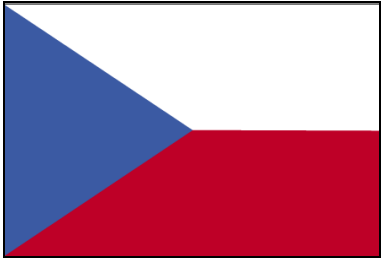


**CZECH REPUBLIC 2011 COUNTRY REPORT  
GLOBAL HEALTH PROFESSIONS STUDENT SURVEY  
(GHPSS)**



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## **Summary**

Tobacco use is one of the major preventable causes of premature death and disease in the world [1]. A disproportionate share of the global tobacco burden falls on developing countries, where 84% of 1.3 billion current smokers reside.

Health professions students have been found to play an important role in cessation and prevention of tobacco use among their patients.

The Global Health Professions Student Survey (GHPSS) is part of the Global Tobacco Surveillance System developed by the World Health Organization (WHO) and the Office on Smoking and Health (OSH) of the United States Centers for Disease Control and Prevention (CDC). The GHPSS is a school-based survey of 3rd year students pursuing advanced degrees in dentistry, medicine, pharmacy, and nursing.

The 2011 study included 1671 students from 28 schools. The sample was selected from all Medical, Dental, Nursing, and Pharmacy schools in Czech Republic.

Health professionals can play a critical role in reducing tobacco use. Even brief and simple advice from health professionals can substantially increase smoking-cessation rates.

From the perspective of the national health policy, it is very important to monitor trends in smoking of health professionals as role models for their patients and population as whole. The analysis of trends may reflect the effectiveness of preventative actions and also provides important information on the context of smoking.

Findings from the Czech Republic GHPSS show that nursing students had the highest prevalence (32.2 %) of current cigarette smoking. The prevalence of current cigarette smoking was lowest among medical students.

In 2011, over 1 in 5 health professions students smoked cigarettes. 82 % thought health professionals should serve as role models for their patients and advise them not to smoke. At the same time, however, only 53 % of them really feel to be such role models.

Six in ten health professions students assumed that health professionals who smoke are less likely to advise patients to stop smoking.

Conclusions: educational institutions, public health organizations, and education officials should discourage tobacco use among health professions students and work together to design and implement programs that train health professions students in effective cessation-counseling techniques.

To substantially reduce the use of tobacco products, resources should be invested in improving the quality of education of health professions students with respect to tobacco control.

It is of great importance to strengthen students' awareness about their role as models for their patients and public, to enhance the education of their responsibility to advise all patients to quit smoking, and support the role of nurses in smoking cessation.

## **Introduction**

Tobacco use is one of the major preventable causes of premature death and disease in the world [1]. A disproportionate share of the global tobacco burden falls on developing countries, where 84% of 1.3 billion current smokers reside [1]. The World Health Organization (WHO) attributes approximately 5 million deaths a year to tobacco. The number is expected to exceed 8 million deaths by 2030, with approximately 70% of these deaths occurring in developing countries [2].

Health professions students have been found to play an important role in cessation and prevention of tobacco use among their patients [3-6]. Counseling by health professions students has been shown to increase smoking cessation [3]. Despite the involvement of health professions students, as the largest group of healthcare professionals in tobacco control, only a few studies have collected information on tobacco use, exposure to secondhand smoke, and training to provide cessation counseling among health professions students. These studies used different sampling methods, questionnaires, and data collection procedures, and very few are from low or middle-income countries [7-10]. The WHO and the U.S. Centers for Disease Control and Prevention have attempted to overcome these limitations by developing and implementing the Global Health Professions Student Survey (GHPSS) [11]. The GHPSS includes surveys of dental, medical, nursing, and pharmacy students.

