# **Knowledge, Attitude and Practice of University Hospital Staff Regarding Tobacco Control Measures**

ABEER A. ABDEL KHALIK, M.Sc.\*; LAILA M. KAMEL, M.D.\*; ZEINAB E.M. AFIFI, M.D.\*; GHADA N. RADWAN, M.D.\* and SAHIR O. EL-KHASHAB, M.D.\*\*

The Departments of Public Health & Community Medicine\* and Internal Medicine\*\*, Faculty of Medicine, Cairo University

# **Abstract**

*Background:* The best way to protect smoker and non-smokers' health is to provide a smoke-free environment. Hospitals should be 100% smoke-free for the health of all patients, workers and visitors.

*Aim of Study:* To assess the readiness for implementation of smoke free hospital.

Material and Methods: A descriptive exploratory health service study conducted at Internal Medicine Hospital (IMH) Cairo University hospital. Smoking behavior, the knowledge, attitude and practice (KAP) of all staff (physicians, nurses and paramedical staff) working in the hospital towards smoke free policy implementation at hospital were assessed.

Results: The prevalence of current smoking in male healthcare workers (HCWs) was 18.6%. Majority of HCWS were exposed to second hand smoking (SHS). Knowledge of HCWs was high in most of areas related to tobacco control laws, while physicians have a lower percent of correct knowledge in some areas. Positive attitude was high and no tobacco control practices and activities are implemented at the hospital.

Conclusion: Some areas of knowledge still need to be addressed for achieving 100% smoke free hospital. A smokefree policy practices need to be implemented at the hospital like enforcing the protocol of fining for smokers in the hospital and smoking cessation service support at the hospital.

**Key Words:** Smoke free hospital – Tobacco control – Healthcare workers

# Introduction

TOBACCO use has major health, social, environmental and economic consequences. It is considered as a great barrier against sustainable development. Nearly 7 million deaths resulted from tobacco use yearly. This includes twelve percent that die from exposure to secondhand smoke [1]. Enforcement implementation of the Frame work convention on

Correspondence to: Dr. Abeer A. Abdel Khalik, The Departments Public Health & Community Medicine Faculty of Medicine, Cairo University

tobacco control (FCTC) is considered as a major boost to global development through creating a healthier and more productive population. Monitor tobacco prevalence and protection policies, protecting people from second-hand smoke (SHS), offer help for quitting smoking, warn using pictorial health warning, enforcement banning of tobacco advertising and raising taxes on tobacco purchasing (MPOWER) are group of policies developed from FCTC helping countries on tobacco control [2]. Egypt was one of the Arab countries which signed early to the FCTC, ratified it in 2005 [3]. This was supported by Law 154/2007 that prohibits smoking indoors in government facilities, health care facilities, educational institutions and sports and social clubs [3]. Most of the articles of the FCTC are reflected in Egyptian laws and legislations however, there are still some gaps in relation to each measure and lack of compliance [4]. No doubt that health care facility should set an influential model in abstinence from smoking and promoting smokefree environments. As such, health care staff has a prominent role in tobacco control [5]. Nearly about 49% are exposed to second-hand smoke in health care facilities which makes smoking at health care facilities is a public health threat in Egypt [6]. One objective of smoke-free hospital campuses is to set a clear example of good healthpromoting practices, by providing a clear message to patients, visitors, and employees that tobacco consumption is a health risk, and therefore, it would not be allowed on the grounds of the institution. This message was expected to encourage patients, visitors, and employees to quit smoking and maintain a clean environment, reduce fire hazards and increase productivity among staff [7]. Accordingly, the rationale for the current study to assess the readiness of the hospital for implementing a smokefree hospital setting as being a smoke-free health

care facilities projecting a healthy image in the community and the important role of health care workers in combating tobacco epidemic.

