Attitudes and knowledge of Health care workers in Cieszyn County of the Silesian Province in southern Poland about seasonal flu vaccinations – preliminary study

Postawy i wiedza pracowników ochrony zdrowia powiatu cieszyńskiego na temat sezonowych szczepień przeciwko grypie – doniesienie wstępne

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Abstract

Introduction. Influenza is one of the more common viral infectious diseases, the occurrence of which is a significant clinical, epidemiological and economic problem. According to reports from the World Health Organization (WHO), around 5% -10% of adults and 20%-30% of children fall ill worldwide every year. During the year, 3–5 million acute cases are registered, and around 250,000–650,000 people die. The annual influenza vaccine is the best method of preventing the disease. Health care workers are a risk group for influenza.

Objective. The aim of the survey was to assess the knowledge and attitudes towards vaccination among health care workers (HCWs).

Materials and method. The study was conducted among a group of 330 randomly selected employees of medical facilities in the Cieszyn County of the Silesian Province in southern Poland. The research tools were a self-made questionnaire and a knowledge test. To assess the statistical significance of differences in qualitative data between the groups, the chi independence test was applied.

Results. 47.6% of the respondents had a low-level of knowledge about flu vaccination, in 41.8% it was at the medium level, and in only 10.6% the knowledge level was high. The average number of points scored in the knowledge test was 4.44 (SD = 2.33) out of 12 points possible. Only every third respondent was in favour of the vaccination. Slightly over 15% of the respondents (17.60%) were vaccinated against influenza in the current 2018–2019 season.

Conclusions. Knowledge about vaccination against influenza is incomplete. A small percentage of health care professionals are in favour of influenza vaccination. There is a need to increase efforts to promote annual influenza vaccination among health care professionals.

Key words

influenza vaccination, health care worker, attitude, knowledge, beliefs

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Streszczenie

Cel pracy. Grypa jest jedną z najczęściej występujących wirusowych chorób zakaźnych, stanowiących istotny problem kliniczny, epidemiologiczny i ekonomiczny. Według raportów Światowej Organizacji Zdrowia (WHO) każdego roku choruje na nią ok. 5–10% dorosłych i 20–30% dzieci na całym świecie. W ciągu roku rejestruje się 3–5 mln ostrzych przypadków, a ok. 250 –650 tys. osób umiera. Coroczne szczepienie przeciw grypie jest najlepszą metodą zapobiegania tej chorobie. Pracownicy ochrony zdrowia stanowią grupę ryzyka zachorowania na grypę. Celem pracy była ocena wiedzy i postaw wobec szczepień wśród pracowników służby zdrowia (HCW).

Materiał i metody. Badania zostały przeprowadzone w grupie 330 losowo wybranych pracowników placówek medycznych na terenie powiatu cieszyńskiego województwa śląskiego. Na rządzie badawcze stanowił kwestionariusz ankietowy własnego autorstwa oraz test wiedzy. Aby ocenić statystyczną istotność różnic danych jakościowych pomiędzy grupami, zastosowano test niezależności chi².

 Wyniki. 47,6% respondentów posiadało wiedzę na temat szczepień przeciwko grypie na poziomie niskim, 41,8% na poziomie średnim, a tylko 10,6% na poziomie wysokim. Średnia liczba punktów w teście wiedzy wyniosła 4,44 (SD = 2,33) na 12 pkt możliwych. Tylko co trzeci respondent był zwolennikiem szczepienia. Niewiele ponad 15% badanych (17,60%) zaszczepiło się przeciw grypie w sezonie 2018/2019.

Wnioski. Wiedza na temat szczepienia przeciwko grypie jest niepełna. Niewielki odsetek pracowników ochrony zdrowia jest zwolennikiem szczepienia przeciw grypie. Istnieje konieczność zwiększenia działań promujących coroczne szczepienie przeciwko grypie wśród pracowników ochrony zdrowia.