The data discussed in this report come from the GHPSS conducted among 3<sup>rd</sup> year medical, dental, nursing, and pharmacy students in Czech Republic. GHPSS is a standardized school-based survey of third-year students pursuing advanced degrees in dentistry, medicine, nursing, or pharmacy. It is conducted in schools during regular class sessions. GHPSS follows an anonymous, self-administered format for data collection. GHPSS uses a core questionnaire on demographics, prevalence of cigarette smoking and other tobacco use, knowledge and attitudes about tobacco use, exposure to secondhand smoke, desire for smoking cessation, and training received regarding patient counseling on smoking cessation techniques.

### ***Czech Republic Demographics***

Czech Republic is a Member State of the WHO European Region and is considered a high income country. The data discussed in this report come from the GHPSS conducted among 3<sup>rd</sup> year medical, dental, nursing, and pharmacy students in Czech Republic.

### ***WHO Framework Convention on Tobacco Control and MPOWER***

In response to the globalization of the tobacco epidemic, the 191 Member States of the World Health Organization unanimously adopted the WHO Framework Convention on Tobacco Control (FCTC) at the Fifty-sixth World Health Assembly in May 2003. The FCTC is the world's first public health treaty on tobacco control. It is the driving force behind, and blueprint for the global response to the pandemic of tobacco-induced deaths and diseases. The treaty embodies a coordinated, effective, and urgent action plan to curb tobacco consumption and lays out cost-effective tobacco control strategies for public policies such as banning direct and indirect tobacco advertising, increasing tobacco tax and price, promoting smoke-free public places and workplaces, displaying prominent health messages on tobacco packaging, and tobacco research, surveillance, and exchange of information.

To help countries fulfill their WHO FCTC obligations, in 2008 WHO introduced MPOWER, a package of six evidence-based tobacco control measures that are proven to reduce tobacco use and save lives:

- Monitor tobacco use and prevention policies
- Protect people from tobacco smoke
- Offer help to quit tobacco use
- Warn about the dangers of tobacco
- Enforce bans on tobacco advertising, promotion and sponsorship
- Raise taxes on tobacco

The GHPSS supports WHO MPOWER by monitoring country-specific data on key tobacco indicators, including prevalence, factors influencing tobacco use, and role model and cessation training.

### ***Purpose and Rationale***

Health professionals can play a critical role in reducing tobacco use. Even brief and simple advice from health professionals can substantially increase smoking-cessation rates. Therefore, one of the strategies to reduce the number of smoking-related deaths is to encourage the involvement of health professionals in tobacco-use prevention and cessation counseling. The GHPSS was designed to collect data on tobacco use and cessation counseling among health professional students in all WHO member states. Questionnaires are translated into local languages as needed. GHPSS has a standardized methodology for selecting participating schools and classes and uniform data processing procedures.

The rationale for Czech Republic's participation in the GHPSS includes the following:

- a) The most recent mortality data from the Czech Republic for the year 2010 showed that 3,998 males (77.7 per 100,000 inhabitants) and 1,556 females (29 per 100,000 inhabitants) died from lung cancer (C34), and same time this single cause of death is a leading cause of deaths of all neoplasms (CZSO, 2011). National and international studies also confirm that the overall mortality attributable to smoking is very high. In 2002, there were 20,550 deaths in the CR that could be attributed to smoking (14,525 men and 6,025 women). Deaths caused by smoking represented 19% of the total nationwide mortality (Sovinova et al., 2008).
- b) The reduced productivity caused by smoking related morbidity is serious, and the treatment of smoking related illnesses is costly. The conservative estimate for the Czech Republic suggests that at least 4 % of total health care expenditures for inpatient treatment may be attributable to tobacco smoking.
- c) The smoking prevalence in adult population is 25 %.
- d) The Czech Ministry of Health "Long term Program for Improving the Health of the Population of the Czech Republic: Health for All in the 21st Century" has made reduction of tobacco use a priority.

From the perspective of the national health policy, it is very important to monitor the trends in smoking of health professionals as role models for their patients and population as whole. The analysis of trends may reflect the effectiveness of preventative actions and also provides important information on the context of smoking.