# **Patients and Methods**

Study design: A descriptive exploratory health service study. Study site and period: The study conducted at the Internal Medicine Hospital (IMH) of Cairo University Hospitals. It was conducted over a period of twelve month from May 2015 till May 2016. Study population: The staff members of the hospital were composed of 230 physicians (professor, associate prof., lecturer, assistant lecturer, demonstrators and residents), 30 house officers, 45 nurses, 50 paramedical and administrative staff (PAS) and 30 care service workers. All medical, PAS as well as care service available in the hospital during time of conduction of study were targeted in this work; the expected number was not less than 50% of all staff. Study tools and data collection technique: The study tools were tailored from various studies with similar objectives such as Nasr R. et al., 2012 and Global Adult Tobacco Survey 2009 [3,8]

- Observational checklists for assessment of tobacco control regulations at hospital in which observation of number of (NO smoking sign, health education materials, and cigarette butts) and any form of smoking advertisement and sale .... etc.
- Structured self-administered questionnaire to assess KAP towards the implementation of tobacco control regulations at the hospital and smoking behavior of different staff members at the hospital which includes socio-demographic characteristics with different educational and occupational questions according to the staff member's category (physicians, nurses, PAS and care service). Knowledge about FCTC and tobacco laws and regulations in Egypt and response format was close ended (yes, no and I don't know). Attitude about smoking at hospital e.g. attitude towards smoking of doctors, towards SHS smoking.... etc. The response format was rated by the three-points Likert scale, ranging from agree to disagree and I don't know for neutral response. Practices: Asking about laws and regulations execution at hospital e.g. are there laws and if presently executed or not .... etc. Response format close ended (yes, no and I don't know).
- Regarding care service workers the same abovementioned questionnaire was used to collect data through interview to overcome the illiteracy problems in some of them.

Statistical analysis: The data was coded and fed on the computer using the Statistical Package for Social Science SPSS version 21. The data was summarized using number and percentage for qualitative variables, mean and standard deviation for quantitative variables. Comparisons between groups were tested using Chi Square test for qualitative variables comparisons, independent for quantitative variables which were normally distributed and Mann-Whitney test for quantitative variables which were not normally distributed. p-values less than or equal to 0.05 were considered statistically significant. Ethical consideration: Formal approval from officials at IMH approval of the research ethics committee, Department of Public Health and Community Medicine, as well as institutional research board (IRB) approval of Kasr Al-Aini Medical School was obtained. The study was conducted after explaining to the participants the phases of the study and its objectives. Informed consents were obtained from all the participants in the study and data confidentially was preserved according to the revised Helsinki decelerations of biomedical ethics [9].

#### Results

A total of 125 physicians, 45 nurses, 44 PAS and 23 care service workers were enrolled in the current study. Two thirds of physicians were males (60.5%) while most of the other categories were females. The mean age was  $36.83 \pm 11.68$  years, the range was 21-65 years. Ever smokers presented 18.6%; while 95% were exposed to SHS. The mean age of initiation of smoking was 24.26 for a mean duration of 16 years. The mean number of cigarettes smoked by smokers at the hospital was 5 cigarettes per day (Table 1). Regarding knowledge about tobacco rules and regulations in Egypt, more than two third of hospital staff were aware of smoking laws in Egypt with higher percent of correct answer among care service except the questions about the prohibition of tobacco advertisement (48.9%), the decision of the head of university (40%) and knowledge about FCTC (1.3%). More than three quarters (84.4%) knowledgeable about the prohibition of smoking at public places where less than 50% of physicians and care service knew that there is a penalty for smoking at hospital. Physicians reported lower percent of correct answers in most of questions (Table 2). Regarding attitude of hospital staff towards tobacco control, more than 80% of hospital staff showing favorable attitude towards tobacco control at the hospital in most of questions, however 60% agree that smoke free policy could hardly be enforced and also 65% agree that the patient cannot stop smoking during hospital stay. Physicians

reported higher percent of favorable attitude in most of statements related to tobacco control at the hospital (Table 3). No significant difference in attitude towards tobacco control at the hospital regarding smoking status however the percent of the favorable attitude is higher among non-smokers (Table 4). Regarding tobacco control measures implemented at the hospital, more than half of staff members (nurses 66.7%, paramedical 56.8% and care service 65.0%) reported that there is antismoking policy for the hospital versus 48.0% of physicians, however 12% among PAS and 8.3 among physicians said that this policy is not executed at all. 95.65% of care service and 73.33% of nurses said that there is no sale for cigarettes at hospital. Antismoking signs or health education posters at hospital were observed by 57.78% of nurses and 60.87% of care services, while less than half of physicians and PAS do (48.80% and 43.18% respectively). That nothing was given to patient to help smoking cessation was reported by 86.4% of physicians and 77.27% of PAS. (Table 5). Fig. (1) showed that the time of exposure to SHS at work is more than other places for all study members, except physicians and PAS. Nurses and care service reported higher hours of exposure in work than other groups (mean 8.4 and 5.2 respectively). The relation between respiratory symptoms

related to SHS and hours of exposure to SHS revealed that the higher hours of exposure to SHS is statistically significantly higher among persons with wheezy chest, dyspnoea, morning cough and sputum (Table 6). After inspection of tobacco control measures at the hospital using checklist. There was no poster for smoke free policy at the hospital entrance, no tobacco control team, no Egyptian guide for smoke free hospital and no smoking designated area. There was 1 antismoking sign per floor and nearly one educational poster per floor. The average cigarette butts per floor was  $11.11\pm3.84$ .