Słowa kluczowe

wiedza, postawa, przekonania, szczepienie przeciwko grypie, pracownik ochrony zdrowia
INTRODUCTION

Influenza is one of the more common viral infectious diseases, the occurrence of which is a significant clinical, epidemiological and economic problem. According to the World Health Organization (WHO) reports, around 5%-10% of adults and 20%-30% of children fall ill worldwide every year. Each year, 3–5 million acute cases are registered, and around 250,000–650,000 people die [1, 2]. Flu is a disease in which the constant evolution of the virus contributes to the occurrence of serious seasonal epidemics as a result of point mutations [3]. Due to their contact with influenza patients and the ease of transmission of the influenza virus, medical personnel are particularly vulnerable to infection. The risk of transmission of infection from influenza health care workers to patients is also a big problem. This is especially dangerous for chronically ill persons, the elderly, pregnant women, newborns and young children, who are at high risk of the severe course of the disease. Vaccination of medical personnel against flu is therefore associated not only with a reduced risk of severe consequences of the disease in the vaccinated, but also all those who have contact with them. For this reason, health workers are considered to be an important link and a priority target for influenza vaccination [4]. According to the American Advisory Committee on Immunization Practices (ACIP), vaccinating medical workers against influenza, as in other groups, should be carried out every year [5]. Similar recommendations were included in the Polish Preventive Vaccination Programme, according to which the vaccination against influenza is recommended to employees of medical facilities and administrative staff of those facilities [6]. Despite the awareness of the dangers of flu and its complications, the problem is the small percentage of health care workers undergoing influenza vaccination every year. It is estimated that in Poland only 5–6% of medical workers are vaccinated against influenza, which is one of the lowest rates in Europe [7].

OBJECTIVE

The aim of the study was to assess the attitudes and knowledge about influenza vaccination among healthcare workers.

MATERIALS AND METHOD

The study was conducted among employees of medical facilities in Cieszyn County of the Silesian Province in southern Poland, whose management agreed to the carrying out of the survey. The criterion for inclusion in the study was consent and being a healthcare worker. The survey was conducted in the 2018–2019 season, from December 2018 – March 2019, among nurses, midwives, doctors, paramedics and physiotherapists. The research tool was a self-made questionnaire, consisting of 17 closed questions and a knowledge test, containing 5 questions, both closed and open, multiple-choice, concerning the main research problem, and developed on the basis of available literature. For every correct answer the respondents were awarded 1 point, with the maximum of 12 points for the whole test. The number of points in relation to each person was added and then converted into a percentage scale from 0–100, where the score of 100 meant that the surveyed person provided the correct answers. The results obtained were then converted into ranges: the respondents who obtained no more than 35% of the points were qualified to the group of persons with a low level of knowledge, those who answered correctly to 36–60% of the questions – to the group of persons with a medium level of knowledge, and those who obtained at least 61% of correct answers – to the group of persons with a high level of knowledge.

Based on the number of employed health care workers meeting the criteria for inclusion, 600 questionnaires were individually distributed, of which 330 (55%) were returned. Due to the heterogeneity of groups in relation to the variables of age, profession, education, internship and workplace, the answers were merged, resulting in 3 categories regarding age (below 40 years of age, 40–49 years old, and over 50) and 2 categories in relation to occupation (nurse and other medical profession). Education (secondary and higher), work experience (less or more than 15 years). Those working in the departments of internal medicine, dermatology, nephrology, neurology, ophthalmology, cardiology, rehabilitation, paediatrics, geriatrics, infectious and intensive care, were classified as conservative wards, while the departments of general surgery, trauma-orthopaedic, gynaecological-obstetric, paediatric surgery, operating theatres and hospital emergency department, were classified as surgical wards.

The majority of the respondents were women (88.8%). The largest group of the respondents were persons aged 45–49 (18.20%), then 50–54 (17.00%) and 40–44 (16.40%). Nurses constituted the vast majority of the respondents (73.60%). Almost half of the respondents (47.90%) declared having secondary education. 63.90% of those surveyed had over 15 years of work experience. The detailed characteristics of the studied group are presented in Table I.

