

# The Effect of Primary Care Physicians on Smoking Habits

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## Abstract

Primary care physicians (PCPs) are the first line of healthcare for patients and their knowledge of smoking cessations services and guidelines can affect the prevalence of smoking dramatically. We aimed to analyse the routine of PCPs in regards to patient smoking habits and to evaluate their knowledge of smoking cessation clinics and services. We conducted a cross-sectional descriptive study at the King Abdulaziz Medical City in Riyadh, using a validated questionnaire developed by the National Cancer Institute, USA, and customized to our medical settings.

**Index terms**— family medicine, primary care physicians, smoking, smoking cessation, smoking habits, tobacco, Saudi Arabia.

## 1 I. Introduction

Smoking is one of the leading causes of preventable death and disease among humans. The use of tobacco is associated with lung cancer, which is one of the most fatal cancers worldwide (Alamoudi, 2010; Bartsch et al., 2016). In the United States, a total of 212,584 new cases of lung cancer were diagnosed in 2013, 156,176 of which were fatal (World Health Organization, 2016). According to the latest Saudi National Cancer Registry in Saudi Arabia, the diagnosis of lung cancer reached 397 cases in 2010, accounting for 4% of all cancer cases diagnosed that year (Azuri and Nashef, 2016). Moreover, the elimination of tobacco smoking could prevent 20% of all cancer deaths worldwide (Cruz et al., 2011). Nonsmoking behaviour is dependent on various factors, including physician advice and intervention. In a recent study done in Turkey, the majority of Primary Care Physicians (PCPs) (87.3%) routinely inform their patients about smoking habits, and 89.2% of PCPs advised patients to quit smoking (Sonmez et al., 2015). In Saudi Arabia, 2013 health data estimates that 12.1% of the population are smokers, and the average age to start smoking is 18.7 (Institute of Health Metrics and Evaluation, 2017). The Saudi Ministry of Health has been approaching the smoking issues by opening more than 70 smoking cessation clinics and providing adequate training for more than 170 physicians across the country to help smokers quit using the newest evidence-based medicine (Ministry of Health, 2017). Our study aims to analyse the routine of PCPs in regards to patient smoking habits and to evaluate their knowledge of smoking cessation clinics and services.

## 2 II. Methods

A cross-sectional descriptive study was conducted in King Abdulaziz Medical City (KAMC), Riyadh between January and February of 2017, using the validated lung cancer screening questionnaire developed by the National Cancer Institute (NCI) in collaboration with the Agency for Healthcare Research Quality, and the Centers for Disease Control and Prevention in the United States. The questionnaire was edited and customized by adding and eliminating questions to be compatible with our medical setting.

All 146 PCPs in the KAMC, including Family Medicine and Internal Medicine physicians, were included in the study without sampling. A pilot study on 10 physicians was performed to ensure full comprehension of the questionnaire, which resulted in some changes in vocabulary and format to avoid any confusion. King Abdullah International Medical Research Center (KAIMRC) also reviewed the survey tool. It contains questions related to physicians' attitudes and demographic characteristics.

Data management and statistical analysis were performed using the Statistical Package for Social Sciences (SPSS) software version 20.0. Frequencies and percentages were utilized to present categorical variables.

Permission from the KAIMRC in Riyadh was obtained. The questionnaire cover sheet for the survey explained that participation of physicians was voluntary, and therefore was considered as a consent form. All data collected were anonymous and were kept as secure storage media. All of the content was encrypted and only the researchers are able to login to view it. Out of 146 PCPs included in this study, we received 74 responses with a total response rate of 50.68%, including Family Medicine (response rate of 51%) and Internal Medicine (response rate of 48.7%).

On average, family physicians spent 81.73% of their time providing medical care, 8.18% on research, 9% on teaching, and 1.09% on 'other' (administration, higher education, etc). While internal medicine physicians spent 80.52% providing medical care, 12.1% on research, and 7.38% on teaching. The mean age groups of patients seen per specialty are shown in figure 1, and the average number of patients seen during a typical week by specialty is shown in figure 2.

Physician practices regarding asking patients about their smoking behaviours are demonstrated in figure 3. Only 38% of family physicians, and 21% of internal medicine physicians, are aware of, and have referred patients to, any smoking cessation services. Of these smoking services, Naqa, Ministry of Health clinics, and the Saudi Charitable Society to Combat Smoking were the most commonly reported. Only 33% of all PCPs are aware of, or have ever referred a patient to, any smoking cessation service.