Table (1): Smoking behavior of studied group.

Smoking variables behavior	N=237	%
Never smokers	193	81.43
Ever smokers	44	18.57
Current smokers	19	43.18
Former smokers	25	56.82
Exposure to SHS smoking at hospital	222	95
Smoking related variables N=19	Mean	SD
Age of initiation of smoking (years)	24.26	9.18
Duration of current cigarette smoking in years	16.05	10.84
Number of cigarettes smoked/day	9.91	8.04
Number of cigarettes smoked/day at the hospital	5.89	5.71

Table (2): Percentage of health care workers having correct knowledge about smoking laws and regulations in Egypt.

Knowledge (correct answer)	Physician N (%) 125	Nurses N (%) 45	*PAS N (%) 45	Care service N (%) 23	Total group N (%) 237	<i>p</i> -value
a- Egyptian laws:						
<ul> <li>Is cigarettes smoking prohibited by law at workplace? (Yes)</li> </ul>	77 (61.6)	37 (82.22)	34 (77.27)	22 (95.65)	170 (71.7)	0.001
<ul> <li>Is cigarettes smoking prohibited by law at public places? (Yes)</li> </ul>	101 (80.8)	40 (88.89)	37 (84.09)	22 (95.65)	200 (84.4)	0.248
• Is cigarettes smoking prohibited by law at public transport? (Yes)	84 (67.2)	39 (86.67)	36 (81.82)	22 (95.65)	181 (76.4)	0.003
• Is tobacco products advertisement is prohibited by law? (Yes)	47 (37.6)	26 (57.78)	30 (68.18)	13 (56.52)	116 (48.9)	0.002
• Is cigarettes sale to age minor less than 18 prohibited by law? (Yes)	60 (48)	31 (68.89)	29 (65.91)	18 (78.26)	138 (58.2)	0.006
• Is there a national law for country to increase cigarettes price and taxes? (Yes)	96 (76.8)	36 (80)	34 (77.27)	21 (91.3)	187 (78.9)	0.456
• Is there a legal Penalty for smoking at hospital? (Yes)	60 (48.39)	33 (73.33)	32 (72.73)	11 (47.83)	136 (57.6)	0.003
• By law there are health warnings covering at least 50% of the main display area of the cigarette pack (Yes)	95 (76)	34 (75.56)	33 (75)	18 (78.26)	180 (75.9)	0.993
b- Egypt regulations for tobacco control:						
• Is there a religious ruling (Fatwa) for smoking? (Yes)	86 (68.8)	31 (68.89)	37 (84.09)	14 (60.87)	168 (70.9)	0.159
• Did you know the decision for Head of the University for banning smoking at any of university places? (Yes)	43 (34.4)	21 (46.67)	24 (54.55)	8 (34.78)	96 (40.5)	0.088
• Did you know the **FCTC? (Yes)	3 (2.4)	0 (0)	0 (0)	0 (0)	3 (1.3)	0.436

<sup>\*\*</sup>FCTC: Frame work convention of tobacco control.

Table (3): Percentage of health care workers having positive attitude towards tobacco control at the hospital.