RESULTS

The results obtained were entered into the Excel 2016 spreadsheet, while the statistical calculations were made using the SPSS (Statistical Package for the Social Sciences) 24.0.0.1 Software. The maximum allowable type I error was assumed to be α = 0.05 for all analyses, and a value was considered statistically significant when p ≤ 0.05. To assess the statistical significance of differences in qualitative data between the groups, the chi independence test was used. The choice of the test was dictated by the nature of the variables involved in the analysis. In each case, these were qualitative variables (measured at the nominal or ordinal level).

As for the knowledge level of surveyed, 47.6% of the respondents had a low level of knowledge of flu vaccination, in 41.8% it was at the medium level, and in only 10.6% at the high level. The average number of points in the knowledge test was 4.44 points (SD = 2.33) out of 12 achievable (Tab. 2). Detailed analysis of the answers given in the knowledge test showed that almost 80% of the respondents (79.10%) knew that seasonal influenza vaccination is recommended to health care professionals. 90% of the respondents believed that medical personnel are exposed to influenza virus infection through droplet transmission, and almost 30% (27.27%) through physical contact. As far as influenza complications were concerned, the most frequently listed were cardiological (78.42%) and pulmonary (68.39%).
fifth respondent indicated neurological complications, and every fourth stressed the exacerbation of chronic diseases. Among flu prevention measures, the staff surveyed most often mentioned proper hygiene procedures (64.13%) and protective vaccinations (33.74%). Nearly 15% (14.29%) mentioned pharmacological prophylaxis which, however, is not recommended in routine procedures. According to 76.40% of the respondents, there are contraindications for vaccination against influenza. It is worrying that among the contraindications, in addition to infection with fever and intolerance to the vaccine component, the respondents listed planning to or actually being pregnant (34.7%).

Subsequently, attempts were made to determine whether gender had an impact on the level of knowledge. 47.8% women and 45.9% men had a low level of knowledge. The average level of knowledge was found in 42.3% women and 37.8% men, while 9.9% women and 16.2% men revealed a high level of knowledge. There was no relationship between the level of knowledge and the gender of the respondents (p > 0.05).

In the next stage, the level of knowledge depending on age was analysed. 30.90% of the respondents were under the age of 40, in the group of persons aged 40–49 and >50 years the percentage was the same and amounted to 34.50%. 51.0% of the respondents under the age of 40 had a low level of knowledge, 45.6% of those aged between 40–49, and 46.5% of those aged 50. On the other hand, 16.7% of the respondents under 40 years of age significantly more often had a high level of knowledge (p <0.05) (Tab. 3).

Subsequently, the level of knowledge depending on occupation was examined. 10.3% of nurses and 11.5% of the respondents working in another medical sphere had a high level of knowledge, whereas 44.0% of nurses and 57.5% of other professionals had a low level of knowledge. The differences, however, were not statistically significant (p > 0.05) (Tab. 4).

### Table 1. General characteristics of the studied group

| Sex         | N  | %    |
|-------------|----|------|
| Women       | 293| 88,80|
| Men         | 37 | 11,20|

| Age [years] | N  | %    |
|-------------|----|------|
| 25–29       | 49 | 14,80|
| 30–34       | 26 | 7,90 |
| 35–39       | 27 | 8,20 |
| 40–44       | 54 | 16,40|
| 45–49       | 60 | 18,20|
| 50–54       | 56 | 17,00|
| 55–59       | 49 | 14,80|
| 60–64       | 7  | 2,10 |
| >65         | 2  | 0,60 |

| Profession  | N  | %    |
|-------------|----|------|
| Nurse       | 243| 73,60|
| Midwife     | 12 | 3,60 |
| Paramedic   | 23 | 7,00 |
| Physician   | 28 | 8,50 |
| Physiotherapist | 9 | 2,70 |
| Other       | 15 | 4,50 |

| Education   | N  | %    |
|-------------|----|------|
| Vocational  | 4  | 1,20 |
| Secondary   | 158| 47,90|
| Higher vocational | 60 | 18,20|
| Higher      | 108| 32,70|

