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Assessment of knowledge, attitudes, and practices of physicians regarding vaccination against Herpes zoster

Evaluación de los conocimientos, actitudes y prácticas de los médicos con respecto a la vacunación contra Herpes zóster

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RESUMEN

Objective To evaluate the knowledge, attitudes, and practices of the physicians of a fourth-level institution in Colombia, regarding vaccination against Herpes-zoster.
Methodology An email survey was applied to 141 general physicians and specialists in various areas.
Results 85.3 % of those surveyed knew about the existence of the vaccine against Herpes-zoster, and 50% knew that there are two types of vaccines. 60.8% were aware of the recommendation to vaccinate as from the age of 50. However, only 11.8% of the physicians recommended the vaccine to between 25 and 100% of their patients over 50 years of age. 36.3% and 41.2% of the physicians never made this recommendation to adults over 60 and 50 years of age, respectively.
Conclusions In a fourth-level institution in Colombia, most physicians in a fourth-level institution know about the existence of the Herpes-zoster vaccine, but this knowledge is not reflected in their clinical practices and the recommendations given to their patients.

Key Words: Herpes zoster; surveys and questionnaires; herpes zoster ophthalmicus; primary prevention; knowledge (*source; MeSH, NLM*).

ABSTRACT

Objetivo Evaluar los conocimientos, actitudes y prácticas de los médicos de una institución de cuarto nivel en Colombia en relación con la vacunación contra Herpes-zóster.
Metodología Se aplicó una encuesta por correo electrónico a 141 médicos generales y especialistas en diversas áreas.
Resultados El 85,3 % de los encuestados conocía la vacuna contra el Herpes-zóster y el 50 % sabía que existen dos tipos de vacunas. El 60,8 % conocía la recomendación de vacunar a partir de los 50 años. Sin embargo, solo el 11,8 % de los médicos recomendaban la vacuna a entre el 25 y el 100 % de sus pacientes mayores de 50 años. El 36,3 % y el 41,2 % de los médicos nunca hacían esta recomendación a los adultos mayores de 60 y de 50 años, respectivamente.
Conclusiones En una institución de cuarto nivel en Colombia, la mayoría de los médicos conocen la existencia de la vacuna Herpes- zóster, pero este conocimiento no se refleja en sus prácticas clínicas y en las recomendaciones que les dan a sus pacientes.

Palabras Clave: Herpes zóster; encuestas y cuestionarios; Herpes zóster oftálmico; prevención primaria; conocimiento (*fuente: DeCS, BIREME*).

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The Varicella-zoster Virus (VZV) causes chickenpox, usually in childhood, and Herpes-zoster (HZ), which is the reactivation, usually in adults, of latent virus in the neurosensory ganglia. HZ occurs because of the decrease in cell-mediated

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immunity related to aging (1-5). More than 95 % of young adults in Europe and North America, have seropositivity for HZ, this means, that they are population at risk of suffering from HZ throughout their lives (6,7). It is considered that without vaccination, around 30 % of all adults will present HZ, and if they live up to 85 years or more, this percentage will reach 50 %, which is why it becomes relevant as a public health problem (8,9). Additionally, to make matters worse, it has been suggested that COVID-19 and some of the vaccines against this virus, may increase the risk of developing HZ (10,11).

The HZ vaccine consisting of live attenuated virus has been available for more than a decade, and in 2017 a recombinant vaccine was approved by the United States Food and Drug Administration (FDA) (8,9,12). In some countries, studies have been carried out on the attitudes and practices of physicians regarding vaccination against HZ (8). There are no data in this regard on health professionals in Colombia. To establish the level of knowledge, attitudes, and practices of the institution's physicians regarding the vaccines available for HZ and their recommendations to the target population, this study was carried out in a fourth-level complexity clinic in northeastern Colombia (Fundación Oftalmológica de Santander, FOSCAL).

