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Original Article

Evaluation of Physicians' Knowledge, Attitudes, and Behavior Regarding Influenza Vaccination

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ABSTRACT

Objective: Influenza is a disease that causes mortality, morbidity, and workforce productivity losses, especially in high-risk patients. Healthcare workers are among those at risk for exposure to the flu and for transmission of the virus to the patients. The aim of this study was to evaluate the attitudes and behavior of physicians at one hospital regarding the influenza vaccine.

Methods: A questionnaire comprising 11 questions was used to evaluate the attitudes and behaviors of the physicians working in one hospital with respect to the influenza vaccine.

Results: A total of 105 physicians participated in the study, and 74.3% of the respondents were not vaccinated for influenza virus. The most common reasons given were that it was viewed as unimportant and remissness (64%). The results indicated that 39% of the physicians surveyed did not recommend an influenza vaccine to their patients. Vaccination was most frequently recommended to the patients with chronic lung disease (83.9%). It was also observed that 94.3% of the physicians had not received any education on influenza in previous year.

Conclusion: The most important step in reducing the mortality due to influenza is to increase the rate of influenza vaccination. Awareness of physicians should be increased in order for vaccination programs to be successful throughout the country.

INTRODUCTION

Influenza is a highly infectious airway disease caused by influenza viruses. It is common in the community and is important as a source of regional epidemics and global pandemics. It is transmitted primarily through droplets spread during coughing, sneezing, speaking, and contact with infected excretions of infected individuals. Hospitalization may be required, especially for high-risk patients. The disease may have serious effects and even result in death. Influenza is a self-limiting disease, but may have serious complications in children, in patients with comorbid diseases, pregnant women, and patients aged ≥65 years. It is estimated that influenza-related epidemics annually cause severe disease in approximately 3 to 5 million individuals worldwide and death in 290,000 to 650,000 cases.[1]

The most effective way to prevent influenza-related deaths and hospitalizations is vaccination. The Advisory Committee on Immunization Practices recommends that every person ≥6 months of age be vaccinated, but immunization of some risk groups has been particularly emphasized.[2] Groups at the greatest risk include children aged between 6 and 59 months; individuals over the age of 50 years; patients with chronic lung, cardiovascular, renal, hepatic, neurological, or hematological diseases; those with metabolic disorders; those with a reduced immune response; those taking aspirin or other drugs containing salicylates; pregnant women; children and adolescents who are vulnerable to Reye syndrome after an influenza virus infection; residents of medical care facilities; and the morbidly obese.[2] In addition to these risk groups, the vaccination of healthcare workers who have extensive contact with patients is important in terms of preventing transmission of the virus as well as protecting them from the disease.[3]

The aim of this study was to evaluate the behavior and at-

titudes of physicians regarding the application of influenza vaccine to both themselves and their patients.

MATERIAL AND METHODS

An 11-item questionnaire was used to survey 105 physicians aged 25 years or more working at Umraniye Education and Research Hospital between August 15 and September 15, 2018. This was a descriptive study; face-to-face interviews were conducted and the responses of the participants regarding demographic characteristics and influenza vaccination were recorded on the questionnaire. The data obtained as a result of the research were then analyzed using SPSS for Windows, Version 15.0 (SPSS Inc., Chicago, IL, USA). Mean and SD were used in descriptive analyses.

The questionnaire comprised multiple-choice and yes/no questions related to descriptive personal demographic data of the physicians, their academic title, the department of employment, length of experience, their own record of immunization with the influenza vaccine, their thoughts and attitudes about influenza vaccination, and whether they recommend vaccination against influenza to their patients. More than one response was permitted for some multiple choice questions.

The respondents were asked about their knowledge and attitude regarding the influenza vaccine, including questions about the transmission route of influenza, whether the respondent had been vaccinated and reasons for not being vaccinated, and whether they recommend influenza vaccination to their patients. Those who replied that they recommend vaccination were asked to specify the patient groups for whom they recommend vaccination, and those who responded that they did not recommend influenza vaccination were asked the reason. Finally, the participants were asked to indicate whether they had been educated about influenza in the previous year.

RESULTS

The demographic data of the participating physicians are provided in Table 1. The results indicated that 28.8% of the respondents thought that the influenza virus was a respiratory tract infection, and 71.4% replied that it occurred as the result of the spread of droplets. In all, 25.7% of the physicians surveyed had been vaccinated against influenza every year (Table 2).

