*Original Research Article*

# An Institutional Based Descriptive and Experimental Study of Smoking Cessation Services in United Arab Emirates (UAE) in 2012

Nasir Ahmed Ali[1], Nazar Khalid Zarroug[2]

[1]Assistant Professor, Jazan University, Saudi Arabia.
[2]Public Health Specialist, MOH, United Arab Emirates.

Corresponding Author: Nasir Ahmed Ali

## ABSTRACT

**Introduction:** Tobacco use is the leading cause of preventable death, and is estimated to kill more than 5 million people each year worldwide – more than tuberculosis, HIV/AIDS and malaria combined (WHO 2008). Tobacco smoke contains over 4000 chemical compounds including tar, carbon monoxide, nicotine, hydrogen cyanide, acetone, ammonia, arsenic, phenol, naphthalene, cadmium and polyvinyl chloride. Many of these agents are toxic and at least 43 can cause cancer (CDC 2007).

**Objective:** To observe the characteristics, attitudes and various trends among subjects who attended to the smoking cessation clinic during the study period as well as the efficacy of the services provided to them.

**Material and Methods:** This is an institutional based descriptive and experimental study was carried out to cover the services provided by the smoking cessation clinic in the emirate of Ras Al-Khaimah, United Arab Emirates in 2012. Data was collected by using pretested questionnaire that include socio-demographic and other quantitative and qualitative variables related to smoking. All subjects had received treatment in accordance with evidence based guidelines delivered by certified healthcare professionals; data was obtained from 417 clients who fit the selection criteria and analyzed by SPSS -18.

**Results:** The main findings of the study were that most of the subjects had started smoking at a young age; less than 20 years old (77.9%) and did not seek assistance to quit smoking until they had been smoking for more than ten years (60.2%). The study also observed that most of the subjects had started smoking because they were influenced by the marketing strategies of the tobacco industry (44.1%), peer influence (36%) and parental smoking influence (17.8%). The study found that the success rate of quitting smoking was increased by attending more than three treatment sessions and by combining counseling with the use of nicotine replacement therapy (P value 0.001).

**Conclusion:** This study emphasized the fact that smoking is a chronic relapsing condition that should be dealt with accordingly. Based on these findings, it is recommended that smoking cessation services should be incorporated within all government healthcare services; clients who are attempting to quit smoking should be offered counseling and medication; healthcare providers should be trained and provided with the necessary resources to enable them to deliver smoking cessation services in accordance with evidence based guidelines.

*Keywords:* Smoking Cessation, Tobacco use, Quitting rate.

## INTRODUCTION

Tobacco use is the leading cause of preventable death, and is estimated to kill more than 5 million people each year worldwide-more than tuberculosis, HIV/AIDS and malaria combined (WHO,

2008). Most of these deaths are in low- and middle-income countries. The gap in deaths between low- and middle-income countries and high-income countries is expected to widen further over the next several decades if we do nothing. If current trends persist, tobacco will kill more than 8 million people worldwide each year by the year 2030, with 80% of these premature deaths in low- and middle-income countries. By the end of this century, tobacco may kill a billion people or more unless urgent action is taken (Mathers and Loncar, 2006).

It is difficult for the world's more than 1 billion tobacco users to quit. However, most smokers want to quit when informed of the health risks (Peto, 1996). Although most who quit eventually do so without intervention, assistance greatly increases quit rates (U.S. Department of Health and Human Services, 2004).

Tobacco dependence treatment is primarily the responsibility of each country's health-care system (Mathers and Loncar, 2006).

Despite their lower population-wide impact, individual cessation interventions have a significant impact on individual health and are extremely cost-effective compared with many other health system activities (Murray and Lopez, 1997).

People who quit smoking, regardless of their age, smoking history or health status, experience immediate and profound health benefits and can reduce most of the associated risks within a few years of quitting (Levine and Kinder, 2004).

Tobacco dependence treatment can include various methods, but programs should include: cessation advice incorporated into primary health-care services; easily accessible and free telephone quit lines; and access to free or low-cost cessation medicines. Integrated delivery of brief cessation counseling to tobacco users requires a well-functioning primary health-care system. Action to

strengthen primary health care can draw on who developed health systems strengthening strategies to improve six health system building blocks; leadership/governance, health workforce, information support, medical products and technology, financing, and service delivery (Benowitz, 1996). Brief cessation counseling is relatively inexpensive when integrated into existing primary health-care services, is usually well received by patients, and is most effective when it includes clear, strong and personalized advice to quit (Peto, 1996).