MATERIAL AND METHODS

A cross-sectional survey was applied in the months of February to May 2020 to medical interns, graduated physicians, residents, and specialists of the Fundación Oftalmológica de Santander (FOSCAL) in Floridablanca (Colombia).

The survey design was carried out in the Google forms program, including 20 questions with closed dichotomous and multiple-choice answers. The questionnaire included questions about academic training, year of graduation, general knowledge of the HZ vaccine (types and commercial names of the vaccine, age of indication); status of vaccination against HZ; attitude of physicians about the recommendation of vaccination for adult patients (older than 50 and older than 60 years of age); attitude about the importance and indication of the HZ vaccine at these ages; and knowledge about population at risk of HZ.

The sample was selected at convenience among physicians with direct employment ties, by providing services (in private clinics) or with academic ties with FOSCAL, for a total of 141 participants. A reminder message of the completion of the survey was sent by email every three weeks, for two times.

The subjects consented to participate in the survey, before proceeding to fill it out. The information obtained from the survey was protected by anonymity, since no identification data was required and sensitive data was not asked. Completion of the survey was voluntary, without financial compensation or any other type of incentive.

The health professionals were classified into four groups according to the level of training: a first group described by the acronym I&GP (Interns and General Practitioners); a second group made up of residents of different specialties; a third group including physicians with specialty (specialists), and the last group included physicians who also had subspecialty or fellowship, described by the acronym F&S (Fellows and Subspecialists). Questions that were unanswered were reported as "not responding".

For statistical analysis, Cronbach's alpha coefficient was estimated to establish the internal consistency of the survey. The response rate of the respondents was calculated and the responses were grouped according to the level of academic training of the respondents. A descriptive analysis was carried out with absolute and relative frequencies. Fisher's exact test was used to establish a relationship between the level of academic training and the answers obtained. An alpha of 0.05 was taken as the significance value. The R program was used for statistical analysis.

All procedures in this study were performed in accordance with the ethical standards of the institutional ethics committee Fundación Oftalmológica de Santander FOSCAL, and with the 1964 Helsinki declaration and its later amendments.

RESULTS

From the total 141 surveys sent, the percentage of response was 72.3 % with 102 answered surveys. 13.7 % of those surveyed reported that they had obtained a medical degree before 1985, 11 % between 1985 and 1995, 11.8 % between 1996 and 2005, 38.2 % between 2006 and 2015, and 14.7 % in 2016 or later. 9.8 % were interns in their last medical school year. The characteristics of the four groups of surveyed physicians are described in Table 1.

The internal consistency of the survey composed of 20 items, was high, since Cronbach's alpha coefficient yielded a value of 0.85.

General knowledge of physicians about HZ and the vaccine

It was found that 85.3 % of the respondents knew about the existence of the vaccine against HZ and, in addition, that the answers to the question of how many vaccines were available against HZ, varied depending on the academic level ($p=0.03$) (Table 2).

Regarding the association of the knowledge about the existence of the vaccine and the four groups of health professionals, the proportions of positive responses, in descending order, were 95.8 % in residents; 92,6 % in the

Table 1. Description of surveyed physicians

Specialty Area	Total (102) N (%)	Specialists (28) N (%)	I&GP (23) N (%)	F&S (27) N (%)	Residents (24) N (%)
Anesthesia	10(9,8)	5(17,8)	0(0,0)	4(14,8)	1(4,1)
General surgery	3(2,9)	2(7,1)	0(0,0)	1(3,7)	0(0,0)
Dermatology	11(10,8)	4(14,2)	0(0,0)	2(7,4)	5(20,8)
Gynecology	2(2,0)	0(0,0)	0(0,0)	0(0,0)	2(8,3)
Internal medicine and specialties*	10(9,8)	7(25,0)	0(0,0)	1(3,7)	2(8,3)
Ophthalmology	33(32,4)	4(14,2)	0(0,0)	18(66,6)	11(45,8)
Otorhinolaryngology	1(1,0)	1(3,5)	0(0,0)	0(0,0)	0(0,0)
Pediatrics	1(1,0)	0(0,0)	0(0,0)	1(3,7)	0(0,0)
Urology	1(1,0)	0(0,0)	0(0,0)	0(0,0)	1(4,2)
Other	7(6,9)	5(17,8)	1(4,3)	0(0,0)	1(4,2)
No answer	23(22,5)	0(0,0)	22(95,7)	0(0,0)	1(4,2)

