

Enhancing Education for Smoking Preventing and Smoking Cessation in Medical Personnel

A measure for a better health

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Our work presents the smoking-related attitude, the methods for the development knowledge and antismoking commitment among health-care workers. We analyzed a 20 items questionnaire in 209 healthcare employees (specialists physicians, interns, medical assistants/nurses). Smoking is widespread among health professionals 34.7% comparing with the country average (28%). In the last 10 years smoking has declined in physicians -27.1% but remains constant in assistants 43.3% and nurses 46.3% (comparison with a previous study). Smoking is lower in young physicians and pulmonologists (by information achieved along courses and traineeships in Pulmonology Discipline). Smoking is predominant in males 55% vs 27.7% in females. Medical personnel's knowledge about the harmful effects of smoking is still insufficient. 32% of smokers do not consider that smoking affects the health entourage. 20% report smoking in the hospitals. The methods used for providing antismoking activities in medical personnel were complexes: thematic conferences for physicians/nurses (6 in the last 4 years), 2 workshops for practical implementation the antismoking techniques, curricular courses (4 h/semester for the fifth-grade medical-students and third-grade assistants, 6 hours optional courses for all students) and by promoting the antismoking policy in our universities and pulmonology clinics. Medical personnel are a target group in the anti-smoking activity (like health promoters) considering the great potential for further education for large groups of patients.

Keywords: medical personnel, smoking, health promoters

Smoking is a serious addictive disease through the nicotine component. Smoking is spread across the globe causing a veritable *tobacco pandemic* with aggressive adverse consequences for human and environment health [1]. World Health Organization (WHO) appreciates that in 2015, in the world there were more than 1.1 billion smokers [2]. Worldwide, active smoking in all its forms (cigarettes, cigars, snuff, snus, smokeless, pipe, hookah, etc.) or like *second hand* smoking is responsible for the death of over 6 million people [2]. WHO declared chronic smoking like *the single most preventable cause of death in the world today* [3].

In the last decades several studies established that smoking is a crucial risk factor for premature disability and deaths by many diseases: lung cancer, mesothelioma and extrapulmonary tumors, asthma, chronic obstructive pulmonary disease (COPD), sleep apnea, cardiovascular diseases (atherosclerosis, ischemic cardiac and arterial diseases, stroke), diabetes, digestive diseases (tumors, peptic ulcer), endocrine diseases, increase risk for infections, effects on the fetus and newborn by smoking of the pregnant women, cataracts, depression, etc.) [1, 4-14]. A large volume of epidemiologic evidence has confirmed the relationship between smoking and cancers especially lung cancer [4-10], mouth, throat, nose [11], esophagus, stomach, pancreas and colorectal cancer [12], neuroendocrine intestinal tumor [8], kidney and ureter [13], cervix and ovary [14].

COPD and asthma are both widespread chronic obstructive lung diseases with well-defined main risk factors for etiology and exacerbation triggers: smoking and occupational environment interactions [15-18]. At the

same time, smoking causes depression which, in COPD patients, is associated with depression caused by the disease itself and thus occurs in an aggravated form [18]. Chronic smoking is responsible for the inflammation in the mouth and hypopharynx structures with the increase of airways walls thickness and collapsibility that are the basis for the appearance of the obstructive sleep apnea. Smoking acts both in the upper and lower airways causing overlap with severe early respiratory dysfunctions [16, 19]. Aerosols play an important role in the treatment of various forms of respiratory diseases, those with the bronchodilators, anti-inflammatories and antibiotics for the therapy of bronchial asthma, COPD, bronchiectasis etc. being particularly important. On average only 10% of the therapeutic aerosols dose actually reaches the lungs [20].

Tuberculosis, the most frequent chronic infectious-contagious disease worldwide has like risk factor smoking [21]. Cigarette smoking increases the risk for the development of TB (about 1.5 to 2 times) [22]. Smoking has been found to be associated with both risk of relapse of TB and TB mortality.

Nowadays smoking still remains a problem in all countries and environments, including health service workers. Despite the increase in the knowledge about noxious effects of smoking, we witness an important presence of smoking in medical staff. Our study proposes an analysis of the attitude towards smoking of the health workers which still remains an essential category that can be involved in the antismoking fight. We consider that improving educational interventions in the area of the smoking *disease* it could decrease the smoking prevalence and their health consequences.

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Experimental part

The study group included 209 healthcare employees: 48 physicians (specialists in pulmonology 16, internal medicine 17, surgery -15), 60 interns (23 pulmonologists, 17 internal medicine, 20 surgeons), and medical licensed assistants 60 plus 41 nurses.

Our study used anonymous questionnaires with 20 items in a group of 209 health carriers (physicians, assistants, nurses).

We analyzed several parameters: prevalence of smoking in different group, assessment the knowledge about the harmfulness of smoking, the smoking-related attitude, and the methods for smoking cessation and for development the antismoking commitment among health-care workers.

We also questioned the availability of the medical personnel to engage in educational activities against smoking (by active participating in courses/conferences and trough dissemination of anti-smoking principles to patients and patients' family). We made some comparison with a similar study performed in 2008.