Attitude towards tobacco control at hospital	Physician N (%)	Nurses N (%)	PAS N (%)	Care service N (%)	Total group N (%)	<i>p</i> -value
Patient cannot stop smoking during hospital stay (Disagree)	53 (42.4)	12 (26.67)	12 (27.27)	7 (30.43)	84 (35)	0.127
• Hospital employees who work in offices or areas removed from direct patient care should be allowed to smoke (Disagree)	98 (78.4)	28 (62.22)	34 (77.27)	12 (52.17)	172 (72.6)	0.020
• Smoke from someone else's cigarette is unhealthy for non-smokers (Agree)	12 0(96)	37 (82.22)	40 (90.91)	23 (100)	220 (92.8)	0.009
• The smoking habits of health professionals influence others (Agree)	118 (94.4)	43 (95.56)	39 (88.64)	22 (95.65)	222 (93.7)	0.491
• A smoke-free policy is hard to enforce (Disagree)	60 (48)	12 (26.67)	14 (31.82)	10 (43.48)	96 (40.5)	0.047
• Hospitals should be smoke free (Agree)	122 (97.6)	41 (91.11)	42 (95.45)	23 (100)	228 (96.2)	0.184
• A smoke-free hospital would improve the quality of care the patient receives (Agree)	122 (97.6)	43 (95.56)	38 (86.36)	22 (95.65)	225 (94.9)	0.035
• If hospital became smoke free, your health would be affected (improved & markedly improved)	107 (85.6)	38 (84.44)	38 (86.36)	21 (91.3)	204 (86.1)	0.885
Total n=44						
If smokers, you can stop smoking during presence at hospital (very easy)     If smoker you can stop smoking, if	12 (66.7)	3 (42.9)	7 (53.8)	6 (100)	28 (63.6)	0.145
hospital became smoke free (I can)	10 (55.6)	6 (85.7)	11 (84.6)	6 (100)	33 (75.0)	0.010

<sup>\*</sup>PAS: Paramedical and administrative staff.

Table (4): Comparison of ever smokers and never smokers regarding their favorable Attitude towards smoke free policy.

Attitude towards tobacco control (positive)	Ever	Ever smoker		Never smoker	
	N	(%)	N	(%)	<i>p</i> -value
Patient cannot stop smoking during hospital stay (Disagree)	10	22.73	74	38.34	0.144
<ul> <li>Hospital employees who work in offices or areas removed from direct patient care should be allowed to smoke (Disagree)</li> </ul>	28	63.64	144	74.61	0.108
• Smoke from someone else's cigarette is unhealthy for non-smokers (Agree)	40	90.91	180	93.26	0.779
• The smoking habits of health professionals influence others (Agree)	42	95.45	180	93.26	0.557
• A smoke-free policy is hard to enforce (Disagree)	13	29.55	83	43.01	0.259
• Hospitals should be smoke free (Agree)	40	90.91	188	97.41	0.060
• A smoke-free hospital would improve the quality of care the patient receives (Agree)	40	90.91	185	95.85	0.232
• If hospital became smoke free, your health would be affected (improved &markedly improved)	33	75.00	171	88.60	0.107

Table (5): Percentage of responses of health care workers regarding tobacco related laws and practices in the Internal Medicine Hospital.

	Physician N (%)	Nurses N (%)	*PAS N (%)	Care service N (%)	Total group N (%)	<i>p</i> -value
Smoking related laws and practices:						
• Are there laws banning smoking at this hospital? (yes)	60 (48)	30 (66.7)	25 (56.8)	15 (65.2)	130 (54.9)	0.136
• Execution of anti-smoking laws (among those who reported that there were laws at hospital (yes)	5 (8.3)	7 (23.3)	3 (12)	7 (46.7)	22 (16.9)	0.003
<ul> <li>Prohibition of cigarettes sale inside hospital (yes)</li> </ul>	57 (45.6)	33 (73.33)	27 (61.36)	22 (95.65)	139 (58.7)	
<ul> <li>Observing antismoking signs or posters (yes)</li> </ul>	61 (48.8)	26 (57.78)	19 (43.18)	14 (60.87)	120 (50.6)	0.275
Smoking cessation brochures distributed for helping patient to give up smoking (yes)	17 (13.6)	18 (40)	10 (22.73)	3 (13.04)	48 (20.3)	0.001
People smoke cigarettes at hospital:	27 (20 ()	( (12.2)	12 (27.2)	7 (20.4)	(2 (2( 2)	0.245
<ul><li>At any places</li><li>Some places</li><li>No smoking allowed at all</li></ul>	37 (29.6) 45 (36) 43 (34.4)	6 (13.3) 14 (31.1) 25 (55.6)	12 (27.3) 13 (29.5) 19 (43.2)	7 (30.4) 7 (30.4) 9 (39.1)	62 (26.2) 79 (33.3) 96 (40.5)	0.245

<sup>\*</sup>PAS: Paramedical and administrative staff

Table (6): Relation between respiratory manifestations and hours of exposure to second hand smoking.