### ***Current State of Policy***

Currently, in Czech Republic, there are 6 main tobacco policies in place related to tobacco control, for example:

Act No. 379/2005 Coll. on measures for protection against the harmful effects of tobacco products, alcohol and other addictive substances;

Act No. 262/2006 Coll. The Labor Code;

Law No. 40/1995 Coll. On the regulation of advertising;

Act No. 231/2001 Coll. On radio and television broadcasting;

Decree No. 344/2001 Coll. Ministry of Agriculture, which establishes requirements for tobacco products;

A long term Program for improving the health of the population of the Czech Republic: Health for all in the 21st century.

These laws limit environmental tobacco smoke (public smoking bans), sale of tobacco to certain age groups, control packaging and labeling of tobacco products, prevent pro-tobacco marketing, etc.

### ***Other Tobacco Surveys***

The GHPSS has previously been conducted in Czech Republic in 2007. In addition to the GHPSS, the following surveys have been run in Czech Republic: Czech Physicians and Smoking in 2010 and Prevalence of Smoking in Adult Czech Population 2011.

### ***Czech Republic-Specific Objectives***

1. Reduce current cigarette use in Czech Republic in medical students from 19.7 % in 2011 to 17 % in 2015, in dental and pharmacy students from 21.5 % resp. 22.4 % to 19.0 % and in nursing students from 32.5 % in 2011 to 28.0 % in 2015.
2. Increase percentage of health professions students who want to quit smoking from 56 % on average in 2011 to 63.0 % in 2015.

### **Methods**

The GHPSS is part of the Global Tobacco Surveillance System, which collects data through four surveys: the Global Youth Tobacco Survey, the Global School Personnel Survey, the Global Adult Tobacco Survey, and the GHPSS. The GHPSS is a school-based survey of 3rd year students pursuing advanced degrees in dentistry, medicine, pharmacy, and nursing. The GHPSS uses a core questionnaire on demographics, prevalence of cigarette smoking and use of other tobacco products, exposure to secondhand smoke (SHS), desire to quit smoking, and training received to provide patient counseling on cessation techniques. The GHPSS has a standardized methodology for selecting participating schools and uniform data processing procedures [11].

The medical, dental, nursing, and pharmacy GHPSS in Czech Republic included 1671 students from 28 schools. The sample was selected from all medical, dental, Nursing, and pharmacy schools in Czech Republic and a census of students in the selected schools were surveyed. The Czech Republic GHPSS was conducted in schools during regular lectures and class sessions. Anonymous, self-administered data collection procedures were used. The final questionnaire was translated into Czech and back-translated into English to check for accuracy.

The school response rates for the Czech Republic GHPSS were 100% for medical, 100 % for dental, 100 % for Nursing and 100 % for pharmacy schools (Table 1). The student response rates for the Czech Republic GHPSS were 85.5 % for Medicine, 81.3 % for Dentistry, 88.7 % for Nursing, and 96.0 % for pharmacy.

GHPSS was conducted in schools during regular lectures and class sessions. GHPSS followed an anonymous, self-administered format for data collection. A weighting factor was applied to each student record to adjust for non-response (by school and student) and variation in the probability of selection at the school, class, and student levels. SUDAAN, a software package for statistical analysis of complex survey data, was used to calculate weighted prevalence estimates and standard errors (SE) of the estimates (95% confidence intervals (CI) were calculated from the SEs) [12,13].

**Table 1.** Overall Response Rates of Colleges and Third-2011  
Medical, Dental, Nursing, and Pharmacy Students  
**Czech Republic GHPSS, 2011**

	<b>Medicine</b>	<b>Dentistry</b>	<b>Nursing</b>	<b>Pharmacy</b>
<b>Schools (%)</b>	100	100	100	100
<b>Schools (n)</b>	7	4	15	2
<b>Students (%)</b>	85.5	81.3	88.7	96.0
<b>Students (n)</b>	706	187	447	331
<b>Overall response rate (%)</b>	85.5	81.3	88.7	96.0

## **Results**

### ***Student Characteristics***

The percentage of medical students who were females was 65.0 % and 93.6 % were less than age 25, while 65.8 % of dental students were females and 93.5 % were less than age 25. The percentage of nursing students who were females 95.0 % and 86.7 % were less than age 25, but 84.0 % of pharmacy students were females and 95.2 % were less than age 25.