There are many existing opportunities or entry points to incorporate brief cessation counseling into primary health-care services. Integration of brief cessation counseling into management and prevention of cardiovascular disease as well as tuberculosis care is already in process.

Doctors and other health-care workers should also serve as role models by not smoking themselves. Advice and counseling can also be provided in the form of telephone quit lines, which should be free of charge and accessible to the public at convenient times (WHO, 2007.). Pharmacological treatment of nicotine addiction should ideally be used in conjunction with advice and counseling, although it is also effective when provided separately (Peto, 1996).

Cessation medications can double the likelihood that someone will successfully quit, and this probability increases even further if the medication is administered in conjunction with counseling. Nicotine replacement therapy (NRT) has recently been added to the 16th WHO model list of essential medicines because of the high-quality evidence of its effectiveness, acceptable safety and cost effectiveness.

At least some forms of NRT should be broadly available at very affordable prices to the tobacco user wanting to quit. Smoking cessation services are most

effective when they are part of a coordinated tobacco control program.

Wealthy countries with substantial financial resources should be expected to offer comprehensive quit smoking services at no or minimal cost, although low and medium-income countries can effectively implement at least some cessation services. Most countries can use lower-cost counseling options effectively, even when financial support for medications is beyond budgetary limits (Hendricks, 2006).

## MATERIALS AND METHODS

This is study of smoking cessation services that was carried out to cover the services provided by the smoking cessation clinic in the emirate of Ras Al-Khaimah, United Arab Emirates in 2012

Various quantitative and qualitative variables were studied including the following; sex, current age, age of starting smoking, quantity of smokes/day, duration of smoking, type of smoked tobacco, cessation method used, number of treatment sessions attended, number of previous quit attempts, level of nicotine addiction, reasons for starting to smoke, and reasons for attempting to quit smoking.

All subjects who attended the clinic were assessed by direct interview using a standardized questionnaire (Appendix 1). The subjects received counseling in accordance with international guidelines for smoking cessation counseling.

Every subject was assessed and counseled during the initial visit for about 45 minutes; subsequent counseling was tailored according to specific needs of each subject.

Subjects are considered to have made a successful quit attempt if were able to abstain from smoking for at least 24 hours and are considered to successfully quit smoking if they were able to abstain from smoking completely for more than 6 months, in accordance with international guidelines.

Biophysical measures; height, weight, pulse, blood pressure and carbon monoxide levels were taken for all subjects at the initial visit and then as required.

**Inclusion criteria:** Subjects must have been smoking ten or more cigarettes per day or what is equivalent to that for at least 30 days prior to attending the clinic to seek assistance in quitting smoking.

**Study sampling:** In view of the design of this study all smokers who have attended the smoking cessation clinic at RAK for assistance in attempting to quit smoking and met the inclusion criteria were selected, a total of 417 subjects.

## RESULTS

Table (4.1): Gender

| Sex | Frequency | Percentage (%) |
|---|---|---|
| Male | 404 | 96.8 |
| Female | 13 | 3.2 |
| Total | 417 | 100 |

Table (4.1) illustrates that almost all the subjects who attended to the clinic were males.

Table (4.2): Age groups

| Age groups | Frequency | Percentage (%) |
|---|---|---|
| <15 | 5 | 1.2 |
| 15-20 | 37 | 8.9 |
| 20-30 | 83 | 19.9 |
| 30-40 | 103 | 24.7 |
| >40 | 189 | 45.3 |
| Total | 417 | 100 |

Table (4.2) shows that the great majority of subjects who attended the clinic were more than 40 years old.

Table (4.3): Age at starting smoking

| Age group | Frequency | Percentage (%) |
|---|---|---|
| <15 | 166 | 39.8 |
| 15-20 | 159 | 38.1 |
| 20-30 | 68 | 16.3 |
| 30-40 | 16 | 3.8 |
| >40 | 8 | 2.0 |
| Total | 417 | |

Table (4.3) clearly shows that the great majority of the subjects who attended the smoking cessation clinic had started smoking at a young age; below 20 years of age.

