

The TAMARA II Trial. Smoking Among Physicians in Argentina

Estudio TAMARA II. Tabaquismo en médicos de la República Argentina II

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ABSTRACT

Background: Smoking is the leading cause of preventable morbidity and death. It is important to know the characteristics of smoking habits among physicians and their attitude toward patients who smoke.

Objective: The aim of this study is to investigate the prevalence of smoking among physicians in Argentina, the factors associated with tobacco consumption and their attitude toward their patients who smoke.

Methods: An observational cross-sectional study was performed between June and December 2013 in Argentine physicians of different specialties. Using a structured survey, the following variables were analyzed: associated cardiovascular risk factors, characteristics of tobacco consumption, smoking cessation training and the attitude toward the patient who smokes.

Results: 3,033 physicians were surveyed, 57% were men, and mean age was 41.3±12 years; 19.7% were current smokers and 21.7% were former smokers. The probability of being a smoker was higher among surgeons (OR 1.29) or physicians working at the emergency room (OR 1.41).

Undergraduate and postgraduate tobacco cessation training was achieved by 36.6% and 40.8% of physicians, respectively. Young physicians, clinical specialties or private practice were associated with higher level of training. Tobacco cessation counseling was more frequent in physicians with higher level of training than physicians who smoked or surgeons.

Former smokers presented higher prevalence of risk factors and cardiovascular events. Family history of smoking habit was more common in former smokers and current smokers.

Conclusions: The prevalence of smoking among Argentine physicians is high. Different factors are involved in the probability of smoking, tobacco cessation training or the possibility of medical counseling. Higher level of training in smoking cessation must be provided.

Key words: Smoking - Epidemiology - Physicians - Risk Factors, Vascular - Smoking cessation

RESUMEN

Introducción: El tabaquismo es la principal causa de morbimortalidad evitable, por lo que es importante conocer las características del tabaquismo en los médicos y su actitud con los pacientes fumadores.

Objetivo: Investigar la prevalencia de tabaquismo en médicos de la Argentina, los factores asociados con su consumo y la conducta frente a sus pacientes fumadores.

Material y métodos: Estudio observacional y transversal de médicos de distintas especialidades de la Argentina, realizado entre junio y diciembre de 2013. Mediante una encuesta estructurada, se analizaron factores de riesgo cardiovascular asociados, las características del consumo de tabaco, el entrenamiento en tabaquismo y la actitud frente al paciente fumador.

Resultados: Se encuestaron 3.033 médicos, 57% varones, edad promedio 41,3 ± 12 años, con una proporción de fumadores del 19,7% y de exfumadores del 21,7%. Ejercer una especialidad quirúrgica (OR 1,29) o trabajar en urgencias (OR 1,41) aumentó la probabilidad de ser fumador.

El 36,6% y el 40,8% recibieron entrenamiento antitabaco en pregrado y posgrado, respectivamente. Ser joven, tener una especialidad clínica o trabajar en un medio privado se asoció con mayor adiestramiento. Aquellos con capacitación tenían mayor posibilidad de brindar siempre consejo de cesación y lo daban menos los fumadores o los que ejercían especialidades quirúrgicas.

Los exfumadores presentaron una prevalencia mayor de factores de riesgo y de eventos vasculares. Estos y los fumadores tenían más antecedentes familiares de tabaquismo.

Conclusiones: La prevalencia de tabaquismo en médicos argentinos es elevada. Distintos factores repercuten en la probabilidad de ser fumador, en el entrenamiento en tabaquismo o en la posibilidad de dar consejo médico. Se debe brindar mayor entrenamiento antitabaco.

Palabras clave: Tabaquismo - Epidemiología - Médicos - Factores de riesgo vascular - Cese del tabaquismo

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Abbreviations

DM	Diabetes mellitus
CVRF	Cardiovascular risk factors
HT	Hypertension

MI	Myocardial infarction
BMI	Body mass index

INTRODUCTION

Non-communicable diseases (cardiovascular diseases, chronic respiratory diseases, cancer and diabetes) account for 60% of deaths, especially in low- and middle-income countries. Smoking is one of the most important risk factors for the development of cardiovascular disease and the main preventable cause of death worldwide, accounting for one sixth of deaths. (1, 2)

Since 1950, tobacco consumption in developed countries had been increasing by decade, particularly in men. However, since the end of the seventies, the number of men who smoke has diminished. The prevalence of smoking remains high in low-and middle-income countries. To date, 1,300 million people smoke worldwide. Almost 70% of them live in Asia, Russia, the European Union and South America. (3, 4)