I&GP: intern/general practitioner. F&S: fellow/subspecialist; *Cardiology, Rheumatology, Immunology, Nephrology, Hematology, Pneumology, Intensive care.

Table 2. Additional survey questions on knowledge about Herpes zoster vaccine

Question N (%)		Total (102) N (%)	Specialists (28) N (%)	I&GP (23) N (%)	F&S (27) N (%)	Resident (24)	P *
Do you know about the HZ vaccine?	Yes	87 (85,3)	23 (82,2)	16 (69,6)	26 (92,6)	23 (95,8)	0,05
	No	15 (14,7)	5 (17,8)	7 (30,4)	2 (7,4)	1 (4,2)	
How many types of HZ vaccine exist worldwide?	1	9 (8,8)	1 (3,6)	3 (13,0)	2 (7,4)	3 (12,5)	0,03**
	2	51 (50,0)	12 (42,8)	8 (34,8)	17 (63,0)	14 (58,3)	
	>2	4 (3,9)	1 (3,6)	3 (13,0)	0 (0,0)	0 (0,0)	
	I do not know	24 (23,5)	10 (35,7)	2 (8,7)	6 (22,2)	6 (25,0)	
	No answer	14 (13,7)	4 (14,3)	7 (30,4)	2 (7,4)	1 (4,2)	
What is the name of the non-replicative recombinant vaccine against HZ?	Shingrix	35 (34,3)	9 (32,1)	7 (30,4)	12 (44,4)	7 (29,2)	0,29
	Zostavax	16 (5,7)	3 (10,7)	4 (17,4)	4 (14,8)	5 (20,8)	
	I do not know	35 (34,3)	10 (35,7)	5 (21,7)	9 (33,3)	11 (45,8)	
	No answer	16 (15,7)	6 (21,4)	7 (30,4)	2 (7,4)	1 (4,2)	
From what age is the HZ vaccine recommended according to AAO, AAD and FDA?	≥ 50 years	62 (60,8)	19 (67,9)	10 (43,5)	17 (63,0)	16 (66,7)	0,14
	≥ 60 years	10 (9,8)	1 (3,6)	2 (8,7)	2 (7,4)	5 (20,8)	
	≥ 70 years	1 (1,0)	0 (0,0)	1 (4,3)	0 (0,0)	0 (0,0)	
	I do not know	15 (14,7)	4 (14,3)	3 (13,0)	6 (22,2)	2 (8,3)	
	No answer	14 (13,7)	4 (14,3)	7 (30,4)	2 (7,4)	1 (4,2)	
Does a patient with the replicative vaccine subsequently require the non-replicative vaccine?	Yes	20 (19,6)	5 (17,9)	2 (8,7)	8 (29,6)	5 (20,8)	0,15
	No	68 (66,7)	19 (67,9)	14 (60,9)	17 (63,0)	18 (75,0)	
	No answer	14 (13,7)	4 (14,3)	7 (30,4)	2 (7,4)	1 (4,2)	
What is the percentage of people who will suffer from HZ?	Less than 2 %	13 (12,7)	5 (17,9)	2 (8,7)	4 (14,8)	2 (8,3)	0,44
	About 10 %	34 (33,3)	2 (39,3)	10 (43,5)	5 (18,5)	8 (33,3)	
	About 30 %	36 (35,3)	10 (35,7)	8 (34,8)	10 (37,0)	8 (33,3)	
	I do not know	19 (18,6)	2 (7,1)	3 (13,0)	8 (29,6)	6 (25)	
Does having HZ increase the risk of stroke in the next 30 to 60 days after the appearance of skin lesions?	Yes, I already knew that	19 (18,6)	7 (25,0)	5 (21,7)	4 (14,8)	3 (12,5)	0,65
	No, I did not know this information	83 (81,4)	21 (75,0)	18 (78,3)	23 (85,2)	21 (87,5)	
HZ occurs more frequently in CNTD patients.	Yes, I already knew that	86 (84,3)	24 (85,7)	18 (78,3)	23 (85,2)	21 (87,5)	0,86
	No, I did not know this information	16 (15,7)	4 (14,3)	5 (21,7)	4 (14,8)	3 (12,5)	