## Tobacco Use

**Table 2.** Lifetime and Current Prevalence of Tobacco Use among Third-year Medical, Dental, Nursing, and Pharmacy Students  
**Czech Republic GHPSS, 2011**

		Ever smoked cigarettes	Ever used any form of tobacco other than cigarettes	Currently use cigarettes	Currently use any form of tobacco other than cigarettes
		% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
<b>Medicine</b>	Total	77.5 (76.2-78.6)	52.3 (50.9-53.7)	19.7 (18.6-20.9)	7.5 (6.8-8.3)
	Women	76.2 (74.7-77.7)	43.5 (41.7-45.2)	17.0 (15.7-18.4)	4.1 (3.5-4.8)
	Men	80.1 (78.1-81.9)	69.0 (66.7-71.2)	24.9 (22.9-27.0)	13.9 (12.3-15.7)
<b>Dentistry</b>	Total	81.7 (79.1-84.0)	58.6 (55.5-61.7)	21.5 (19.0-24.2)	10.3 (8.5-12.3)
	Women	80.4 (77.2-83.3)	49.3 (45.5-53.2)	19.0 (16.2-22.3)	5.8 (4.2-7.9)
	Men	84.2 (79.8-87.7)	76.4 (71.5-80.6)	26.3 (21.8-31.2)	18.9 (15.0-23.5)
<b>Nursing</b>	Total	85.5 (84.3-86.6)	44.6 (43.0-46.2)	32.2 (30.7-33.7)	8.2 (7.3-9.1)
	Women	85.4 (84.2-86.6)	44.3 (42.6-45.9)	32.5 (31.0-34.1)	7.8 (7.0-8.8)
	Men	86.2 (80.4-90.5)	50.3 (43.1-57.5)	25.7 (20.0-32.3)	14.0 (9.6-19.9)
<b>Pharmacy</b>	Total	82.7 (81.9-83.6)	53.5 (52.4-54.6)	22.4 (21.4-23.3)	8.2 (7.6-8.8)
	Women	82.3 (81.4-83.2)	51.4 (50.2-52.7)	22.7 (21.6-23.7)	7.2 (6.6-7.9)
	Men	84.9 (82.8-86.8)	64.2 (61.4-66.8)	20.7 (18.6-23.1)	13.2 (11.4-15.2)

Among medical students, 77.5 % reported that they have ever smoked cigarettes (Table 2). The prevalence of ever smoked cigarettes is for dental students 81.7 %, 85.5 % for nursing, and 82.7 % for pharmacy students.

Among medical students, 19.7 % currently smoked cigarettes (Table 2). The prevalence for current cigarette smoking among dental students is 21.5 %, 32.2 % for nursing, and 22.4 % for pharmacy students.

Among medical students, 7.5 % currently used tobacco products other than cigarettes (Table 2). The prevalence for other tobacco use among dental students is 10.3 %, 8.2 % for nursing, and 8.2 % for pharmacy students.

Other tobacco products cover in this survey chewing tobacco or snuff, cigarillos, cigars, or pipes.

**Table 3. Policy and Exposure to Secondhand Smoke among Third-Year  
Medical, Dental, Nursing, and Pharmacy Students  
Czech Republic GHPSS, 2011**