| Workplace   | N  | %    |
|-------------|----|------|
| General surgery department | 19 | 5,80 |
| Trauma and orthopedic department | 25 | 7,60 |
| Internal medicine department    | 31 | 9,40 |
| Intensive care unit             | 31 | 9,40 |
| Gynecological-obstetrics department | 8 | 2,40 |
| Pediatric ward                   | 50 | 15,20|
| Nephrology department            | 6  | 1,80 |
| Emergency ward                   | 40 | 12,12|
| Pediatric surgery ward           | 7  | 2,10 |
| Operating room                   | 11 | 3,30 |
| Dermatological ward              | 9  | 2,70 |
| Geriatric ward                   | 11 | 3,30 |
| Cardiology department            | 8  | 2,40 |
| Neurology department             | 13 | 4,00 |
| Ophthalmological department      | 10 | 3,00 |
| Rehabilitation ward              | 8  | 2,40 |
| Infectious disease ward          | 14 | 4,30 |
| Other                             | 28 | 8,50 |

| Seniority [years] | N  | %    |
|-------------------|----|------|
| <1                | 8  | 2,40 |
| 1–4               | 39 | 11,80|
| 5–9               | 41 | 12,40|
| 10–14             | 31 | 9,40 |
| >15               | 211| 63,90|

### Table 2. Descriptive statistics of the subjects’ knowledge

| Knowledge | N   | M   | SD  | Min | Maks | Q25 | Q75 |
|-----------|-----|-----|-----|-----|------|-----|-----|
| Knowledge | 330 | 4,44| 2,33| 0,00| 12,00| 2,00| 5,00| 6,00|

N – number of respondents; M – average; SD – standard deviation; Min – minimum; Maks – maximum; Q25 – first quartile; Q75 – third quartile

| Knowledge level | low | 40–49 | >50 |
|-----------------|-----|-------|-----|
| Knowledge       | N   | %     | %   |
| low             | 52  | 51,0% | 45,6%| 46,5%|
| average         | 33  | 32,4% | 49,1%| 43,0%|
| high            | 17  | 16,7% | 5,3% | 10,5%|

| Knowledge level | N   |
|-----------------|-----|
| <40             | 102 |
| 40–49           | 114 |
| >50             | 114 |

χ²– test statistic; df – degrees of freedom; p – statistical significance

Subsequently, the level of knowledge depending on occupation was examined. 10.3% of nurses and 11.5% of the respondents working in another medical sphere had a high level of knowledge, whereas 44.0% of nurses and 57.5% of other professionals had a low level of knowledge. The differences, however, were not statistically significant (p > 0.05) (Tab. 4).
Secondary education, including vocational, was declared by 49.10% of those surveyed, while a bachelor’s and master’s degree by 50.90%. 49.4% of the respondents with secondary education and 45.8% with higher education had a low level of knowledge. On the other hand, 5.6% of people with secondary education and 15.5% with higher education presented a high level of knowledge. Persons with higher education were significantly more likely to have a high-level of knowledge about flu vaccination (Tab. 5).

The respondents were asked whether the workplace – surgical (26.70%) or conservative (73.30%) department, affects the level of knowledge. A low level of knowledge was found in 52.3% of the respondents employed in surgical departments and in 46.1% of those employed in conservative departments. On the other hand, 9.1% of the employees of surgical departments and 11.2% of conservative departments had a high level of knowledge. The differences, however, were not statistically significant (p > 0.05).

Considering the seniority of the respondents, it was found that 49.6% of those who had work for less than 15 years and 46.4% of those who had worked for more than 15 years had a low level of knowledge. 14.3% of the persons with seniority below 15 years and 8.5% with seniority over 15 years had knowledge at a high level. The differences were, however, not statistically significant (p > 0.05).