Most (61%) of the participants recommended the influenza vaccine to their patients. The responses indicated that 83.9% recommended the vaccine to the patients with chronic lung disease and 79% to individuals aged ≥65 years. A total of 38.7% of the physicians recommended influenza vaccine to all individuals aged ≥6 months and without contraindications (Table 3). However, 39% of the participants did not recommend influenza vaccination to their patients, and the most common reason, given by 37.2%, was that it was not considered useful (Table 4).

Table 1. Demographic characteristics of the physicians participating in the survey

	n	%
Gender		
Female	54	51
Male	51	49
Age (years)		
≤30	64	61.5
31–40	30	28.8
41–50	8	7.7
51–60	3	2
Academic position		
Resident	73	69.5
Specialist	29	27.6
Associate professor	2	2.9
Professor	0	0
Department of employment		
Internal medicine	56	53.3
Surgery	49	46.7
Length of employment in the department (years)		
0–5	83	79
6–10	16	15.2
>10	6	5.7

Table 2. Physicians' attitudes towards getting vaccinated against influenza (n=105)

	n	%
Do you get vaccinated against influenza?		
Yes	27	25.7
No	78	74.3
If your response is 'No,' why is that?		
Lack of importance/remissness	50	64
I don't think it is beneficial	27	35
Concern about side effects	1	1

It was also revealed that 94.3% of the participants did not have any influenza education in the previous year.

DISCUSSION

Influenza can occur in individuals of all groups and can usually be healed without sequelae. However, the effects can be severe, particularly in some risk groups (children <5 years of age, pregnant women, those with chronic diseases, and the elderly), and may even result in death. Vaccination of these individuals is particularly important.[4–6] Influenza can be transmitted from patients to physicians, and from physicians to patients, family members, and colleagues. It is therefore recommended that all healthcare workers who are at high risk should receive an influenza vaccine every year to reduce transmission.[3] However,

Table 3. Patient groups for whom the physicians recommended influenza vaccination and the rates of recommendation

For whom do you suggest a flu vaccine?	n	%
Patients with		
Chronic pulmonary diseases (i.e., asthma, COPD)	52	83.9
>65 years of age	49	79
Metabolic diseases (i.e., diabetes mellitus)	44	71
Immunosuppression	42	67.7
Hematological disease	41	66.1
Cardiovascular disease (i.e., hypertension)	39	62.9
Hospital workers/health care professionals	37	59.2
Renal disease	34	54.8
Liver disease	33	53.2
Neurological disease	32	51.6
Pregnant women	29	46.7
Women planning to become pregnant during the flu season	28	45.2
Children using aspirin	26	41.9
Morbidly obese patients (BMI ≥40 kg/m^2)	25	40.3
All individuals aged >6 months without contraindications	24	38.7

BMI: Body mass index; COPD: Chronic obstructive pulmonary disease.

Table 4. Physicians' reasons for not recommending the influenza vaccination to their patients (n=41)

Why don't you recommend influenza vaccine to your patients?	n	%
I don't believe it is beneficial	16	37.2
Lack of patient request	14	32.6
Lack of importance	11	25.6
Remissness	6	14.4
Concern about side effects	2	4.7
Lack of reimbursement	0	0

healthcare workers often do not get an annual vaccination for reasons including doubt about the reliability of the vaccine, medical contraindications, personal beliefs, fear of injections, insufficient importance given to the disease of influenza, belief that the disease may be mild, and concern that the vaccine will make them sick.[7]

In our study, 25.7% of the physicians had an annual influenza vaccine. Other studies in our country have reported similar rates (30.2%, 34.6%).[8,9] However, Unver-Ulusoy et al.[10] reported a rate of only 11.3% due to a high degree of doubt about the effectiveness of the vaccine. The US Centers for Disease Control recommends that all healthcare workers should be vaccinated with the influenza vaccine every year. Globally, the reported vaccination rate for healthcare workers varies between 13.1% and 60%, depending on the country and the influenza season.[11–15] Antón-Ladislao et al.[14] reported that the vaccination rate was much higher (71%) in physicians aged ≥45 years and with an increased awareness of the risks of influenza. The rate of vaccination of physicians remains insufficient in our country.

Godoy et al.[15] noted that a higher vaccination rate among their study group may have been related to the fact that the majority of the participants were in the age group of 45 to 54 years and had a high level of professional experience. The lower vaccination rate in our study may have been associated with the age of the respondents, 61.5% of whom were under the age of 30, and the relative lack of professional experience, given that 79% were in the first 5 years of their professional career.