I&GP: intern/general practitioner. F&S: fellow/subspecialist; HZ: Herpes zoster. AAO: American Academy of Ophthalmology. AAD: American Academy of Dermatology. CNTD: chronic non-transmissible diseases.
* Fisher's exact test, ** Statistically significant.

F&S group; 82,1 % among the specialists, and 69,8 % in the I&GP group (p=0.05) (Table 2).

On the other hand, there was statistically significant difference among the four groups of physicians with regard to the knowledge about the available types of HZ vaccine. A higher percentage of the F&S group (63 %) correctly answered that there were 2 types available.

56.9 % of all the physicians surveyed were aware of the existence of a recombinant vaccine against HZ approved by the FDA for patients 50 years of age or older. However, the percentage of respondents who knew the name of this vaccine (Shingrix) was only 34.4 %. In addition, 33.3 % of the physicians answered correctly that approximately 30 % of the population will suffer from HZ in their lifetime, while 46 % answered incorrectly indicating that 10 % or less of the population will suffer from HZ throughout their lifetime (Table 2).

60.8 % of those surveyed, correctly identified that the appropriate age for the application of the HZ vaccine is from the age of 50 onwards. Importantly, 81.4 % of those surveyed reported not previously knowing that suffering from HZ increased the risk of cerebrovascular disease (Table 2).

Self-reported vaccination status

Of the 102 physicians surveyed, 40 subjects (39.2 % of the total) reported being over 50 years of age. Among these older adults that responded the survey, only 2 individuals (5 %) reported already being vaccinated against HZ: a dermatologist and an anesthesiologist. 62.5 % of those older than 50 years reported that they were not vaccinated and 32.5 % did not answer this question.

Physician Attitudes Regarding the HZ Vaccine in Their 50- and 60-Year-Old Patients

Of the professionals surveyed 56.9 % and 52 % stated that they considered vaccination against HZ important in those over 50 and 60 years of age, respectively (Table 3).

On the other hand, only 11.8 % of the professionals reported that they recommended the application of the HZ vaccine to more than 25 % of their patients 50 years or older, and 11.7 % to more than 25% of their patients 60 years or older. Additionally, during medical consultations only 29.4 % of the professionals reported that they recommended at least to some of their patients over 50 years of age the application of the HZ vaccine and only 30.3 % recommended it to at least some of your patients over 60 years of age. Of those surveyed 36.3 % and 41.2 % did not make this medical recommendation to any of their patients aged 60 years or older and 50 years or older, respectively (Table 3).

Of the physicians surveyed, 45.1% indicated that they did not ask any of their patients 50 years of age or older, about HZ vaccination status, and only 4.9 % of them asked about HZ vaccination status to more than 75 % of their patients of this age group (Table 3).

Only 1 % of those surveyed stated that they considered that more than 25 % of their patients aged 50 years or older had already been vaccinated, and only 2 % of those surveyed reported that they considered that more than 25 % of their patients 60 years or older had already received the vaccine (Table 3).