nous of enposure to second name smoning.						
	SHS hours (of e	<i>p</i> -				
	Yes (mean ±SD)	No (mean ±SD)	value			
Wheezy chest	$5.73 \pm 6.04$	2.7±3.21	< 0.001			
Dyspnea	$5.04 \pm 5.58$	2.47±2.89	< 0.001			
Morning cough	$5.08\pm5.29$	$3.05\pm4.03$	0.003			
Diurnal cough	$4.47 \pm 5.48$	$3.21 \pm 3.84$	0.779			
Sputum	$4.83 \pm 5.26$	$3.24 \pm 4.16$	0.05			
Inflamed eye	$4.72 \pm 5.86$	$3.28\pm3.88$	0.34			
Running nose	$4.25\pm5.16$	$3.07\pm3.74$	0.505			
Sore throat	$4.36\pm5.13$	$3.22 \pm 4.05$	0.493			
Bronchial asthma	6.22±6.97	$3.48 \pm 4.27$	0.195			

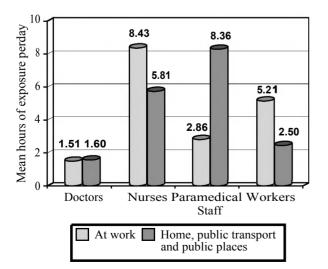


Fig. (1): Mean hours of exposure to SHS at work and home by different occupation categories.

# Discussion

Smoking is one of the most serious threats to public health in the world. No program of fight against smoking can be conceivable without the involvement of the health structure [10]. The role of hospitals and other medical institutions is crucial in promoting healthy behavior in the community. Health professionals themselves play a particularly important role in tobacco control [3]. This study was conducted in a trial to start initial steps for achieving a smoke free hospital through profiling knowledge, attitude of different staff members at the hospital as well as the tobacco control measure at hospital. The study was conducted in the Internal Medicine Hospital, Kasr Al Ainy Medical School. Regarding smoking Behavior: Most of HCW smokers were males. The prevalence of ever smokers was 18.6%. Nearly half (44.2%) of males were current smokers. In a study conducted by Radwan et al., 2012 at Kasr Al-Ainy Hospitals the prevalence among male HCWs was 16.5% for current and 22.8% for ever smokers, which is lower than our results especially for ever smokers. Both studies show that current smokers are less than ever smokers, reflecting the tendency to quit smoking among previous smokers. A national survey reported current smoking prevalence of 46.0% among males [11]. The lower percent of smoking prevalence among HCWs might be attributed to their awareness about the harmful effects of smoking and their consciousness about their role model for patients [12]. However, it may include some under-reporting, reflecting denial of a behavior they know should not be practiced. Other studies showed

different results in smoking prevalence among HCWs. The Global Health Professional Survey which was conducted in five countries in the Eastern Mediterranean Region between 2002 and 2004, including Egypt, reported higher current smoking prevalence (38%) among HCWs (physicians, dentists, nurses and others working in supporting professions) [13]. Another cross-sectional study conducted in Tunisia, 2014 reported a current smoking prevalence of 21% among HCWs (Physicians) [10]. In Algeria a study done by Chaouki et al., 2005 reported 70% current smoking prevalence among a sample of 190 hospital staff. The mean age of smoking onset of HCWs in the current study was 24.26 years. Egypt STEPS survey reported an age of 18.1 years [11]. The difference may be due to change overtime. Abdulateef et al., 2016 in Iraq reported mean age of onset 22.3 years; Shishani et al., 2011 in Jordan reported that the mean age was 20 years [15,16]. In this study, the mean number of cigarettes smoked per day was 9.9. Almost half of this number is smoked in the hospital. Egypt Stepwise approach to surveillance survey (STEP) reported 15.9 cigarettes smoked per day [11]. Abdulateef et al., 2016 reported cigarettes smoked per day to be less than a pack [15]. Saglam et al., 2010 who conducted study among health care workers at Turkey reported that thirty-two percent of all smokers consumed less than 10 cigarettes per day. It could be assumed that HCWs consume fewer cigarettes per day than the general population [17]. The early onset of smoking and increase number of cigarettes per day are related to nicotine dependence. Nicotine dependence might be associated with more resistance to compliance with smoke free policy [18]. Regarding second Hand Smoking: The high rate of smoking in Egypt is reflected by exposure to second hand smoking (SHS) which was reported by 95% SHS is hazardous to non-smokers. In the present study the occurrence of respiratory manifestations (including wheezy chest, dyspnea, cough, inflamed eye, running nose, sore throat and bronchial asthma) was high. These manifestations were related also to the daily hours of exposure. Most of the exposure occurs at the working place. The lowest reported respiratory symptoms among HCWs were reported among non-smokers, followed by non-smokers who are exposed to SHS and as expected are highest among smokers. Exposure to secondhand smoke, associated with a range of chronic and acute respiratory symptoms in non-smokers such as cough, phlegm and sputum production, wheezing and shortness of breath, in both people with and without asthma [19]. Most of the international and national laws are intended to control tobacco and to protect