In 2010, smoking caused approximately 5 million deaths, and would reach 10 million annually by 2030 with the current smoking prevalence. (5, 6) Approximately 50% of smokers could die due to chronic diseases caused by tobacco use, half of them at middle-age, with a significant reduction in life expectancy. (7) The risk of death is three times higher among smokers. (2)

Smoking prevalence in Argentina decreased from 29.7% in 2005 to 25.1% in 2013, (8-10), with an estimated 40,000 tobacco-related deaths per year. (11) Smoking cessation and lower exposure to environmental tobacco smoke reduce mortality and acute cardiovascular events, and improves survival after acute myocardial infarction (AMI) and the outcomes after myocardial revascularization. (1) Brief interventions during the usual medical consultation by providing counseling to quit smoking are important for controlling and discouraging tobacco use. (11) However, physician's attitude toward smoking will depend on several factors, particularly on his/her personal relationship with tobacco. (12)

The primary aim of the present study was to investigate the prevalence and characteristics of smoking among physicians in Argentina and their attitude toward their patients who smoke. The secondary aim was to analyze the presence of associations between smoking and other cardiovascular risk factors (CVRF) in physicians.

METHODS

We conducted an observational cross-sectional study between June and December 2013. Physicians of both sexes and with different specialties were selected using a non-probability sample method in 22 provinces of Argentina, including Antarctic stations.

The survey consisted on a structured self-administered questionnaire which included the following variables: smoking habits, physical activity, body mass index (BMI) history

of hypertension (HT), dyslipidemia and diabetes mellitus (DM), family history of coronary artery disease, history of AMI and myocardial revascularization with percutaneous coronary intervention or surgery.

Current smoker was defined as smoking one cigarette/day, for at least one year and during the past 12 months. A person who had been a smoker but had not smoked for a year was considered a former smoker. Non-smoker was defined as the one who had never smoked. The following information was required: number of cigarettes smoked per day, age at starting smoking, places where he/she smoked, smoking in unauthorized areas, time to first cigarette after waking up, and smoking while sick and during pregnancy. The respondents were asked about the presence of smokers among their relatives, if they had received any kind of training in smoking-cessation counseling, either as formal courses or informative meetings, how often they advised their patients to quit smoking and whether they used drugs for tobacco cessation in both outpatients and hospitalized patients.

Physical activity was defined as walking or playing any kind of sport for at least 30 minutes, 3 times a week or more. The respondents were considered as having HT, dyslipidemia or DM if they were aware of their condition or were receiving specific medication. Body mass index (BMI) was calculated using the Quetelet index (kg/m²) with the information about weight and height provided by the survey respondents. Body mass index was divided in three categories: < 25, 25-29.9 (overweight) and ≥30 (obesity). A history of AMI among relatives before the age of 55 in men and 65 in women was considered family history of coronary artery disease.

Statistical analysis

The information was recorded in an Excel spreadsheet software program and was analyzed using the Epi-Info 7.0 software package. Continuous variables were compared with Student's t test (two samples) or with ANOVA (three samples or more) for normal distribution. For variables with non-normal distribution, the Mann-Whitney U test or the Kruskal-Wallis test was used. Categorical variables were analyzed with the chi square test.

Logistic regression analyses were used to evaluate the association between different variables with the probability of: 1) being an active smoker, 2) providing regular counseling to quit smoking, and, 3) being trained in smoking-cessation treatment. Multivariate analysis was performed with the variables presenting significant associations in univariate analysis. The different regressions included the variables sex and age. Age was incorporated in multivariate analysis as a dichotomous variable considering the median age of the population (39 years). The strength of the association was expressed as odds ratio (OR) with its corresponding 95% confidence interval (95% CI). A p value ≤0.05 was considered statistically significant.

RESULTS

The survey was responded by 3,062 physicians of different specialties and both sexes from 22 provinces na-

tionwide. Twenty-nine surveys with no data about age and sex were not considered; thus, the final analysis included 3,033 surveys. Thirty-seven percent of physicians corresponded to the Autonomous City of Buenos Aires and 31% to the province of Buenos Aires; 79% practiced clinical specialties, 31% worked only in private settings and 56% in emergency areas.