	Ever Cigarette Smokers			All Respondents		
	Smoked on college premises during the past year	Smoked in college buildings during the past year	Colleges with an official policy banning smoking in college buildings and clinics	Colleges that had an official policy banning smoking in school buildings and clinics that enforced the ban	Exposure to smoke at home during the past week	Exposure to smoke indoor public places during the past week
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
<b>Medicine</b>	12.8 (11.7-14.0)	2.0 (1.5-2.5)	94.5 (93.8-95.1)	66.4 (65.0-67.8)	26.9 (25.6-28.1)	47.2 (45.8-48.6)
<b>Dentistry</b>	10.7 (8.6-13.2)	0.8 (0.3-1.8)	95.1 (93.5-96.3)	68.6 (65.4-71.7)	26.2 (23.5-29.1)	60.9 (57.8-63.9)
<b>Nursing</b>	29.0 (27.3-30.7)	2.9 (2.4-3.6)	86.4 (85.2-87.4)	57.3 (55.5-59.0)	41.4 (39.8-43.0)	58.4 (56.8-60.0)
<b>Pharmacy</b>	17.5 (16.5-18.6)	0.0	85.5 (84.7-86.3)	77.1 (76.0-78.2)	28.7 (27.7-29.7)	60.3 (59.2-61.4)

***Exposure to Secondhand Smoke (SHS)***

The proportion of medical students reporting their schools have an official policy banning smoking in school buildings and clinics was 94.5 %, 95.1 % of dental students, 86.4 % of nursing students, and 85.5 % of pharmacy students (Table 3). The proportion of students reporting that such policies are enforced ranged from 57.3 % among nursing students to 77.1 % among pharmacy students.

Among medical students, 26.9 % reported that they had been exposed to SHS in their home in the past 7 days. Similarly, 26.2 % of dental students reported SHS exposure at home, 41.4 % among nursing students, and 28.7 % among pharmacy students (Table 3).

Among medical students, 47.2 % reported that they had been exposed to SHS in indoor public places in the past 7 days. Similarly, 60.9 % of dental students reported SHS exposure in indoor public places, 58.4 % among nursing students and 60.3 % among pharmacy students.

## *Role Model and Cessation Training*

**Table 4.** Cessation, Education and Perception of Responsibility to Counsel Patients among Ever Smokers, Third-Year Medical, Dental, Nursing, and Pharmacy Students  
**Czech Republic GHPSS, 2011**

	Current Cigarette Smokers who want to quit smoking cigarettes now	Percentage Answering “Yes”		Learned cessation approaches to use with patients
		Do health professionals serve as role models for their patients and the public?	Should health professionals get specific training on cessation techniques?	
	% (CI)	% (CI)	% (CI)	% (CI)
<b>Medicine</b>	51.6 (47.1-56.1)	52.7 (51.3-54.1)	60.2 (58.9-61.6)	2.9 (2.5-3.4)
<b>Dentistry</b>	47.0 (37.9-56.3)	57.9 (54.8-61.0)	63.5 (60.4-66.4)	3.3 (2.3-4.7)
<b>Nursing</b>	58.0 (54.7-61.3)	45.8 (44.2-47.4)	58.9 (57.3-60.4)	15.1 (13.9-16.2)
<b>Pharmacy</b>	66.7 (63.5-69.7)	55.8 (54.6-56.9)	71.3 (70.3-72.3)	1.5 (1.3-1.8)

Of current smokers among medical students, 51.6 % reported that they want to stop smoking. The figures among dental, nursing and pharmacy students are 47.0 %, 58 %, 66.7 %, respectively.

Over 52 % of the medical students, 57 % of the dental students, 45 % of the nursing students, and 55 % of the pharmacy students thought health professionals serve as role models for their patients and the public.

Over 60% of the medical students, 63 % of the dental students, 58 % of the nursing students, and 71 % of the pharmacy students thought health professionals should get specific training on cessation techniques. The percentage of health professions students reporting that they had ever received some kind of formal training in their professional school on cessation approaches to use with their patients ranged from 1.5 % among pharmacy students to 15.1 % among nursing students.