non-smokers from the hazards of SHS(FCTC The article 8 of FCTC, 137/1981 law and Law 154/2007 in Egyptian laws, Rector of CU decree) The main objectives for profiling the present control measure at hospital is to prepare for implementing a totally smoke-free policy in a health-care service aiming to reduce the health impacts associated with smoking and exposure to environmental tobacco smoke for all individuals and to provide a safer, healthier and more pleasant environment for all [20]. The implementation of 100% smoke-free legislation has led to significant improvement in respiratory symptoms within populations [21]. Regarding knowledge, Attitude and Practice: Nearly 84.4 % of HCWs were knowledgeable about the prohibition of smoking at public places and health institutions respectively. Only 58% of HCWs were aware about prohibition of cigarettes sale to those less than 18 years and a total ban on advertising of tobacco respectively. Ghali et al., 2017 found the same results, 72% of health care workers in his study were aware of prohibition of smoking at public places and 94.5% were aware of the mandatory prohibition of smoking in health institutions. Contrary to the current study, higher percent of HCWs in this study was aware of the prohibition of cigarettes sale to those less than 18 years (89.5%) and the total ban on advertising of tobacco (89.5%) [10]. In the current study the physicians had always the lowest percent of knowledge regarding tobacco control laws and FCTC compared to nurses, PAS and care service. Radwan et al., 2012 identified no significant difference in knowledge among physicians, nurses and administrative staff with lower percent of knowledge among physicians. The consistency in the results of the two studies urges the need for prompt immediate action to enhance education regarding tobacco control for health care workers in Egypt, especially physicians. Including this topic in undergraduate education would support their role as health care providers and may also influence their own behavior [3]. The attitude of HCWs was generally good. In this study, HCWs supported the implementation of smoke free policy in a hospital setting. More than 90% of HCWs agreed that the hospital should be smoke free, that smoke free policy will positively affect patient care, second hand smoking is harmful to non-smokers and the physicians play a role model in their smoking behavior. Less than half (40.5%) of the HCWs disagree that smoke free policy is difficult to enforce, which indicates a favorable attitude towards enforcing a smoke-free policy. The results of the current study are consistent with many studies as Radwan et al., 2012 in which more than 90% of HCWs showed favorable attitude while

Abeer A. Abdel Khalik, et al. 2255

48.0% the HCWs believed that smoke free policy is difficult to enforce [3]. Marsh et al., 2014 study at New Zeeland University among physicians and students found a high level of support for smokefree policy initiatives on Campus and respondents believed the proposed smoke-free policy would bring many benefits as positive impact on quality of life and on learning through creation of a smokefree environment [22]. In the current study 93.7% agreed with the statement that health workers should be role models for healthy living. Radwan et al., 2012 and Nsereko et al., 2008 reported that most of the study group believed that the smoking habits of HCWs influence others. Furthermore, smoking of HCWs is identified as one of the barriers towards implementation of smoke-free hospital policies [3,23]. Strong support for smoke-free policies, even among smokers, has been reported in several countries that implement smoking bans even in high prevalence of smoking [24]. In the current study there was a high positive attitude towards smoke free policy. Increasing levels of support for smoke-free policies are essential to the success of tobacco control [25]. In the current study, nurses (smokers and non-smokers) got the lowest percent in comparison to other groups in their positive attitudes regarding tobacco control at the hospital However, Radwan et al., 2012 reported the lower percent in positive attitude was among administrative staff [3]. The assessment about tobacco control practices at the IMH was done through inspecting the hospital using check list and a questionnaire directed to HCWs. There were no signs of implementation of smoke free policy at the hospital; there were no posters for smoke free policy at the hospital entrance, and no tobacco control team. There were manifestations of smoking everywhere at the hospital, the average number of cigarette butts per floor were  $11.11 \pm 3.84$ . The awareness about presence of tobacco control laws at hospital was reported by 54.9% of HCWs, 16.9% stated implementation of these laws. Half of HCWs reported that cigarettes are being sold at the hospital. Antismoking signs at hospital were observed by 50.6% and 20% reported that there are smoking cessation brochures distributed to help patients to quit. Pianori et al., 2017 study concluded that the smoking law alone has been shown to be inadequate. Effective results can be achieved only by a common strategy and shared intervention programs that are based on a workplace health promotion strategy; this has also been experienced in the current study [26]. In conclusion, our study assessed the present situation of the tobacco control measures in the IMH and found that there was lack of information, education and communication materials

