During this period of time, hospitals reported annually from 4.6–21.2 thousand immigrants' hospitalizations due to injuries and poisoning, which accounted for 8.2–11.9% of the total number of their hospital stays. In the general population, the percentage of such hospitalizations was slightly lower.

Demographic profile. Each year, the majority of immigrants hospitalized due to injuries were males (67.4%, 65.4%, 63.3%, respectively), while the participation of females gradually increased. In the general population, the percentage of injured hospitalized males was smaller than in the migrant group (Tab. 2).

The average age of immigrants hospitalized due to injuries in subsequent years was 37.9, 36.1, 35.2 years, respectively.

Table 1. Hospitalization among immigrants and general population by cause, Poland, 2008–2010

Year	Immigrants			General population		
	Total	*Injury-related*		*Total*	*Injury-related*	
	(No.)	(No.)	(%)	(No.)	(No.)	(%)
2008	57,039	4,661	8.2	6 668 710	540,044	8.1
2009	178,310	21,234	11.9	7 565 187	669,258	8.8
2010	166,193	19,837	11.9	7 631 799	732,997	9.6

Table 2. Injury-related hospitalization among immigrants and general population by gender

Year	Immigrants		General population	
	Male (%)	*Female (%)*	*Male (%)*	*Female (%)*
2008	67.4	32.6	62.5	37.5
2009	65.4	34.6	61.3	38.7
2010	63.3	36.7	60.9	39.1

Table 3. Injury-related hospitalization among immigrants and general population by average age

Year	Immigrants		General population	
	Average	*SD*	*Average*	*SD*
2008	37.9	23.0	45.2	26.0
2009	36.1	22.2	45.3	26.1
2010	35.2	21.4	45.4	26.2

In the group of all patients hospitalized due to injuries, the average age was slightly higher (Tab. 3).

In the analyzed period, the largest group of immigrants hospitalized due to injuries were persons aged 15–19, with a considerable participation of people aged 20–29 and 45–54 years (Fig. 1). A similar regularity was observed in the general population. In 2008, an exceptionally high level of immigrants' hospitalization was observed among children aged 0–4 and adults aged 45–49. It should be noted that within the age group 10–49, the proportion of immigrants hospitalized due to injuries was higher than in the case of the group of all the injured patients. The percentage of injured foreigners decreased progressively after the age of 50.

Nature of injury (diagnosis). In the course of three years, the most common types of injuries accounted for 10.3% of all-cause hospitalization (S06-intracranial injury in 2008). Therefore, this study was based on the types of injuries that collectively accounted for 80% of all hospitalizations.

Analysis of the nature of injuries among foreigners (Fig. 2) indicated a significant variety of causes and fluctuations in particular years. This distinguishes the immigrants from the group of all the hospitalized patients among whom injury consistency is observed (Fig. 3).

The highest percentages of immigrants' hospitalizations were the result of intracranial injury (S06) and a superficial injury of head (S00) – in both cases they occurred in 2008. In 2010, most immigrants' hospitalizations were related to open wound of wrist and hand (S61 – 7.1%); dislocation, sprain and strain of joints and ligaments at ankle and foot level (S93 – 6.6%); open wound of the head (S01 – 6.2%), as well as superficial injury of wrist and hand (S60 – 5.9%). It

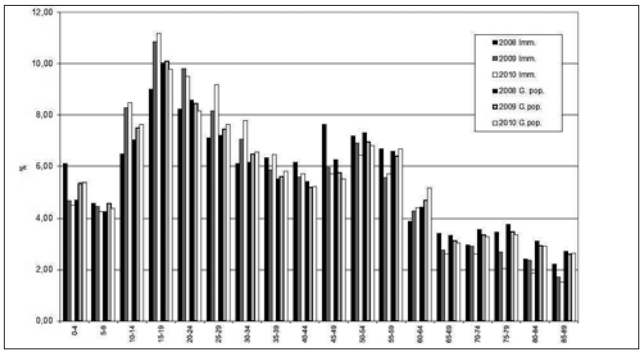

Figure 1. Injury-related hospitalization among immigrants and general population in Poland by age groups 2008–2010

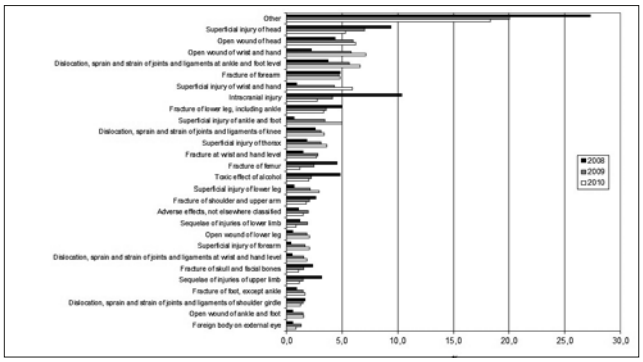

Figure 2. Injury-related hospitalization among immigrants in Poland by nature of injury 2008–2010