Out of 55 family medicine physicians, only 47% asked almost all of their patients about smoking habits, and only 27.6% of these physicians are aware, or have referred a patient to, any smoking cessation program or service. On the other hand, out of the 19 internal medicine physician respondents, only 26% asked almost all patients about smoking behaviour, and 60% of them are aware, or have referred a patient to, any smoking cessation program or service.

Patient awareness of the relationship between smoking and lung cancer is reflected by a mean of 2.6 family medicine patients who asked if they could or should be screened for lung cancer. Furthermore, a mean of 3.4 internal medicine patients asked if they could or should be screened for lung cancer.

### 3 IV. Discussion

Tobacco smoking is one of the most important public health issue worldwide, and primary care physicians play a very crucial role in this matter (AlAteeq et al., 2016). The main means to consider to reduce tobacco smoking include collaboration and cooperation of policy, the public, and health professionals (Armstrong et al., 2017; Bartsch et al., 2016). Of all healthcare specialties, PCPs are considered the backbone of smoking intervention (Alamoudi, 2010). Smoking cessation and smoking habits can affect many clinical outcomes in patients, including overall survival rates, outcomes of surgery, and quality of life. Thus, providing tobacco cessation advice should be part of every PCP's routine clinical practice (Lina et al., 2016).

The present study examined the influence of PCP attitudes and routines in clinical practice on smoking cessation measures. Based on our findings, only 35% of PCPs promote lung cancer screening by initiating a conversation with their patients concerning the advantages and risks of undertaking lung cancer screening. This oversight can be attributed to a lack of familiarity with the clinical practice guidelines for lung cancer detection. These findings are consistent with existing evidence that does not support screening for any asymptomatic patient, regardless of their exposure to smoking (National Cancer Institute, 2016b). Moreover, The findings of the study indicate that only 38% of family physicians and 21% of internal medicine physician were aware of, and had referred patients to, any smoking cessation program. Previous studies have highlighted that proper training of physicians could help strengthen the appropriate skills, which could assist them in reconsidering their own personal beliefs, and offer solutions of how patients might quit smoking (Nobile, 2014). Research has shown that smoking cessation plays a central role in the prevention of cancer, improvement of cancer treatment, and cancer survival rates, thus making it imperative to be recommended in all clinical guidelines (National Cancer Institute, 2016a).

Despite the high number of family medicine physicians who ask their patients about their smoking status (94.7%), only 21% of them were aware of locations and organizations where they could refer patients to seek tobacco cessation services. Although patient's smoking status is a vital portion of their medical history, the results of this study indicate that history taking is undertaken as routine, rather than as a starting point for addressing necessary care and support. The disconnect that exists between screening patients for smoking and referring them for tobacco cessation services offers crucial information on the need for strengthening the training of PCPs to appreciate the need for referring patients. There is a need to harmonize the screening of smoking and referring patients to smoking cessation services.

A recent modeling investigation has estimated that the integration of smoking cessation programs into detection might enhance cost-effectiveness by an average of 20-45% (National Cancer Institute, 2016a; Nobile et al., 2014). The majority of PCPs in this study did not place a lot of significance on referring patients to smoking cessation programs, and this evaluation is in opposition to recent evidence that there is need to considering that smoking causes long-term complications (Lina et al., 2006). The advantages connected with smoking cessation, such as reduced risk of developing diseases, higher survival rates, and improved quality of life can act as motivating factors (National Cancer Institute, 2016a).

Researchers have also indicated that smoking cessation improves cognition levels, performance, appetite, mood,

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and also reduces fatigue among smoking patients (Azuri and Nashef, 2016; Sonmez et al., 2015). Lack of referral for the appropriate smoking cessation services may provide false reassurance to patients instead of helping them to stop their unhealthy habits (National Cancer Institute, 2016b). Therefore, further strategies should be implemented to ensure long-term smoking cessation among smokers.

The findings of this study illustrate that physicians may lack the confidence or the ability to counsel patients to quit smoking as evidenced by their lack of sufficient engagement in smoking cessation services. This may be due to inadequate training in tobacco cessation. It is notable that among the Family Physicians only 38% referred a patient for smoking cessation services. These findings may also indicate the delivery of health care in health facilities in Riyadh may be more focused on providing curative care as compared to preventative care, which is practiced to the lesser extent (Bartsch et al., 2016; National Cancer Institute, 2016a).

One of limitations of this study is that the survey was based on physician routines and knowledge that were collected through self-reporting and were not verified using any other sources, such as medical claims or reports. Due to the cross-sectional nature of the research design, the establishment of causal links was difficult, and future longitudinal research is required to provide evidence in regards to the hypothesis proposed by the findings.