Table 1 shows the general characteristics of the physicians in this study. Mean age was 41.3 ± 12 years, 56.8% were men and they were older than women ($p < 0.001$). The prevalence of current smokers was 19.7%, and 21.7% were former smokers. Mean use of cigarettes was 11.0 ± 9 cigarettes/day; 24.1% smoked 20 cigarettes or more and age at starting smoking

was 18.03 ± 4 years. Average exposure to environmental tobacco smoke was of 5.4 hours/day in 51.5% of cases. The percentage of physicians who smoked after waking up was 31.6% and 22.3% smoked during a respiratory or cardiovascular illness. The prevalence of smoking in workplaces and unauthorized areas was high, with no differences between both sexes; 8.8% of women had smoked during pregnancy.

Table 2 shows the population characteristics by age, sex, prevalence of CVRF and cardiovascular events in physicians related with smoking status. There were no differences related to sex in smoking status ($p = 0.35$). Physicians who smoked were younger. Former smokers were older, had higher prevalence

Table 1. General characteristics of the sample (n=3,033)

Hemodynamic parameter	Prevalence		QR	p
Male gender	56.8			
Median age, years	39	M: 42 W: 36		<0.001
Average age, years	41.3 ± 12	M: 43.3 ± 12 W: 38.8 ± 10		<0.001
Clinical specialty, %	78.7	M: 74.2 W: 84.8	1.94 (1.61-2.34)	<0.001
Works only in private health care centers, %	30.8	M: 31.7 W: 29.6	1.10 (0.94-1.30)	0.21
Works only in emergency areas, %	55.7	M: 56.6 W: 54.6	1.08 (0.93-1.25)	0.25
Former smokers, %	21.7	M: 21.7 W: 21.7	1.00 (0.84-1.19)	0.98
Current smokers, %	19.7	M: 18.8 W: 20.8	0.87 (0.73-1.05)	0.16
Number of cigarettes/day, %	11.0 ± 9	M: 11.5 ± 9 W: 10.5 ± 8		0.36
Smokes ≥ 20 cigarettes/day, %	24.1	M: 25.3 W: 22.7	1.15 (0.77-1.70)	0.47
Age at starting smoking	18.03 ± 4	M: 17.9 ± 4 W: 18.2 ± 4		0.22
Exposure to environmental tobacco smoke, %	51.5	M: 51.2 W: 51.8	0.97 (0.84-1.12)	0.71
Smokes after waking up, %	31.6	M: 33.8 W: 28.9	1.25 (0.98-1.60)	0.07
Smokes in the morning, %	66.0	M: 67.9 W: 63.6	1.21 (0.95-1.53)	0.11
Smokes while sick, %	22.3	M: 23.2 W: 21.2	1.12 (0.85-1.46)	0.41
Smokes at hospital, %	85.6	M: 86.1 W: 84.9	1.10 (0.72-1.67)	0.63
Smokes at home, %	74.5	M: 74.6 W: 74.4	1.01 (0.78-1.30)	0.82
Smokes in unauthorized areas, %	28.8	M: 28.0 W: 29.9	0.91 (0.71-1.16)	0.45
Smoked during pregnancy, %	8.8			

M: Men. W: Women

of CVRF (HT, DM and dyslipidemia) and were more likely to perform physical activity. In addition, they had higher prevalence of history of AMI, myocardial revascularization procedures and family history of coronary artery disease. There were no differences in the reported history of stroke.

Table 3 presents the relation between smoking and specialty. Almost 79% of the physicians practiced clinical specialties. The prevalence of smokers was higher in surgical specialties [22.8% vs. 18.6%, OR 1.29 (1.04-1.60); $p=0.01$]. The clinical specialties with lower prevalence of smokers were nephrology (10%), intensive care (15.6%) and cardiology (16.1%), while the prevalence was higher among gastroenterologists (30%) and specialists in diagnostic imaging (29.8%). Among surgical specialists, general surgeons had the highest prevalence of smokers (30.3%) and otorhinolaryngologists had the lowest (9.4%). The prevalence of smoking among physicians working in emergency care settings (emergency room, coronary care unit, intensive care unit, neonatology or anesthesiology) was greater than for those working in other areas [22.1% vs. 16.8%, OR 1.40 (1.16-1.69); $p<0.0001$]. There were no differences in the prevalence of smokers between professionals working in a private setting versus those working in public centers [OR 1.01 (0.82-1.23); $p=0.89$].