DISCUSSION

The option of vaccination against HZ with a live attenuated virus vaccine (Zostavax, Merck Sharp & Dohme Limited, Hertfordshire, United Kingdom) has existed for approximately twelve years, but the use of this vaccine, even in developed countries, has been less than expected (8).

In our study in Colombia, 102 surveys were answered, and it was observed that there was no relationship between the knowledge about the existence of the HZ vaccine and the four groups of physicians, divided according to the level of medical training (P = 0.05). Knowledge on the existence vaccine was higher in the residents, followed by the F&S, specialists and I&GP groups, in descending order, but differences did not reach statistical significance. (Table 2). However, this trend may suggest that it is important to reinforce HZ vaccine education among undergraduate students in medical schools.

Surveys similar to the one applied in the present study have been carried out in other countries. In an article published by Tsui *et al*. in 2018, 138 physicians were surveyed at a United States institution (New York University Langone Health, NYULH). The authors found that they had a good knowledge of the recommendations of the Advisory Committee on Immunization Practices (ACIP) and the approval of the US FDA of vaccination against HZ in patients older than 60 years, reaching an average of 78% of correct answers to this question.

Comparatively, in the present study in Colombia, 70.6 % of those surveyed knew that it was indicated in those over 60 years of age. Of the physicians surveyed in the USA, 63 % knew that the indication had already been extended to those over 50 years of age, and similarly in our study this percentage was 60.8 %. In the present study, 52 % of those surveyed agreed that vaccination in those over 60 years of age was an important clinical priority, while in the North American study, this percentage was 35 % (8). Additionally, 56.9 % of those surveyed in the present study consider vaccination in people over 50 years of age an important clinical priority, which is the current recommendation of the American Academy of Ophthalmology (AAO), American Association of Dermatology (AAD)