and low priority given to tobacco control activities at the hospital. Overcoming challenges to extending tobacco control within hospitals could be enhanced by taking advantage of high awareness and good favorable attitude of hospital. Still some areas of tobacco control laws and regulations need improvement in hospital staff especially physicians Recommendations:

- 1- Ensuring political support from top level management for smoke free hospital to be translated as supervision, monitoring and sustainability.
- 2- Promoting the role tobacco control committee in the hospital and the provision of logistical support for tobacco control programs and policies.
- 3- Prevention of smoking and, tobacco control measures and regulations should be emphasized in the curricula of under graduate/graduate medial and paramedical students.
- 4- Facilitating the collaboration with MOHP for continuous supply of health education materials, antismoking signage and conducting training sessions for best practices of implementation of tobacco control to ensure sustainability.

# References

- 1- World Health Organization: WHO global report on trends in prevalence of tobacco smoking World Health Organization (2017) WHO global report on trends in prevalence of tobacco smoking, 2017.
- World Health Organization: Global report on trends in prevalence of tobacco smoking, 2015.
- 3- RADWAN G., LOFFREDO C., AZIZ R., ABDEL-AZIZ N. and LABIB N.: Implementation, barriers and challenges of smoke-free policies in hospitals in Egypt. BMC. Res. Notes., 5: 568, 2012.
- 4- ABUELFOUTOH A., EL TAHLAWY E., TAMER HIF-NAWY T., SCHARAF N., MOMEN M. and KAMAL A.: Knowledge, attitudes and practice with regard to the articles of the Framework Convention on Tobacco Control among Egyptian. Journal of Taibah University Medical Sciences. 9 (3): 228-235, 2014.
- 5- World Health Organization: WHO Report on role of health professional on tobacco control, 2005.
- 6- EL FIKI S.: Tobacco free hospitals network implementation. The story of the Egyptian Coalition for Tobacco Control. J. ENSH., 33 (4): 14-22, 2010.
- 7- FERNANDEZ E. and MARTINEZ C.: Smoke-free hospital campus: the next challenge for tobacco control in Spain. Med. Clin. (Barc), 134: 633-634, 2010.
- 8- Egyptian guide for smoke free hospital: Antismoking administration at Egyptian MOHP, 2011.
- 9- World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human Subjects. Revised by the 59th WMA General Assembly, Seoul, Republic of Korea. Retrieved on 17-12-2013 from: <a href="http://www.wma.net/en/30publications/10policies/b3/">http://www.wma.net/en/30publications/10policies/b3/</a>, 2008.

- 10- GHALI H., SALWA AISSA S., MERZOUGUII L., FREJ S., OUANES R. and REJEB M.: Latiri HKnowledge, attitudes and perception of the hospital staff towards smoking at sahloul hospital-sousse-tunisia. Journal of Advances in Medicine and Medical Research, 23 (5): 1-11, 2017.
- 11- Egypt STEPS Survey WHO STEPS chronic disease risk factor surveillance 6-3C-1 www.who.int/chp/steps, 2011-2012.
- 12- JURANIC' B., RAKOSEC Z., JAKAB J., et al.: Prevalence, habits and personal attitudes towards smoking among health care professionals. J. Occup. Med. Toxicol., 12: 20. Published Jul., 26. doi: 10.1 186/s12995-017-0166-5, 2017
- 13- World Health Organization WHO Report on the Global Tobacco Epidemic: Implementing smoke-free environments, 2009.
- 14- CHAOUKI F., BOUSAFSAF H. and TAKOUACHET A.: Smoking in a medical and hospital student setting. Rev. Mal. Resp., 22 (1): 25-33, 2005.
- 15- ABDULATEEF S., ALI A., ABDULATEEF D. and MOHESH M.: Smoking knowledge, attitude, and practices among health care professionals from sulaymaniyah city/Iraq. Tob Use Insights, 9: 1-6, 2016.
- 16- SHISHANI K., NAWAFLEH H., JARRAH S. and SI-VARAJAN E.: Smoking patterns among Jordanian health professionals: A study about the impediments to tobacco control in Jordan European Journal of Cardiovascular Nursing, 10: 221-2,2011
- 17- SAGLAM L., BAYRAKTAR R., KADIOGLU E. and EURASIAN H.: Smoking prevalence and the degree of nicotine dependence among healthcare workers at the ataturk university medical facility. J. Med., 42 (2): 74-77, 2010.
- 18- KENDLER K.S., MYERS J., DAMAJ M.I. and CHEN X.: Early smoking onset and risk for subsequent nicotine dependence: A monozygotic co-twin control study. The American Journal of Psychiatry, 170 (4): 408-1, 2013.