When analysing the replies to questions regarding the attitudes and beliefs of the respondents about influenza vaccination, it was found that only every third respondent was in favour of vaccination. Slightly over 15% of respondents (17.60%) declared that they had been vaccinated against influenza in the current 2018–2019 season. The vast majority of respondents replied that they had never been vaccinated

**Table 4. The relationship between the level of respondents’ knowledge and the profession**

| Profession | N | % |
|------------|---|---|
| Nurse      | 107 | 44.0 |
| Other      | 50  | 57.5 |
| **Knowledge level** |   |   |
| low        | 111 | 45.7 |
| average    | 27  | 31.0 |
| high       | 25  | 10  |
| **Altogether** | 243 | 100.0 |

χ² – test statistic; df – degrees of freedom; p – statistical significance

**Table 5. The relationship between the level of knowledge of the respondents and education**

| Education | N | % |
|-----------|---|---|
| Secondary | 80 | 49.4 |
| High      | 77 | 45.8 |
| **Knowledge level** |   |   |
| low        | 73 | 45.1 |
| average    | 65 | 38.7 |
| high       | 9  | 5.6 |
| **Altogether** | 162 | 100.0 |

χ² – test statistic; df – degrees of freedom; p – statistical significance

**Table VI. Detailed description of the answers provided**

| Question                                                                 | N   | %   |
|--------------------------------------------------------------------------|-----|-----|
| **Supporter of influenza vaccination**                                   |     |     |
| Yes                                                                      | 110 | 33.30 |
| No                                                                       | 220 | 66.70 |
| Flu vaccination in current season                                        |     |     |
| Yes                                                                      | 58  | 17.60 |
| No                                                                       | 272 | 82.40 |
| **Vaccination**                                                          |     |     |
| Annually                                                                 | 43  | 13.00 |
| Occasionally                                                             | 56  | 17.00 |
| First time this season                                                   | 9   | 2.70 |
| Never                                                                    | 222 | 67.30 |
| Willingness to vaccinate if it was refunded                               |     |     |
| Yes                                                                      | 109 | 33.00 |
| No                                                                       | 221 | 67.00 |
| **Do you recommend influenza vaccination?**                              |     |     |
| Always                                                                   | 31  | 9.40 |
| Often                                                                    | 66  | 20.00 |
| Seldom                                                                   | 76  | 23.00 |
| Never                                                                    | 157 | 47.60 |
| **Inclusion of free vaccinations in the workplace**                      |     |     |
| Yes                                                                      | 180 | 54.50 |
| No                                                                       | 150 | 45.50 |
| **Fear of getting the flu**                                              |     |     |
| Yes                                                                      | 132 | 40.00 |
| No                                                                       | 198 | 60.00 |
| **Work despite symptoms indicative of a current respiratory infection** |     |     |
| Never                                                                    | 56  | 17.00 |
| Seldom                                                                   | 201 | 60.90 |
| Often                                                                    | 73  | 22.10 |
| **Do you think that you are at risk of influenza?**                      |     |     |
| Yes                                                                      | 204 | 61.80 |
| No                                                                       | 126 | 38.20 |
| **Why flu vaccination?**                                                 |     |     |
| According to recommendations                                            | 17  | 24.64 |
| I’m vaccinated every year                                                | 25  | 36.23 |
| I care about my health                                                  | 34  | 49.28 |
| I care about my relatives health                                        | 18  | 26.09 |
| I care about my patients health                                         | 9   | 13.04 |
| **Reasons for the lack of vaccination decision**                         |     |     |
| No evidence of the effectiveness of the vaccine                         | 51  | 19.25 |
| The conviction of low effectiveness                                     | 130 | 49.06 |
| Fear of an adverse reaction to vaccination                               | 55  | 20.75 |
| Lack of time                                                             | 30  | 11.32 |
| The need to pay                                                          | 13  | 4.91 |
| Fear of injection                                                        | 12  | 4.53 |
| Other                                                                    | 14  | 5.28 |

N-number of respondents, %-percentage
against influenza, and only 13% said they were vaccinated every year. One in three would consider vaccinating if it was refunded. Almost half of the respondents replied that they never recommended vaccinating to their patients. 54.5% of the respondents said they could get a flu vaccination free of charge in the workplace. Most respondents (60%) were not afraid of getting the flu, despite the fact that 61.80% thought they were at risk. Only 17.00% of the respondents said that they never undertook work while having the symptoms of flu infection. Nearly half of the respondents (49.06%) voiced the belief that the vaccine was of low effectiveness as justification for the lack of vaccination (Tab. 6).