## **Discussion**

### *Prevalence*

Findings from the Czech Republic GHPSS show that nursing students had the highest prevalence (32.2 %) of current cigarette smoking. The prevalence of current cigarette smoking was lowest among medical students. Use of tobacco products other than cigarettes was highest among dental students. Tobacco use endangers the health of health professions students and negatively influences the future health professions workforce to deliver effective anti-tobacco counseling when they start seeing patients [9]. The tobacco control community should target tobacco users among health professions students to overcome this situation. Educational institutions training health professions students should help their students quit using tobacco by providing encouragement and information to students who are considering quitting and providing assistance to students who are motivated to quit.

### ***Exposure to Secondhand Smoke***

Over 56 % of health professions students in Czech Republic reported they were exposed to SHS in indoor public places. In addition, more than 90 % of the students reported their schools have an official policy banning smoking in school buildings and clinics. Educational institutions training health professions students should be encouraged to provide smoke free work and study areas by enforcing ban of smoking in their buildings and clinics. A smoke free work environment has been shown to improve air quality, reduce health problems associated with exposure to tobacco smoke, support and encourage cessation attempts among smokers trying to quit, and receive high levels of public support from people who spend time in the area [15]. Furthermore, the creation of smoke free areas by health education institutions sends a clear message to educators, students, patients, and clinicians about negative impact of tobacco [16].

### ***Role Model and Cessation Training***

Health professions students should be trained to provide effective, accurate, and accessible advice to patients on all aspects of health. The Czech Republic GHPSS data show that over 57.9 % of dental students but only 45.8 % of nursing students recognize that they are role models in society. Over 60.2 % of medical students, 63.5 % of dental students, 58.9 % of nursing students, and 71.3 % of pharmacy students think they should receive training on counseling and treating patients to quit using tobacco.

In 2011, over 1 in 5 health professions students smoked cigarettes. 82 % thought health professionals should serve as role models for their patients and advise them not to smoke. At the same time, however, only 53 % of them really feel to be such role models.

Six in ten health professions students assumed that health professionals who smoke are less likely to advise patients to stop smoking. As regards opinion that health professionals who use other tobacco products are less likely to advise patients to stop smoking, similar results were observed.

However, only 2.9 % of medical students, 3.3 % of dental students, 15.1 % of nursing students, and 1.5 % of pharmacy students have received formal training during first three years of their study. This unfavorable reality can be explained by the fact that the Czech Republic GHPSS surveyed 3rd year students, but students usually receive training on patient cessation techniques during the fifth year of their programs.

To address this possibility, the GHPSS research coordinators raised this question to the school administrators and found that, in the majority of the countries, there is no formal training at any time. Of the countries with some training, the type of training included: problem-based learning, included in generic counseling curricula; or included in curricula as part of community medicine or public health courses.

This study did not make an effort to evaluate the adequacy of cessation training in the countries reporting this type of instruction. However, professional training for health professions students should include courses detailing the harmful health effects of tobacco use and exposure to secondhand smoke, and training in counseling on tobacco cessation techniques [4-7, 17-18].

Curricula should include a course or supplements to existing courses specifically relevant to tobacco issues.

### ***Comparison to Previous Tobacco Surveys***

- Two comprehensive surveys were carried out in the Czech Republic focused on tobacco use among future health professionals in 2006 and 2011. Prevalence of smoking among students is high. Nevertheless, in medical and dental students, there has been some decline observed (21.6 % to 19.7 % in medical students, and 32.5 % to 21.5 % in dental students). Compared to that findings, prevalence of smoking in nursing students remained the same (32.7 % vs. 32.8 %), and prevalence of smoking in pharmacy students even increased from 18.9% to 22.4 %. The reality is that more than 80 % of pharmacy students are women.
- These findings differ from the smoking prevalence among Czech physicians. The results of the study “Czech physicians and smoking” carried out in 2010 showed that between physicians there are 10 % less smokers than in adult general population (15.6 % vs. 26.3 %).
- Current smoking of water pipe (13.2 % in medical students, 20.4 % in dental students, 12.4 in nursing students, 20.1 in pharmacy students) is lower than smoking of water pipe in general adult population (38.1 %).

### ***Relevance to FCTC***

The results of this GHPSS are critical for gauging progress toward WHO FCTC and MPOWER implementation and uptake.