Among physicians, the prevalence of smoking habits in their fathers, mothers or siblings was greater in current smokers and former smokers, and the probability of smoking habits in their descendants was 4 times higher [OR 3.58 (2.64-4.85); $p<0.0001$]. The percentage of physicians giving counseling to quit

smoking was high (97.7%), and was more frequent in former smokers. The proportion of physicians who did not provide counseling to quit smoking was very low (2.3%) and the greatest prevalence was seen in current smokers, 4.0%.

Among the professionals surveyed, 56.1% had received some kind of training in smoking-cessation counseling (formal courses or informative meetings): 36% had received undergraduate training and 40.8% post-graduate training. Table 4 shows the characteristics of professionals with or without training in smoking-cessation counseling. There were no differences related smoking status. Physicians trained in smoking cessation were younger (40.5 ± 11 years vs. 42.3 ± 11 years; $p<0.0001$), there was greater prevalence of women, and were not surgeons; they recommended their patients to quit smoking more frequently and the indication of drugs to quit smoking was 4 times greater. In addition, the probability of providing counseling to quit smoking to hospitalized patients was two times greater (67.9%), but only 14.7% used drug therapy in these patients.

Table 5 shows the variables independently associated with training in tobacco cessation, with the possibility of providing usual counseling to quit smoking and with the probability of being an active smoker. Physicians >39 years or those with a surgical specialty were less likely to be trained in tobacco cessation counseling; on the contrary, the probability of previous training was greater in those working in emergency settings or in a private health care center. The possibility of usually providing counseling to quit smoking was greater in doctors trained in tobacco

Table 2. Population characteristics by age, sex, prevalence of CVRF and cardiovascular events in physicians related to smoking status (n=3,033)

	Current smokers (n=597)	Former smokers (n=658)	Non-smokers (n=1,778)	p
Age (years). mean (SD)	40.6 (11.8)	42.4 (11.9)	41.2 (11.8)	0.016
	%	%	%	
Sex				
Female (n=1,310; 43.2%)	20.8	21.7	57.5	0.35
Male (n=1,723; 56.8%)	18.8	21.7	59.5	
Works only in private health care centers (n=870/2,824; 30.8%)	31.0	29.5	31.2	0.74
Works in emergency areas (n=1,605/2,879; 55.7%)	62.4	45.6	57.3	0.001
Hypertension (n=454/3,021; 15.0%)	13.8	24.3	12.0	0.001
Dyslipidemia (n=633/3,023; 20.9%)	19.8	30.8	17.7	0.001
Diabetes (n=74/3,015; 2.5%)	3.5	4.7	1.2	0.001
Physical activity (n=1,305/3,015; 43.3%)	36.9	48.3	43.6	0.001
Obesity (n=419/2,964; 14.1%)	13.8	14.9	13.9	0.94
Family history of AMI (n=422/2,943; 14.3%)	17.1	20.1	11.3	0.001
AMI (n=34/2,973; 1.1%)	1.2	2.6	0.6	0.001
Percutaneous coronary intervention (n=48/2,973; 1.6%)	1.7	3.6	0.9	0.001
CABGS (n=21/2,976; 0.70%)	0.5	1.4	0.5	0.06
Stroke (n=10/2,948; 0.30%)	0.2	0.3	0.4	0.69

SD: Standard deviation. AMI: Acute myocardial infarction. CABGS: Coronary artery bypass graft surgery.

Table 3. Prevalence of smoking habits by medical specialties related to smoking status (n=3,033)

	Current smokers (n=597; 19.7%) %	Former smokers (n=658; 21.7%) %	Non-smokers (n=1,778; 58.6%) %
Clinical specialty**	18.6	21.8	59.6
Cardiologists	16.5	22.5	61.0
Nephrologists	10.0	23.3	66.7
Pneumologists	23.7	18.6	57.6
Intensivists	15.9	23.8	60.3
Diagnostic imaging specialists	30.0	20.0	50.0
Gastroenterologists	32.3	25.8	41.9
Infectologists	23.5	17.6	58.8
Dermatologists	18.4	21.1	60.5
Specialists in internal medicine	19.7	21.8	58.5
Endocrinologists	18.4	28.9	52.6
Pediatricians	16.1	20.0	63.9
Neurologists	20.0	16.7	63.3
Psychiatrists	20.6	14.7	64.7
Oncologists	19.2	23.1	57.7
Surgical Specialty**	22.8	22.3	54.9
General surgeons	27.7	22.1	50.3
Neurosurgeons	20.8	12.5	66.7
Gynecologists/obstetricians	24.5	28.7	46.9
Orthopedic surgeons	25.7	12.9	61.4
Otorhinolaryngologists	9.4	30.2	60.4

*Specialties responding 20 surveys or greater were analyzed.