DISCUSSION

Annual vaccination is the most effective way to prevent and control the health and economic effects associated with getting influenza [8]. Health care professionals play a key role in promoting the vaccination and setting an example to their patients. Vaccination against influenza should be administered to protect oneself and family against falling ill and spreading the virus into the home environment, and to protect patients from falling ill.

The subject of mandatory vaccination against influenza among health care professionals, however, raises much controversy and is full of ethical and legal implications. While some researchers maintain that patient protection is the responsibility of hospitals, and hence the vaccination of employees against influenza should be mandatory [9], other researchers argue that the lack of scientific reports confirming the effectiveness of vaccination and, as such, mandatory vaccination against influenza remains a challenge for health care professionals and remains an open issue [10, 11].

The decision to use vaccinations is influenced by another aspect, often highlighted in publications – the ethical aspect. Some researchers believe that if vaccinated personnel rates are not optimal and campaigns promoting vaccinations are fruitless, mandatory vaccination policies may be introduced. The report from the survey of the National Programme for Combating Influenza (OPZG) stated that a significant proportion of health care workers do not perceive a relationship between the incidence of influenza and health, and the possibility of transmitting the disease to patients [12]. This is confirmed by the research of the authors of the current survey, where most respondents were not afraid of getting the flu. Therefore, it is suggested that there should be a moral order to carry out vaccination in the group of health care workers [13–15]. In the research by Gołębiak et al. [16], the respondents were asked about the ethical nature of influenza vaccination. The results showed that 83% of the staff working in outpatient departments accept the ethical aspect of vaccination; in the group of hospital employees it was 55%, which in total for all the respondents amounted to 66% of respondents [16].

The literature increasingly emphasizes a better understanding of the psycho-social determinants of the personal decision to get vaccinated against influenza [17]. A number of studies on decision models have been developed to assess the vaccination predictive factors. According to these models, the decision to get vaccinated against influenza is mainly due to the belief that the susceptibility to influenza infection is high, and that influenza is a serious infectious disease, whereas the lack of vaccination is due to the belief that vaccination has serious side effects and is not effective [18, 19]. In own study, in the group of persons who declared that they had been vaccinated, almost a half (49.28%) stated that they got vaccinated because they cared about their health, over 25.0% of the respondents said that they got vaccinated because they cared about the health of their families, and 13.04% because they cared about the health of their patients. However, in the group of the non-vaccinated persons, the most frequently cited reason for such a decision was the belief that the vaccine’s effectiveness was low (49.06%).

Despite almost 10 years of efforts and extensive campaigns to vaccinate health care professionals in most European countries, vaccination coverage is still low in this group [20]. In own study, the percentage of vaccinated persons was similar to Italian studies, but considerably lower than in other countries, such as the United States (90.5%), the United Kingdom (68.7%), and other European countries (40–45%) [20–25].

The results of research by Harris et al. showed that a higher vaccination rate against influenza occurred in the situation of legal fortifications resulting from internal regulations of the health care facility, activities promoting vaccination, and the possibility of administering the vaccination free of charge for a period longer than one day [26]. In own research, only every third person would have had themselves vaccinated if the vaccine had been refunded.