To reduce the workload of the respondents, the survey questionnaire on smoking habits and smoking cessation services was comparatively short, and it was not capable of capturing extra details about particular features of the patients whom the PCPs had interacted with, such as the extent and type of smoking exposure. The researcher did not inquire as to what degree a physician might be initiating the discussion concerning smoking habits and smoking cessation services with their patients. Moreover, the study relied on the PCPs' routines towards smoking habits and knowledge regarding smoking cessation services that are subject to recall bias. According to Sonmez et al. (2015), passive smoking has been considered by clinicians and researchers to cause many challenges for human health, however in the current study the researchers did not explore whether PCPs made inquiries concerning passive smoking contact.

## 4 V. Conclusions

It is fundamental for PCPs to build a strong rapport with their patients in order to inspire change in patient perceptions about quitting smoking. Smoking cessation support services should be provided in a nonjudgmental manner to avoid discouraging patients from seeking their services. It is important that all clinicians participate in patient care in order to be adequately prepared to help smokers quit and adopt better lifestyles.

Further research is needed to highlight the importance of a PCP routine that focuses on advising patients to seek tobacco cessation services due to its impact on health outcomes. The members of the public may not have access to sufficient tobacco cessation

## 5 K

The Effect of Primary Care Physicians on Smoking Habits services, particularly PCPs in the KAMC primary care do not have adequate information on where to refer patients for the necessary services.

Education opportunities can be utilized to train PCPs about the need for advising all patients that smoke to seek tobacco cessation services. The initiative will be vital in addressing the gaps in PCP knowledge regarding smoking cessation services. Moreover, more research is required to reveal the factors that may be influencing PCP routines and advising patients to seek tobacco cessation services to promote patient involvement and enhance clinical outcomes that correspond with these recommendations. <sup>1</sup>

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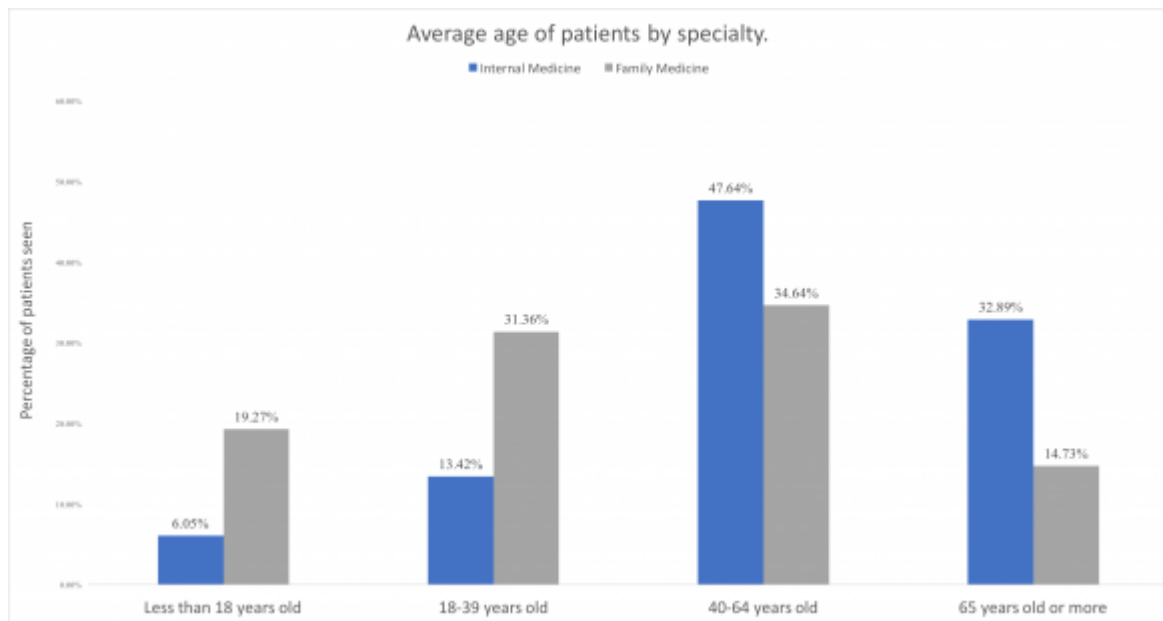


