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Influenza vaccination coverage rates in five European countries—a population-based cross-sectional analysis of two consecutive influenza seasons

Thomas D. Szucs *, Daniela Müller

Institute for Social- and Preventive Medicine, University of Zurich, Department of Medical Economics, Gloriastrasse 18a, CH-8006 Zurich, Switzerland

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Abstract

Introduction: Influenza continues to be a considerable health problem in Europe. Vaccination is the only preventive measure, reducing mortality and morbidity of influenza in all age groups.
Objectives: The objective of this survey was to assess the level of influenza vaccination coverage during two consecutive influenza seasons (2002/2003 and 2003/2004) in six European countries, to understand the driving forces and barriers to vaccination and to determine vaccination intentions for the following winter.
Methods: We conducted a random-sampling, telephone-based household survey among non-institutionalised individuals representative of the population aged 14 and over. The surveys used the same questionnaire for two consecutive winters: 2002/2003 and 2003/2004 data were used for Germany, Italy, Spain and the United Kingdom. 2001/2002 and 2002/2003 data were used for France. The data were subsequently pooled. Four target groups were determined for analysis: (1) persons aged 65 and over; (2) people working in the medical field; (3) persons suffering from chronic illness and (4) a group composed of persons aged 65 and over or working in the medical field or suffering from a chronic illness.
Results: The overall sample consisted of 20,118 individuals. The influenza vaccination coverage rate increased from 21.3% in the first season to 23.2% in the second season. The increase in coverage is statistically significant ($p = 0.01$). The most frequent reasons for being vaccinated given by vaccines were: influenza, considered to be a serious illness which people wanted to avoid (55.8%), having received advice from the family doctor or nurse to be vaccinated (55.2%) and not wanting to infect family and friends (36.1%). Reasons for not being vaccinated mentioned by people who have never been vaccinated were: not expecting to catch influenza (40.4%), not having considered vaccination before (33.3%) and not having received a recommendation from the family doctor to be vaccinated (27.3%). Options encouraging influenza vaccination are: recommendation by the family doctor or nurse (53.1%), more available information on the vaccine regarding efficacy and tolerance (32.1%) and more information available about the disease (26.7%). Adjusted odds ratios for target group vaccination were between 3.6 (Germany) and 13.7 (UK). Vaccination rates among healthcare workers were generally very low. Adjusted odds ratios were between 0.7 (Germany) and 1.5 (Spain).
Conclusion: The vaccination coverage during the second season increased in comparison to the first season. The family doctor is the most important source of encouragement for people to be vaccinated against influenza. It seems that the public would be more likely to be vaccinated if they had more information on the efficacy and tolerance of the vaccine, as well as the disease. We, therefore, suggest that family doctors be better informed on influenza vaccine and the disease itself, so that they can actively inform their patients on these topics.

Keywords: Influenza; Vaccination; Coverage; Europe; Health care; Elderly

* Corresponding author. Tel.: +41 16344704; fax: +41 16344708.
E-mail addresses: thomas.szucs@ifspm.unizh.ch, t.szucs@bluewin.ch (T.D. Szucs).

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1. Introduction

Influenza is often seen as a problem-free and self-limiting disease despite putting a high burden on patients as well as being of high socio-economic relevance to society [1]. It continues to be a considerable health problem in Europe. Influenza is a major cause of morbidity and mortality affecting up to 25% of the population each year [2]. The typical case of influenza may be characterized by the abrupt onset of fever, sore throat, non-productive cough, myalgias, headache and malaise. Symptoms usually last for 5 to 6 days. Elderly and other high-risk persons are especially vulnerable to the serious complications of influenza [2].

Vaccination is an effective way of reducing the mortality and morbidity of influenza especially in the elderly and patients with high risk conditions [3]. Vaccination can prevent about 50% of deaths from pneumococcal disease and 80% of deaths from influenza-related complications in the elderly [4]. In addition to providing substantial health benefits, vaccination may also be associated with significant economic benefits, not only among the elderly but also among healthy working adults and even children. Healthy working adults traditionally have not been included among the priority groups targeted for annual influenza vaccination. Fewer than 25% of the persons aged between 18 and 64 years received an influenza vaccination during 1997. Nevertheless, the effect of influenza on this group is also substantial. Influenza vaccination of healthy working adults is, on average, cost saving [2].

In general, population-based studies of influenza vaccination coverage for a country do not exist. A Canadian study found 13.8% influenza vaccination coverage in fall and winter 1990–1991 [5]. Most studies on influenza vaccination coverage investigate specific groups such as the elderly [6–15], patients from general practices [16,17], or hospitalized patients [18].

2. Objectives

The primary aim of this study is to identify the level of influenza vaccination coverage in two consecutive influenza seasons in five European countries. We also wanted to know whether coverage was associated with demographic parameters.

The second objective is to understand the determinants for being vaccinated or not and to obtain the population's opinion on influenza and vaccination. A further objective was to examine the options which encourage people to be vaccinated and to find out their vaccination intentions for the following winter.

3. Methods

This study is a population-based survey performed during two consecutive influenza-seasons: 2002/2003 and 2003/2004 for Germany, Italy, Spain and the United Kingdom and 2001/2002 and 2002/2003 for France. The questionnaire was circulated via telephone omnibus among non-institutionalised individuals representative of the population, between December and January. For France, data were based on the yearly survey by GEIG (Groupe d'Etude et d'Information sur la Grippe) carried out by mail. The questions were identical in both seasons. The list of possible answers with respect to determining driving forces and barriers to vaccination, as well as encouragement to be vaccinated, is inserted in Table 1. The first season comprises the German, Italian, Spanish and UK data for 2002/2003 as well as the French 2001/2002 data. The second season

Table 1
Overview of the possible answers

Why did you get vaccinated this winter?
Because it's free: the Social Security pays for it
So that I do not pass the flu bug to my family and friends
Because flu is a serious illness and I did not want to get it
The doctor at work offered to do it for me
My family doctor/nurse advised me to do it
My pharmacist advised me to do it
Because of my age
Because I am not in very good health
To prevent the flu from interrupting my professional activities
Because it is required/indicated for my job
Because I got the flu last year
Other reasons
Don't know/no answer
Why do you not get vaccinated against the flu ?
I don't think I am very likely to catch the flu
I thought about it but I didn't end up getting vaccinated
My family doctor has never recommended it to me
My doctor at work has never recommended it to me
My pharmacist has never recommended it to me
It is not a serious enough illness
I do not think the vaccine is effective enough
I do not like injections/needles
I have never considerered it before
There is a new treatment which helps cure the flu
I am too young to be vaccinated
I am against vaccinations
It is too complicated to get vaccinated
It is too expensive, it is not reimbursed
Other reasons
Don't know/no answer
Which of the following options would encourage you to be vaccinated against flu ?
If I could be vaccinated at work
If my doctor/nurse recommended it to me
If my pharmacist recommended it to me
If there were other ways of administering the vaccine (orally, injection without a needle, etc.)
If it were cheaper
If I had more information on the vaccine regarding efficacy and tolerance
If I knew more about the disease
I would not change my mind, I would never be vaccinated
Other
Don't know/no answer