In Poland, there is little data on the vaccination status of medical personnel and reports assessing knowledge and allowing to get to know the opinion of healthcare workers about influenza vaccination. However, studies available in the literature show that relatively few medical workers undergo vaccination [14]. The results of the current survey indicate that there is a need to improve the level of support for seasonal influenza vaccination among health care workers. This is due to the fact that only every third respondent is in favour of vaccination, and in the current season (2018–2019) only 17.6% declared that they have been vaccinated, and only 13% are vaccinated annually. Similar results were obtained by Sternal and Owsianko, stating that 20.2% of their respondents performed irregular vaccinations, while 12.5% of the respondents had themselves vaccinated regularly every year [27]. Of particular concern is the fact that in Poland a small part of the nursing staff is vaccinated, and it is the nurse who is the person who has the most frequent contact with patients [16, 27, 28]. In the literature, the main reason for such a small group of workers undergoing vaccination is the lack of adequate knowledge about this type of flu prevention [14, 28].

In own research, vaccination as a prevention measure against influenza was reported by just over 30% of employees. The need to educate and promote health prevention rests on the shoulders of all health care professionals. It is advisable that this education should be properly organized, purposeful and, regular, and the attitudes presented by the interdisciplinary team well grounded and based on current medical knowledge and the recommendations of international organizations [29].

However, own research has shown that knowledge about seasonal influenza vaccination is low, and only every fourth person surveyed acted in accordance with the recommendations. Financial considerations are one of the important reasons for not vaccinating medical staff [16, 27]. In own study, the need to pay for the vaccinations is given
by 15.50% as the reason for not vaccinating. The impact of funding on vaccination is confirmed by American studies, where the vaccination rate was the lowest among medical workers whose employers did not require vaccinations, did not promote them, and did not provide free access to vaccines [30]. The results of the survey conducted among employees of medical facilities under the OPZG project indicate that one of the main factors determining the implementation of preventive vaccinations is providing free access to them at the workplace. Only every third respondent declared that their employer runs free vaccinations for medical staff before and during the flu epidemic season [31]. In own study, however, more than half of the respondents declared that they had access to free vaccination in the workplace, and yet they did take advantage of this type of preventive measure. At the same time, less than 5.0% of the respondents (4.91%) mentioned the necessity to pay as an argument for not being vaccinated. Another recurring reason why health care professionals do not get vaccinated against influenza is the fear of the vaccine and its adverse effect – Vaccine Adverse Effect (VAE) [14]. In the publication by Gołębiak et al., the fear of VAE was brought up as the argument by 31% of the personnel for not being vaccinated [16]. In the study by nSternal et al., 16% of the respondents expressed anxiety about VAE [27], and in own study, every fifth person reported the fear of VAE as the reason for deciding not to get vaccinated.

CONCLUSIONS

1) Healthcare professionals’ knowledge of influenza and seasonal vaccinations is incomplete.

2) Few healthcare workers are vaccinated against influenza in the Cieszyn poviat.

3) The main reason for getting vaccinated is the desire to protect oneself against the illness, while the reason for not getting it is the lack of trust in the vaccine’s effectiveness.

4) A significant percentage of healthcare workers surveyed do not recommend seasonal influenza vaccination for their patients.

5) There is a need to increase efforts to promote annual influenza vaccination among healthcare workers in Cieszyn County of the Silesian Province.

In conclusion, it should be noted that there are many factors behind the decision for or against influenza vaccination. The observations obtained may serve as a voice in the discussion behind the decision for or against influenza vaccination. The results of the survey conducted among employees of medical facilities under the OPZG project indicate that one of the main factors determining the implementation of preventive vaccinations is providing free access to them at the workplace. Only every third respondent declared that their employer runs free vaccinations for medical staff before and during the flu epidemic season [31]. In own study, however, more than half of the respondents declared that they had access to free vaccination in the workplace, and yet they did take advantage of this type of preventive measure. At the same time, less than 5.0% of the respondents (4.91%) mentioned the necessity to pay as an argument for not being vaccinated. Another recurring reason why health care professionals do not get vaccinated against influenza is the fear of the vaccine and its adverse effect – Vaccine Adverse Effect (VAE) [14]. In the publication by Gołębicki et al., the fear of VAE was brought up as the argument by 31% of the personnel for not being vaccinated [16]. In the study by nSternal et al., 16% of the respondents expressed anxiety about VAE [27], and in own study, every fifth person reported the fear of VAE as the reason for deciding not to get vaccinated.

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