Czech Republic’s participation in GHPSS addresses the first element of MPOWER (*Monitor tobacco use and prevention policies*). And GHPSS asks students a range of questions that spans many of the remaining elements of MPOWER. The resulting data are critical for gauging Czech Republic’s progress toward fully implementing the elements of MPOWER among its youth. The information provided by GHPSS can address several provisions of the FCTC that relate to the role of school personnel and the comprehensive school tobacco control policy.

For example:

- **Protect people from tobacco smoke**

The GHPSS data show that 26.9 % of students in Medicine, 26.2 % of students in Dentistry, 41.4 % of students in nursing, and 28.7 % of students in pharmacy were exposed to second-hand smoke at home in the past week while 47.2 % of students in Medicine, 60.9 % of students in Dentistry, 58.4 % of students in nursing, and 60.3 % of students in pharmacy were exposed to second-hand smoke in indoor public places in the past week.

- **Offer help to quit tobacco use**

Results from GHPSS show that health professions students who currently smoke are interested in quitting. Of students who currently smoke:

- 51.6 % of students in Medicine, 47.0 % of students in Dentistry, 58.0 % of students in nursing, and 66.7 % of students in pharmacy are current cigarette Smokers who want to quit smoking cigarettes now

- **Warn about the dangers of tobacco**

The GHPSS showed that 52.7 % of students in Medicine, 57.9 % of students in Dentistry, 45.8 % of students in nursing, and 55.8 % of students in pharmacy believed that health

professionals serve as role models for their patients and the public and 60.2 % of students in Medicine, 63.5 % of students in Dentistry, 58.9 % of students in nursing, and 71.3 % of students in pharmacy believed that health professionals should get specific training on cessation techniques. Despite this fact, only 2.9 % of students in Medicine, 3.3 % of students in Dentistry, 15.1 % of students in nursing, and 1.5 % of students in pharmacy learned cessation approaches to use with patients.

GHPSS methodology provides an excellent framework for monitoring and guiding the implementation of school tobacco control programs while making it compliant with the requirements of FCTC.

The results of this survey will be disseminated broadly and, ideally, used to adopt and implement effective legislative measures for preventing and reducing tobacco consumption, nicotine addiction, and exposure to tobacco smoke.

### ***Proposed Interventions/Further Studies***

- The health professions GHPSS has shown significant unmet need for cessation assistance among health professions students as well as gaps in professional training to provide similar effective assistance to their future patients. The health professions GHPSS is helpful in evaluating the behavior and attitudes regarding tobacco among health professions students, but additional research is necessary to improve the evidence base for effective tobacco-related curricula
- Assess and share the content of tobacco control components within the formal training curricula and continuing education courses for health professions students
- Further research should be carried out to assess the impact of existing tobacco control related materials and training provided in health professions schools.

## **Recommendations**

1. Educational institutions, public health organizations, and education officials should discourage tobacco use among health professions students and work together to design and implement programs that train health professions students in effective cessation-counseling techniques.
  2. To substantially reduce the use of tobacco products, resources should be invested in improving the quality of education of health professions students with respect to tobacco control.
  3. It is of great importance to strengthen students' awareness about their role as models for their patients and public, to enhance the education of their responsibility to advise all patients to quit smoking, and support the role of nurses in smoking cessation.
  4. To extend evidence based education of smoking cessation techniques to all medical disciplines, especially to nursing schools. Training materials, curriculum, and evidence-based programs need to be developed, implemented, and evaluated in all schools for health professionals.
1. Smoking bans should be enforced on all health professions schools campuses.
  2. Surveillance outcomes need to be utilised for influencing the national public health policies.
  3. International collaboration in pursuing effective surveillance system as an important tool for recognizing patterns, determinants and consequences of tobacco use, and information exchange are necessary to curb the unfavourable global trends in consumption of tobacco products and its adverse health consequences on a global level. Developing common standardized approaches to combat this menace to people' health on a global level is essential.

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