A total of 64% of our study participants specified that the primary reasons for non-vaccination were neglect or a lack of belief in the importance, as has also been reported in other studies.[13,16] Additional research conducted in our country has demonstrated that also among the most common reasons for not receiving a vaccination are lack of time,[8] lack of confidence that the vaccine would provide sufficient protection,[9] and disbelief in the effectiveness of the vaccine.[10] The results of our study revealed that the awareness of physicians who are expected to support vaccination was not sufficient. The survey responses regarding knowledge and attitudes about the influenza vaccine indicated that 71.4% of the physicians knew that the disease was transmitted through airborne droplets. Vaccination was most frequently recommended for the patients with chronic lung disease (83.9%), and those aged ≥65 years (79%). Similar results were recorded in the study performed by Unver et al.[10] While our physicians appear to be aware of the importance of influenza-related complications and vaccination in some patients at greater risk, it is of concern that vaccination was largely not recommended for patients with other comorbid diseases. Additional information about the effectiveness of the influenza vaccine and other reminders may help to increase vaccination rates.

The fact that 39% of the physicians in our survey reported not recommending influenza vaccination to their patients and that the principal reason was a lack of confidence in its effectiveness means that a large number of patients are deprived of the benefits of vaccination and that there is a need for more sources of credible information on the subject. Written and visual reminders may be useful; however, the majority of resident doctors (79%) indicated that their heavy workload contributed to forgetting to recommend vaccination to their patients.

An assessment of these results indicated that a lack of information about the influenza vaccine, improper attitudes towards vaccination, underestimating the benefits of vaccination, disbelief in the effectiveness, and lack of time due to an intense work schedule were the most important factors related to nonvaccination. The fact that 94.3% of the participants did not receive influenza education within the previous year suggests that annual education and training to update knowledge and increase physician awareness could help to reduce influenza-related mortality and morbidity.

CONCLUSION

Healthcare workers, and particularly physicians, should be well-informed about the effectiveness of the influenza vaccine and recommend vaccination to patients. Greater community immunization rates, especially in high-risk groups, will help to prevent or reduce instances of hospitalization, losses in workplace productivity, and deaths related to influenza. We believe that regular training and collateral items that can serve as a reminder should be made available in hospitals free of charge every year in order to help reduce the rate of infection.

Ethics Committee Approval

Approved by the local ethics committee (B.10.1.TKH.4.34.H.GP.0.01/23).

Peer-review

Internally peer-reviewed.

Authorship Contributions

Concept: A.S.Ö.; Design: P.Ö.; Data collection &/or processing: Ş.Ç., S.Ö.; Analysis and/or interpretation: M.Ç.Ö.; Literature search: L.N.A.; Writing: A.S.Ö.; Critical review: A.K.

Conflict of Interest

None declared.

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Hekimlerin İnfluenza Aşısı Hakkında Bilgi, Tutum ve Davranışlarının Değerlendirilmesi

Amaç: İnfluenza özellikle yüksek risk grubundaki hastalarda mortalite, morbiditede artışa ve iş gücü kaybına sebep olan bir hastalıktır. Sağlık çalışanları hem maruziyet hem de hastalara bulaş açısından risk grubundadır. Çalışmamızda hastanemizde görev yapan hekimlerin influenza aşısına karşı tutum ve davranışlarının değerlendirilmesi amaçlanmıştır.

Gereç ve Yöntem: Hastanemizde çalışan hekimlere influenza aşısına karşı tutum ve davranışlarını değerlendiren on bir soru içeren bir anket çalışması uygulandı.

Bulgular: Toplam 105 hekim çalışmaya katıldı. Aşılanmayan hekim oranı %74.3 idi. Aşı yaptırmayanlar arasında en sık neden %64 ile aşı yapılmasının ihmal edilmesi/önemsenmemesi idi. Hekimlerin %39'unun influenza aşısını hastalarına önermediği görüldü. Aşı yapılması önerilen hasta grubunda en sık endikasyon kronik akciğer hastalığı (%83.9) idi. Hekimlerin %94.3'ünün son bir yıl içerisinde influenza ile ilgili eğitim almamış olduğu tespit edildi.

Sonuç: Influenza'ya bağlı mortalitenin azaltılmasında en önemli basamak influenza aşılanma oranlarının artırılmasıdır. Aşılama programlarının ülke çapında başarılı olabilmesi için öncelikle hekimlerin bu konudaki farkındalıklarının artırılması gerekmektedir.

Anahtar Sözcükler: Bilgi; farkındalık; hekimler; influenza, influenza aşısı.