** p=0.04 between clinical and surgical specialties.

Table 4. Physician characteristics by tobacco cessation training (n = 3,016)

Variable	Not trained (n=1,323) %	Trained (n=1,693) %	OR	p
Gender (n=3,016)				
Female (43.2%)	39.3	46.1	0.75 (0.65-0.87)	0.0001
Male (56.8%)	60.7	53.9		
Surgical specialty (n=620/2,929; 21.2%)	27.2	16.5	0.52 (0.44-0.63)	<0.0001
Works in emergency areas (n=1597/2,863; 55.8%)	52.0	58.7	1.31 (1.13-1.52)	<0.0001
Works only in private health care centers (n=864/2,809; 30.8%)	28.2	32.8	1.24 (1.05-1.46)	<0.001
Smoking status (n=3,016)				
Current smokers 19.7%	18.9	20.3		0.21
Non-smokers 58.6%	58.0	59.1		
Former smokers 21.7%	23.1	20.6		
Always provides tobacco cessation counseling (n=2,325/2,958; 78.6%)	76.3	80.3	1.26 (1.06-1.51)	<0.001
Never provides tobacco cessation counseling (n=66/2,958; 2.3%)	3.6	1.1	0.30 (0.17-0.52)	<0.0001
Uses drug therapy (n=1,206/2,332; 51.7%)	31.6	65.0	4.01 (3.36-4.79)	<0.0001
Tobacco cessation counseling in hospitalized patients (n=1,951/2,875; 67.9%)	55.7	77.1	2.68 (2.28-3.14)	<0.0001
Uses drug therapy in hospitalized patients (n=412/2,808; 14.7%)	9.7	18.4	2.09 (1.66-2.63)	<0.0001

SD: Standard deviation. AMI: Acute myocardial infarction. CABGS: Coronary artery bypass graft surgery.

cessation and in those >39 years; however, surgeons or active smokers were less likely to advice patients to stop smoking. Finally, the probability of being an active smoker was greater in physicians with surgical specialties, or working in emergency settings, but lower in those doing physical activity.

DISCUSSION

Smoking is the leading cause of preventable death worldwide, (1, 2) and responsible of a significant number of cardiovascular diseases, respiratory diseases and cancer. Evidently, the impact of smoking on health is such that physicians from almost all the specialties deal with the direct or indirect consequences of smoking tobacco in all its forms; yet, many doctors smoke. The prevalence of smoking among physicians from different countries is difficult to know because the information derives from small-scale studies. The proportion of professionals who smoke differs according to the regions analyzed, with a trend toward higher prevalence in men and in developing countries. (14) Recent studies have reported prevalence between 14% and 38%. (15-18) In 2004, the TAMARA trial reported a prevalence of 30% of physicians who smoked and 22.4% of former smokers in Argentina. (12) By that time, the prevalence of smoking in the general population in Argentina was about 30%. (8) The proportion of smokers in the general population has decreased over the past decade. (9, 10) Similarly, the prevalence of smoking habits found in the TAMARA II study experienced a 10-point reduction compared with the prevalence reported in the first TAMARA study.

Strikingly, an elevated number of doctors (85.6%) smoked in workplaces as hospitals. The implementation of a smoke-free hospital policy demonstrated a

reduction in the prevalence of smoking and improved the attitude toward tobacco control among physicians. (19) In this setting, and observing the results of our investigation, it would be highly relevant to implement such policies in as many medical centers as possible.

A survey conducted by Shkedy et al. among practicing physicians at a university-affiliated medical center in Israel, showed a greater prevalence of smoking habits among surgical specialties. (20) In a similar way, the prevalence of tobacco use in our study was significantly greater in these specialties compared with clinical specialties. The probability of being a smoker was 29% higher among surgical specialties, independently of the other variables evaluated. Cardiologists had the lowest proportion of smokers compared to other specialists, and this finding is similar to the one reported in the previous TAMARA study (16% vs. 18%). (12) Among surgical specialists, otorhinolaryngologists had the lowest prevalence of smokers (9%); this proportion was similar to the one observed in a study among otorhinolaryngologists from Brazil (7%). (21)

We observed that working in emergency settings was independently associated with a higher probability of being an active smoker. This finding is not a minor subject. Many patients visiting the emergency department are interested in smoking cessation counseling. (22, 23) However, emergency department-based smoking cessation counseling is suboptimal. (24-26) The emergency department setting could represent an excellent opportunity to implement strategies to quit smoking, and emergency doctors should be encouraged to provide counseling for smoking cessation.