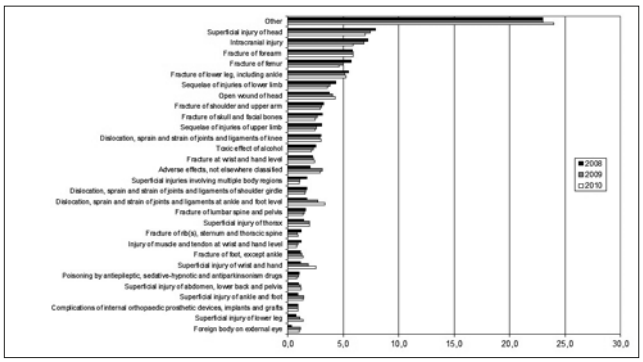

Figure 3. Injury-related hospitalization among general population in Poland by nature of injury 2008–2010

should be noted that there was an upward tendency in the hospitalization of immigrants due to these four major causes.

The causes of hospitalizations typical of immigrants were not significant in the overall number of hospitalizations, and in the case of open wound of wrist and hand (S61), were even irrelevant. Only an open wound of the head (S01) and fracture of forearm (S52) were quite common in both groups. Superficial injury of the head (S00), which was typical for all patients in 2010, was only the fifth most common cause of immigrants' hospitalizations. The incidence of hospitalizations due to the toxic effect of alcohol (T51) in 2010 was similar to the national rate/structure of injuries, although in 2008 it was significantly higher.

DISCUSSION

Available data on hospitalization of patients with injuries are presumably just the tip of the iceberg. According to the estimates of Lublin (Poland), only 6.1% of persons who reported to the Emergency Department were admitted to hospitals [13]. Between 2008–2009 the number of hospitalizations of immigrants tripled and has remained unchanged since then. The proportion of hospitalizations due to injury and poisoning also increased: in the first year, every 12th foreigner stayed in the hospital due to this reason, while in the following year every 8th stayed in hospital. Injuries, however, were not the dominant cause of hospitalization of immigrants in Poland, in contrast to, e.g. Lazio Region (Italy), where approximately ¼ of all discharges of foreign males were related to injuries [14]. The increase in numbers of hospitalizations of injured immigrants may be the result of the increase in the total number of foreigners, the increase in the number of injuries in this group of people, or the emergence of greater severity of body injury. There is no evidence that immigrants began using health services more often.

Available data do not allow calculation of the portion of injuries that took place in the work environment. Research conducted in numerous countries, however, shows that immigrants are at higher risk of work-related injuries than indigenous people [15, 16, 17, 18, 19]. The increased risk is related to the type of work [17, 20] and, for example, to a short length of stay [21]. It should be noted that immigrants in Poland work mainly in sectors such as construction, agriculture and trade in which the rate of self-declared injuries in Polish population is among the highest (17.1/1,000; 12.9/1,000; 9.2/1,000, respectively [22]).

Analysis of data according to gender and age of immigrants indicates that males and persons aged 15–19 are more vulnerable to risk of injury. At the same time, the increasing vulnerability of women is noted. A significant prevalence of injuries in younger age groups is typical [23, 24] and may be due to a high number of young people in migrant population, as well as due to greater exposure and susceptibility of the group. What may also be significant is the readiness of young people to seek health care, and greater willingness of doctors to in-patient treatment of young adults.

Between 2008–2009 the structure of some causes of immigrants' hospitalization changed, which might have been the result of various circumstances, including those related to the 1 July 2008 introduction of new valuation of medical procedures based on a system of diagnosis related groups for settlements between the health care payer and providers. In recent times, minor injuries, superficial within the wrist, hand, ankle and foot have dominated, while in case of the general population, fractures of arm or leg were more frequent. These differences may be due to the younger age of immigrants. The GHMS does not deliver complete data to assess the circumstances surrounding the origin of the injury, i.e. the factors related to the environment, agent and vector. Taking into account the various patterns of injuries, such as in the area of agriculture, such information would be of great importance for taking preventive measures [25, 26].

CONCLUSIONS

The results of this study show that most cases of hospitalizations due to injuries concern foreign males and young adults. This proves that these groups are in need of being addressed with appropriate strategies for promoting safety and preventing injuries. In order to make this possible, it is necessary to conduct separate, thorough research on the causes and mechanisms of injury in these groups, as well as the entire population of immigrants. It is essential to continue the process of monitoring injury rates among immigrants in order to increase the scope of information on foreigners, which is collected in Poland routinely, and to improve data quality.

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