Figure 1: K

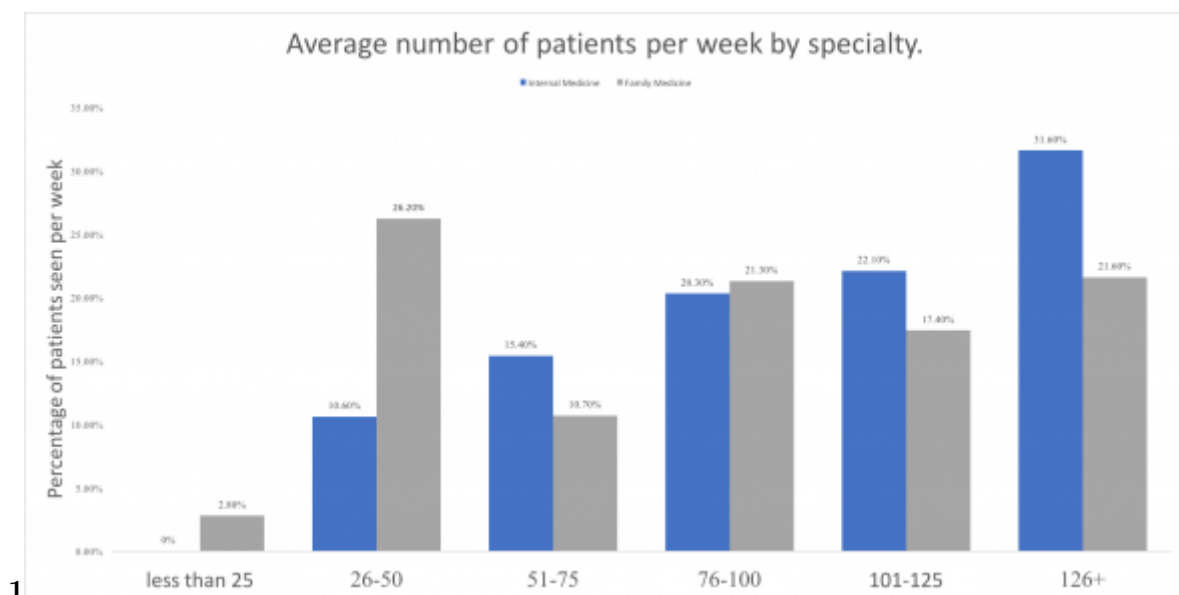


Figure 2: Figure 1 :

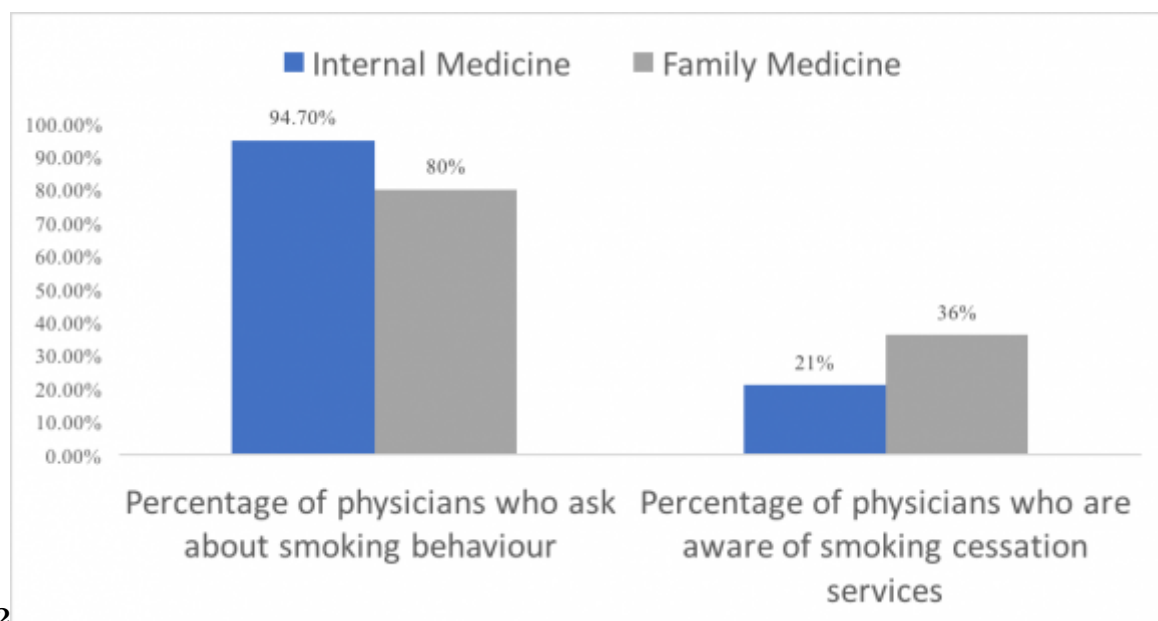


Figure 3: Figure 2 :



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