Table 3. Physician attitudes towards the HZ vaccine

Question N (%)		Total (102) N (%)	Specialists (28) N (%)	I&GP (23) N (%)	F&S (27) N (%)	Residents (24)
What percentage of your patients ≥ 50 years of age do you ask if they have received the HZ vaccine?	0%	46 (45,1)	12 (42,9)	6 (26,1)	13 (48,1)	15(62,5)
	1-25 %	16 (15,7)	4 (14,3)	2 (8,7)	5 (18,5)	5 (20,8)
	26-75 %	7 (6,9)	2 (7,1)	1 (4,3)	3 (11,1)	1 (4,2)
	76-100 %	5 (4,9)	4 (14,3)	0 (0,0)	1 (3,7)	0 (0,0)
	I do not have that information	14 (13,7)	2 (7,1)	7 (30,4)	3 (11,1)	2 (8,3)
	No response	14 (13,7)	4 (14,3)	7 (30,4)	2 (7,4)	1 (4,2)
What percentage of your patients ≥ 60 years of age do you ask if they have received the HZ vaccine?	0 %	46 (45,1)	12 (42,9)	8 (34,8)	10 (37,0)	16 (66,7)
	1-25 %	15 (14,7)	4 (14,3)	2 (8,7)	6 (22,2)	3 (12,5)
	26-75 %	3 (2,9)	1 (3,6)	1 (4,3)	0 (0,0)	1 (4,2)
	76-100 %	8 (7,8)	5 (17,9)	0 (0,0)	3 (11,1)	0 (0,0)
	I do not have that information	15 (14,7)	2 (7,1)	5 (21,7)	6 (22,2)	2 (8,3)
	No response	15 (14,7)	4 (14,3)	7 (30,4)	2 (7,4)	2(8,3)
What approximate percentage of your patients ≥ 50 years have already been vaccinated against HZ?	0 %	3 (2,9)	1 (3,6)	1 (4,3)	4 (14,8)	1 (4,2)
	1-25 %	16 (15,7)	6 (21,4)	1 (4,3)	0 (0,0)	5 (20,8)
	26-75 %	1 (1,0)	0 (0,0)	0 (0,0)	0 (0,0)	1 (4,2)
	76-100 %	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)
	I do not have that information	68 (66,7)	17 (60,7)	14 (60,9)	21 (77,8)	16 (66,7)
	No response	14 (13,7)	4 (14,3)	7 (30,4)	2 (7,4)	1 (4,2)
What approximate percentage of your patients ≥ 60 years have already been vaccinated against HZ?	0 %	5 (4,9)	1 (3,6)	2 (8,7)	0 (0,0)	2 (8,3)
	1-25 %	14 (13,7)	5 (17,9)	1 (4,3)	3 (11,1)	5 (20,8)
	26-75 %	1 (1,0)	0 (0,0)	0 (0,0)	1 (3,7)	0 (0,0)
	76-100 %	1 (1,0)	1 (3,6)	0 (0,0)	0 (0,0)	0 (0,0)
	I do not have that information	67 (65,7)	17 (60,7)	13 (56,5)	21 (77,8)	16 (66,7)
	No response	14 (13,7)	4 (14,3)	7 (30,4)	2 (7,4)	1 (4,2)
What percentage of your patients ≥ 50 years do you recommend getting vaccinated against HZ?	0 %	42 (41,2)	12 (42,9)	6 (26,1)	12 (44,4)	12 (50,0)
	1-25 %	19 (18,6)	4 (14,3)	3 (13,0)	4 (14,8)	8 (33,3)
	26-75 %	6 (5,9)	1 (3,6)	1 (4,3)	3 (11,1)	1 (4,2)
	76-100 %	6 (5,9)	4 (14,3)	0 (0,0)	1 (3,7)	0 (0,0)
	I do not have that information	16 (15,7)	3 (10,7)	6 (26,1)	5 (18,5)	2 (8,3)
	No response	14 (13,7)	4 (14,3)	7 (30,4)	2 (7,4)	1 (4,2)
What percentage of your patients ≥ 60 years do you recommend getting vaccinated against HZ?	0 %	37 (36,3)	12 (42,9)	5 (21,7)	9 (33,3)	11 (45,8)
	1-25 %	19 (18,6)	3 (10,7)	3 (13,0)	6 (22,2)	7 (29,2)
	26-75 %	3 (2,9)	1 (3,6)	0 (0,0)	1 (3,7)	1 (4,2)
	76-100 %	9 (8,8)	5 (17,9)	2 (8,7)	2 (7,4)	0 (0,0)
	I do not have that information	20 (19,6)	3 (10,7)	6 (26,1)	7 (25,9)	4 (16,7)
Do you consider it important that those ≥ 50 years of age get vaccinated against HZ?	Yes	58 (56,9)	16 (57,1)	11 (47,8)	15 (55,6)	16 (66,7)
	Probably yes	25 (24,5)	5 (17,9)	5 (21,7)	8 (29,6)	7 (29,2)
	Probably not	1 (1,0)	1 (3,6)	0 (0,0)	0 (0,0)	0 (0,0)
	I am not sure	4 (3,9)	2 (7,1)	0 (0,0)	2 (7,4)	0 (0,0)
	No response	14(13,7)	4 (14,3)	7 (30,4)	2 (7,4)	1 (4,2)
Do you consider it important that those ≥ 60 years of age get vaccinated against HZ	Yes	53 (52,0)	17 (60,7)	9 (39,1)	13 (48,1)	14 (58,3)
	Probably yes	27 (26,5)	4 (14,3)	4 (17,4)	11 (40,7)	8 (33,3)
	No	1 (1,0)	0 (0,0)	1 (4,3)	0 (0,0)	0 (0,0)
	Probably not	4 (3,9)	2 (7,1)	2 (8,7)	0 (0,0)	0 (0,0)
	I am not sure	4 (3,9)	2 (7,1)	0 (0,0)	1 (3,7)	1 (4,2)
	No response	13 (12,7)	3 (10,7)	7 (30,4)	2 (7,4)	1 (4,2)