- 19- U.S. Department of Health and Human Services: The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. Atlanta, 2006.
- 20- COOPER J., BORLAND R., YONG H. and HYLAND A.: Compliance and support for bans on smoking in licensed venues in Australia: Findings from the international tobacco control four-country survey. Australian and New Zealand Journal of Public Health, 34: 379-85, 2010.
- 21- World Health Organization: Literature review of the health effects of smoke-free policies in light of the WHO FCTC, 2014.
- 22- MARSH L., ROBERTSON L. and CAMERON C.: Attitudes towards smoke-free campus policies in New Zealand. New Zealand Medical Journal, Vol., 127 Number 1393, 2014.
- 23- NSEREKO E., BRYSIEWICZ P. and MTSHALI N.: Knowledge and practice regarding smoking among staff members of a hospital in Kigali, Rwanda, Community Nursing, 12 (6): 27-29, 2008.
- 24- JONES L.L., HASHIM A., MCKEEVER T., COOK D.G., BRITTON J. and LEONARDI-BEE J.: Parental and household smoking and the increased risk of bronchitis, bronchiolitis and other lower respiratory infections in infancy: Systematic review and meta-analysis. Respiratory Research 12: 5 Available from: http://www.ncbi.nlm.nih. gov/entrez/pubmed/21219618, 2011.
- 25- RAVARA S., CALHEIROS J., AGUIAR P. and BARATA L.: Smoking behaviour predicts tobacco control attitudes in a high smoking prevalence hospital: A cross-sectional study in a Portuguese teaching hospital prior to the national smoking ban. BMC Public Health https://bmcpublichealth.biomedcentral.co m/articles/10.11 86/1471-245 8-11-720, 2011.
- 26- PIANORI D., GILI A. and MASANOTTI G.: Changing the smoking habit: Prevalence, knowledge and attitudes among Umbrian hospital healthcare professionals. J. Prev. Med. Hyg., 58 (1): 72-78, 2017.

# المعرفة والأتجاهات والممارسات للأعضاء العاملين بالمستشفى الجامعى بما يخص القواعد الخاصة بالحد من التدخين

الخلفية: إن من أفضل الطرق لحماية صحة المدخن وغير المدحن هي أن تجعل البيئة خالية من التدخين وينبغي لأي مستشفى أن تكون خالية من التدخين بنسبة ٢٠٠٪ وذلك من أجل صحة المرضى والعاملين والزائرين للمستشفى.

الهدف: تقييم إمكانية تجهيز المستشفى لجعلها خالية من التدخين.

الطريقة البحثية: أجريت هذه الدراسة بمستشفى الأمراض الباطنية بجامعة القاهرة وذلك لتقييم السلوك التدخينى ومعرفة إتجاهات وممارسات العاملين بالمستشفى تجاه تنفيذ مستشفى خالية من التدخين وكانت النتائج كالآتى: نسبة أنتشار التدخين بين الذكور كانت ٨٨٦٪. والنسبة الغالبية العظمى من العاملين بالمستشفى كانوا يتعرضون للتذخين السلبى. بلغت نسبة المعرفة بين العا ملين عالية فى معظم الأسئلة الخاصة بقوانين ولوائح تنظيم التدخين بالمستشفى ولكن كانت أقل من الأطباء وكان هناك أتجاه أيجابى نحو جعل المستشفى خالية من التدخين ولكن لا يوجد ممارسات للتحكم بالتدخين بالمستشفى.

الخلاصة: لابد من تحسين المعرفة بالقوانين والقواعد المنظمة للتدخين لجعل المستشفى خالية من التدخين ١٠٠٪ وتفعيل ممارسات التحكم بالتدخين بالمستشفى مثل تطبيق الغرامات وتقديم خدمة الأقلاع عن التدخين بالمستشفى .