**Table (4.4): Type of smoked tobacco**

| Type of smoke | Frequency | Percentage (%) |
|---|---|---|
| Cigarette | 207 | 49.6 |
| Midwakh | 88 | 21.1 |
| Sheisha | 75 | 18 |
| Mixed | 47 | 11.3 |
| Total | 417 | 100 |

Table (4.4) indicates that most of the subjects in the study smoked cigarettes, and that the Midwakh is very popular among the study group.

**Table (4.5): Reason for initiating smoking**

| Reason | Frequency | Percentage (%) |
|---|---|---|
| Peer Influence | 150 | 36.0 |
| Attractive Advertisement | 184 | 44.1 |
| Parent Smoked | 74 | 17.8 |
| Other | 9 | 2.1 |
| Total | 417 | 100 |

Table 5 clearly indicates that advertisement for smoking plays a great role in attracting people to start smoking.

**Table (4.6): Smoking duration**

| Smoking in years | Frequency | Percentage (%) |
|---|---|---|
| 1-3 | 29 | 6.9 |
| 3-5 | 32 | 7.7 |
| 5-10 | 105 | 25.2 |
| >10 | 251 | 60.2 |
| Total | 417 | 100 |

Table (4.6) shows that more than 60% of the subjects in the study have smoked tobacco products for more than 10 years.

**Table (4.7): Reason for wanting to quit**

| Reason | Frequency | Percentage (%) |
|---|---|---|
| Healthcare provider advice | 152 | 36.4 |
| Legislation against smoking | 76 | 18.2 |
| Health Consequences | 117 | 28.0 |
| Others | 72 | 17.4 |

Table (4.7) indicates that healthcare provider advice has influenced many of the subjects among the study to quit smoking.

**Table (4.8): Previous quit attempt**

| Attempt | Frequency | Percentage (%) |
|---|---|---|
| Yes | 299 | 71.7 |
| No | 118 | 29.3 |
| Total | 417 | 100 |

Table (4.8) shows that more than 70% of the subjects of the study have made at least one previous quit attempt.

Table (4.9) demonstrates that more than 60% of the subjects in the study were able to quit smoking for a period of 1 to 30 days.

**Table (4.9): Quitting duration**

| Quitting in days | Frequency | Percentage (%) | Cumulative frequency |
|---|---|---|---|
| > 180 | 136 | 32.6 | 32.6 |
| 90-180 | 27 | 6.5 | 39.1 |
| 30-90 | 48 | 11.5 | 50.6 |
| 1-30 | 46 | 11.1 | 61.7 |
| Never quit | 160 | 38.3 | |
| Total | 417 | 100 | |

**Table (4.10): New quit attempt status**

| New quit attempt | Frequency | Percentage (%) |
|---|---|---|
| Quit attempt made | 257 | 61.6 |
| No quit attempt made | 160 | 38.4 |
| Total | 417 | |

**Table (4.11): Final subject status**

| Smoking status | Frequency | Percentage (%) | Cumulative percentage |
|---|---|---|---|
| Quit | 136 | 32.6 | 32.6 |
| Relapsed | 121 | 29 | 61.6 |
| Continued smoking | 160 | 38.4 | 100 |
| Total | 417 | 100 | |

Table (4.11) shows that exactly 32.6% of the subjects in the study were able to successfully quit smoking for more than 180 days.

Table (4.12) indicates that among the study group the success rate in quitting smoking was higher among the older age groups.

**Table (4.12): Age group vs quit success**

| Age group | Frequency | Percentage (%) | Quit | Not Quit | Percentage (%) |
|---|---|---|---|---|---|
| <15 | 5 | 1.2 | 1 | 4 | 20 |
| 15-20 | 37 | 8.9 | 7 | 30 | 19 |
| 20-30 | 83 | 19.9 | 14 | 69 | 17 |
| 30-40 | 103 | 24.7 | 51 | 52 | 49.5 |
| >40 | 189 | 45.3 | 63 | 126 | 33.3 |
| Total | 417 | | 136 | 281 | |

**Table (4.13): Medication use vs quit status.**

| NRT | Quit smoking | | |
|---|---|---|---|
| | Yes | No | Total |
| Yes | 104 | 136 | 240 |
| No | 32 | 145 | 177 |
| Total | 136 | 281 | 417 |

Table (4.13) demonstrates that the success rate in quitting smoking was higher among the group who used NRT

along with counseling (P value 0.001), (Odds ratio 3.4).