I&GP: intern/general practitioner. F&S: fellow/subspecialist; No significant value was found in the Fisher's exact test between the groups.

and Administration of US Food and Drug Administration (FDA). However, the clinical attitude contrasted with the medical knowledge found in the present survey among physicians in Colombia, since 41.2 % reported that they did not recommend the application of the vaccine to any of their patients over 50 years of age, and only the 5.9 % recommended it to more than 75 % of them (Table 3). Additionally, at the institution, only 5 % of the doctors over 50 years of age, who participated in the survey, had been immunized against HZ. The data also suggested a very low vaccination rate in the population attended by the surveyed physicians. Similarly, in the study by Tsui *et al*. (8) respondents considered that only 11 % of their immunocompetent patients aged 50 to 59 years had received the HZ vaccine, also reflecting a low vaccination rate in a North American institution.

Without a doubt, HZ is a condition that causes significant morbidity, and can leave important sequelae, such as postherpetic neuralgia, and visual consequences when it affects the eye (2-4). Additionally, in a large population cohort (more than 500,000 people in Korea), HZ significantly increased the risk of stroke and myocardial infarction even after meticulously correcting for potential confounders, especially in those relatively young who have less risk for atherosclerosis (13). In this regard, in our group of surveyed physicians, only 18.6 % reported

knowing that suffering from HZ increased the risk of Cerebrovascular Disease (CVD).

In October 2017, the FDA approved a new recombinant vaccine, the varicella-zoster virus glycoprotein E subunit with adjuvant AS01B (Shingrix, GlaxoSmithKline, GSK, Research Triangle Park, North Carolina, USA) for prevention of HZ in adults aged 50 years and older and the ACIP recommended its use in immunocompetent adults aged 50 years or older (14). The efficacy of this new vaccine has been shown to be even higher than the previously available live attenuated virus vaccine, reaching figures of up to 97.4 % and 91.3 % in adults 50 years of age and older and 70 years of age and older, respectively (12, 14) while the live attenuated virus vaccine (Zostavax) achieved around 55 % effectiveness in protection (14). Based on the aforementioned percentages of efficacy with the Shingrix vaccine, the goal of achieving a substantial reduction in new cases of HZ seems very possible. However, to get there, we have a long way to go in Colombia. An obvious proof is that among the surveyed health professionals over 50 years of age, only a tiny minority (5 %) reported being already vaccinated. It is then necessary to work on a change in attitude, starting from this point. Health policies should be developed to increase the knowledge of professionals about the incidence, associated risks and prevention of HZ, emphasizing the groups of professionals where less knowledge of vaccination against HZ was found. Also, reinforcing a transfer of this knowledge to real-life clinical practice, since we found that despite having the knowledge, the surveyed physicians do not make recommendations on vaccination to their patients. Study of health costs, economic production of the patient and the negative effects on the quality of life of patients, published in other countries have shown the benefit of vaccination against HZ (15,16).

We consider that our study contributes to identify the gaps in knowledge, and the critical points where work is required to cause a change in attitude and the practice of medicine and guide the activities to be carried out within the medical community. The knowledge and attitude of the physicians about HZ vaccine most probably play a role in the objective of increasing coverage of the HZ vaccine and eventually reducing the incidence and costs in health and quality of life associated with this disease.

Study limitations

This study has several limitations. It was a study conducted through a survey in a fourth-level medical institution, which may not reflect the knowledge and medical attitudes of the entire Colombian medical population. The survey does not allow estimating the real number of patients older than 50 or 60 years already vaccinated but reflects only the concept in this regard by the respondents. In addition, the comparison with other surveys performed in other countries, is difficult to carry out due to the differences in the design and timing of the study.

Furthermore, the comparison with other surveys is difficult to carry out due to the differences in the study design ♠

Conflict of interest: None.

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