Results and discussions

Smoking is widespread among health professionals 73 smokers (34.9%) comparing with the country average 28% [22]. A similar study made in 2008 found important improvement of the attitude against smoking (table 1).

In the last 10 years smoking has declined in physicians (27.1% in 2018 vs 43% in 2008) and in interns (42.5% in 2008 vs 25% in 2018) but remains constant in assistants and nurses (45% in 2008 vs 43.3% in 2018 and 44.8% in 2008 vs 46.3% in 2018). Smoking is lower in young physicians and pulmonologists (by information achieved in the faculty and in the Pulmonology specialty) (table 2). Smoking is predominant in male 55.5% (table 3).

Medical personnel' knowledge about the harmful effects of smoking is still insufficient. From 11 questions about negative effects of tobacco smoke on health only lung

cancer and ischemic cardiac disease figured between the correct answer in all responders. Knowledge was proportionally smaller in assistants and nurses than in physicians and in specialist physicians (except pulmonologist) than interns. 40 (54.8%) of smokers do not consider that smoking affects the health entourage. More than a half 38 (52.05%) declared symptoms (cough or dyspnea) and frequent respiratory infection due to smoking. 15 responders (20.54%) reported smoking in hospitals.

60 active smokers (82.2%) declared that they want to quit smoking but they did not find the right moment for this. They are seriously thinking to ask specialized medical help STOP-SMOKING, program with pulmonologists experts in smoking cessation (ongoing program in Romania that offers counseling and support medication in advanced nicotine dependence for smoking cessation).

In the last 10 years the methods used in stimulation the antismoking activities for medical personnel were complex: thematic conferences for physicians/nurses (6 in the last 4 years), 2 workshops for practical implementation of the antismoking techniques, curricular courses (4 h/semester) in the fifth-grade for the medical-students and for the third-grade assistants, 6 hours optional courses for all students, promoting the total antismoking policy in Pulmonology Clinics. 65/73 smokers (89%) and 130/136 nonsmokers (95.5%) declared that they agree to increase commitment in the antismoking fight by promoting in their activities information concerning the negative effects of smoking and guide the patients toward smoking-cessation services.

In our study, smoking is widespread among health professionals 34.8% (much higher than country 2017 average 28% and the European average 26%), but lower than 2008 levels in a similar study (country average 37% from a population after 15 year-old [23]).

The values found are huge compared to studies in the field. Braun and colab. found in a very large study in 2004

Year	Specialists Physicians		Interns		Licensed Assistants		Nurses	
2008	Total 65		Total 40		Total 62		Total 58	
	S 28	43%	S 17	42.5%	S 28	45%	S 26	44.8%
	N 37	57%	N 23	56.5%	NS 34	55%	NS 32	55.2%
2018	Total 48		Total 60		Total 60		Total 41	
	S 13	27.1%	S 15	25%	S 26	43.3%	S 19	46.3%
	NS 35	72.9%	NS 46	75%	NS 34	56.7%	NS 22	53.7%

S = Smoker; NS = nonsmoker;

	Pulmonologists 39	Internal medicine 34	Surgeons 35
Specialists - 13	2	5	6
Interns - 15	3	6	6
	5 - 12.8%	11 - 32.35%	12 - 34.2%

	No. of smokers	% of smokers
Males 54	30	55.5%
Females 155	43	27.74%
Total 209	73	34.92%

Table 1
PREVALENCE OF
SMOKING IN STUDY
GROUPS IN 2008
AND 2018

Table 2
PREVALENCE OF SMOKING UPON SPECIALTY IN
PHYSICIANS

Table 3
GENDER DISTRIBUTION OF SMOKING IN THE
STUDY GROUP

1% smokers at doctors, 17% at nurses and 22% at nurses [24].

The decrease in the smoking prevalence during the last 10 years in physicians (mostly in interns and pneumologists) is due to the general antismoking campaigns and to the specific dedicated activities in respiratory specialty (conferences, specialized courses in students' curriculum and interns of pneumology). Another problem, except smoking consumption is represented by the alcohol consumption in women [25]. Tobacco smoking was also considering a predispositional factor for different types of oral infections, such as oral candidiasis, which affects mucosal surfaces of oral cavity [26].

The low prevalence of smoking in pneumologists compared to internists (2.5 times), and surgeons (2.67 times) and compared to the high prevalence in assistants and nurses recommends intensifying the transmission of smoking cessation information to all categories of medical personnel. Medical staff is a target group in anti-smoking activity (like health promoters) considering the great potential for further education of large groups of patients [27, 28]. Educational offerings and permanent training has also to include all categories of medical students achieving *training of the future trainers* for consistent long lasting benefit in general population [27]. Our Clinics and Universities are part of the National Integrated Plan for promoting health and education in the frame of the National Health Strategy for 2014-2020 promoted by the Ministry of Health [29].

Conclusions

Smoking is widespread among health professionals. Knowledge about smoking is still low despite the specific activity of the medical staff. The observation justifies intensification of anti-smoking education in high schools and universities and post-university forums. Medical personnel are a target group in the fight against smoking considering the great potential (like future health-promoters) for further transmission of the correct information to large groups of patients. Developing a large education in general population by the instrumentality of the health personnel and by implementing antismoking policy initiatives could help further reduction of the diseases burden caused by smoking.

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