In previous publications conducted in general populations (27, 28), and coincidental with our findings, current smokers were significantly more likely

Multivariate models	OR	95% CI	p
I. Variables associated with training in tobacco cessation*			
Age ≥39 years	0.73	0.63-0.86	<0.001
Surgical specialty	0.54	0.45-0.65	<0.001
Works only in private health care centers	1.29	1.09-1.53	<0.001
Works in emergency areas	1.32	1.13-1.55	<0.001
II. Variables associated with regular tobacco cessation Counseling**			
Training in tobacco cessation	1.23	1.03-1.49	0.02
Surgical specialty	0.70	0.57-0.87	0.001
Current smoker	0.43	0.35-0.54	<0.001
Age ≥39 years	1.21	1.01-1.45	0.03
III. Variables associated with current smoking***			
Surgical specialty	1.29	1.03-1.61	0.02
Works in emergency areas	1.41	1.16-1.71	0.001
Physical activity	0.73	0.60-0.88	0.001

* Adjusted for age, sex, emergency areas, clinical/surgical specialty and smoking status.

** Adjusted for age, sex, clinical/surgical specialty, smoking status and tobacco cessation training.

*** Adjusted for age, sex, emergency areas, clinical/surgical specialty, risk factors and history of coronary artery disease.

Table 5. Variables independently associated with training in tobacco cessation, possibility of providing regular counseling to quit smoking or of being a current smoker

to be physically inactive.

As in other epidemiological studies, we have observed a significant association between the presence of a family history of smokers and starting and keeping smoking in physicians. (29-31) Of note, the descendants of physicians who smoke have 4 times greater probability of acquiring smoking habits due to parent influence.

In our study, physicians trained in tobacco cessation were more likely to provide regular counseling to quit smoking. This finding coincides with a study performed in Chinese doctors, which demonstrated that those physicians who had ever read any recommendation about tobacco cessation counseling interventions were more likely to report smoking status in the clinical record and to provide tobacco cessation counseling to their patients. (16) In addition, an investigation performed in Argentine obstetrician/gynecologists demonstrated that insufficient knowledge in tobacco cessation interventions was negatively associated with smoking cessation counseling. (32) In agreement with our observations, a Ukrainian study found a negative association between the high prevalence of smoking among certain medical specialties and the likelihood of providing counseling to quit smoking. (33) The results of our investigation are similar to those found by a Brazilian study which reported that clinical specialties were associated with a greater probability of providing tobacco cessation counseling. (34)

Addiction to tobacco is one the most relevant CVRF with significant incidence of acute events as AMI or sudden death; thus, its prevention and treatment should be a priority. The identification of patients' smoking status is fundamental, and tobacco cessation therapies should be offered to patients who smoke in all the areas related with cardiovascular health. (11-35) Cardiologists should be trained in therapies to quit smoking and should act in the same manner they do to investigate and treat other well-known CVRF as HT, DM and dyslipidemia. (35-37)

Ethical considerations

The protocol was evaluated and approved by the Argentine Society of Cardiology Bioethics Committee. Filling out the questionnaire was assumed as consent. No personal data that could identify the survey respondents were requested.

Study limitations

Our investigation has the typical limitations of any epidemiological cross-sectional study. As we were unable to obtain the records of professionals from the different medical colleges, the participants were selected using a simple, non-probability random sampling method. This could be associated with biased results. However, the considerable number of persons evaluated and distributed in 22 provinces nationwide could reflect a part of the smoking facts among physicians in Argentina

CONCLUSIONS

The prevalence of smoking among physicians was high; smokers were younger and worked in emergency settings or practiced surgical specialties. The proportion of CVRF and history of coronary artery disease were higher among current smokers and former smokers. About 56% of professionals had been trained in smoking cessation which was associated with a higher probability of providing counseling to quit smoking. The implementation of tobacco cessation programs to train health care professionals is mandatory.

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Conflicts of interest

Walter Masson is Boehringer Ingelheim's speaker. (See author's conflicts of interest forms in the web / Supplementary Material)

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APPENDIX

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31. San Luis Regional District

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33. Tucumán Regional District

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