**Table (4.14): Visit number of visits quit status**

| Number of visits | Quit Smoking | | Total |
|---|---|---|---|
| | Yes | No | |
| >3 | 112 | 123 | 235 |
| 1-3 | 24 | 158 | 182 |
| Total | 136 | 281 | 417 |

Table (4.14) shows that the success in quitting smoking increases with the number of visits to the smoking cessation clinic (P value 0.001), (Odds ratio 5.9).

## DISCUSSION

The study attempted to analyze various trends among the subjects whom have attended the smoking cessation clinic during the study period. The study examined various quantitative and qualitative variables in order to gain insight and further understanding of the characteristics and attitudes of smokers attending to the smoking cessation clinic at Ras Al Khaimah for assistance in their attempt to quit smoking.

It was found that the great majority of the subjects were male, 96.8% compared to a very low turnover in female subjects only 3.2% (Table 4.1). This finding reflects the gender trend in smoking in the UAE which is a total of about 18.7% of the population, 16.3% males and 2.4% females (WHO-Global Adult Tobacco Survey 2005), but it is still thought that the low female turnover is possibly explained by the conservative nature of the community, in which females would be reluctant to disclose the fact that they do smoke.

The study also showed that most of the subjects who attended the clinic were among the older age groups 45.3% were above 40 years, 24.7% were between 30 to 40 years old, 19.9% were between 20 to 30 years old, 8.9% were between 15 to 20 years old and only 1.2% were less than 15 years old as is illustrated in table (2). This finding clearly reflects that smokers have usually smoked for a considerable amount of time after which only then they start to

realize and develop the various consequences of smoking and then make a serious attempt to quit (U.S. Department of Health and Human Services, 2004; Guindon and Boisclair, 2003).

The study clearly illustrates that the great majority of the subjects had started smoking at an early age; 39.8% below the age of 15, 38.1% between the age of 15 and 20, 16.3% between the ages of 20 to 30, and very few only 3.8% were between 30 to 40 years old and only 2% were above 40years old when they started smoking. This finding coincides with similar results in many other studies that also found that younger people are more vulnerable to the marketing strategies of the tobacco industry (Khuder *et al.,* 1999; Breslau and Peterson, 1996).

Subsequent data suggest that approximately one in five high school students report "current" smoking, defined as any smoking in the past month (CDC, 2008). Smoking prevalence increases with age throughout adolescence, data from the Monitoring the Future study conducted by Johnston et al. in 2007 showed that current smoking is reported by 8.7 percent of 8th graders, 14.5 percent of 10th graders, and 21.0 percent of 12th graders and that the younger children are when they first try smoking, the more likely they are to become regular smokers and the less likely they are to quit.

With respect to the types of smoked tobacco used by the subjects in the study, it was found that the majority of subjects were smoking conventional cigarettes 49.6%, while 21.1% smoked midwakh, 18% smoked the waterpipe or what is known as sheisha and 11.3% smoked more than one type as is shown in Table (4.4).

These findings reflect the fact that cigarettes are more widespread and available at various outlets and are vigorously marketed and advertised (Basil *et al.,* 2000; Shafey, 2004).

Midwakh which is a traditional type of pipe manufactured locally in the

mountains made from the trunks of tree is very popular among the indigenous population of UAE came in second order; used by 21.1% of the subjects (Table 4.4). It is a local product and no previous studies were found on its use.

The finding that 18% of the subjects smoked shiesha coincides with its popularity at the regional level as is described by other studies.

An adult survey conducted by the Egyptian Smoking Prevention Research Institute (ESPRI) in 2005 in the some Lower Egypt villages (10 157 individuals above age 12, 4994 males, and 5163 females with a mean age of 36 ± 28 years), found that 34% of the men were current cigarette smokers, 9% smoked waterpipe and 1% smoked both. The smoking of shiesha was also found to be very popular among university students and on the rise (Maziak *et al.,* 2004).

Data from the study showed that a large proportion of the subjects 44.1% had started smoking in the first place because they were attracted by advertisement for smoked tobacco products and this finding is well documented in many studies.

The tobacco industry spends tens of billions of dollars worldwide each year on advertising, promotion and sponsorship (CDC, 2008; Federal Trade Commission, 2005; Borland, 2007).

Second in rank for the reasons for initiating tobacco smoking found in the study was peer influence 36% of the subjects in the study. As it was described previously that most of the subjects had started smoking at an early age (below 20 years old), it well documented that individuals at this age are strongly influenced by the behavior of their peers in general and specifically in their attitude towards tobacco consumption as is described by Willemsen and De Zwart (1999) in a study examining this aspect of their behavior published and study published (Hoffman *et al.,* 2006).

The study showed that 17.8% of the subjects had started smoking because

they were influenced by a parent who also smoked, it is well known that parents are role models to their children who usually imitate their behavior towards smoking especially, this finding is also supported by observations of their study on parental smoking and its influence on adolescent smoking initiation which was published (Stephan *et al.,* 2009).

The study also found that 60.2% of the subjects had smoked for more than 10 years, 25.2% had smoked for 5 to 10 years, 7.7% for 3 to 5 years and 6.9% for less than 3 years. This is explained by the fact that it take a long time for smokers to start experiencing and recognizing the ill effects of smoking before they decide to make a serious attempt to finally quit (Ann *et al.,* 2008; Messer *et al.,* 2008).

Why smokers usually continue to smoke for many years has also been attributed to the addictive nature of nicotine. Cigarettes and other smoked tobacco products rapidly deliver the addictive drug nicotine to the brain immediately after smokers inhale-about as efficiently as an intravenous injection with a syringe (Benowitz, 1996).

The study has also observed why the subjects wanted to quit smoking and found the healthcare provider advice in the form of a brief intervention has influenced 36.4% of the subjects to seek more comprehensive help at the smoking cessation clinic. 28% of the subjects wanted to quit due to development of ill health effects of smoking , this is expected because most of the subjects were above 40 years old and had smoked for more than 10 years; this finding is supported by various reports (WHO, 2002; Surgeon General Report, 2010).

18.2% of the subjects decided that they wanted to quit smoking because of new legislation against smoking tobacco products which has been implemented in the country in 2009; UAE tobacco control law (2009). Legislation has banned advertisement and sponsorship; it has banned smoking in all public places and

has enforced new revenues and increased taxes on tobacco products. This coincides with various reports and studies conducted worldwide (WHO-The European Tobacco control Report, 2007).

"Increasing the price of tobacco through higher taxes is one of the most effective ways to decrease consumption and encourage tobacco users to quit." "A 70% increase in the price of tobacco could prevent up to a quarter of all smoking-related deaths worldwide" (WHO-Tobacco Free Initiative, 2004).

The study observed that 71.7% of the subjects had made at least one previous attempt at quitting smoking on their own while 28.3% had not tried to quit before attending to the clinic. This finding coincides with various surveys and research that have consolidated the fact the most smokers really want to quit but find great difficulty to achieve this goal on their own; they need professional help and support to overcome their dependence (Jones, 2006; Fiore, 2000).

The study found that 61.7% of subjects were successful in remaining abstinent from smoking during their treatment period for at least 1 to 30 days, but this figure declined to 50.6% in the 30 to 90 day period then reached 39.1% for the 90 to 180 day period and finally 32.6% of subjects were able to successfully quit for more than 180 days. That means that about half of the subjects who were initially able to make a new quit attempt relapsed.

This finding emphasizes that smoking is addictive, that it usually requires multiple attempts – precisely three or more attempts to succeed in quitting and that it must be dealt with as a chronic relapsing condition (Piasecki, 2005; Fiore, 2000). Smokers who have recently quit face a high risk of relapse and most relapse occurs early in the quitting process (Kenford et al., 2002).

The study revealed that among the 136 subjects who had successfully quit smoking, 76.4% had received counseling and NRT while 23.6% received counseling only and among the subjects who did not receive NRT only 18% were able to successfully quit smoking while 82% either relapsed or were not able to quit at all with an odds ratio of 3.4 (Table 4.12). This finding shows that combined counseling and NRT is superior to counseling alone in achieving smoking cessation (P value 0.001). This finding is also supported by previous studies which observed the superiority of combined counseling and NRT (Hand et al., 2002; Molyneux et al., 2003; Davidson et al., 1998).

The study clearly demonstrated that subjects attending more than three treatment sessions at the smoking cessation clinic achieved a higher success rate in quitting smoking than those who attended three or less sessions with an odds ratio of 5.9 as is indicated in Table (4.13). 82.3% of subjects who attended more than three treatment sessions were successful in completely quitting while 17.7% either relapsed or completely failed to quit as compared to 13.3% of those who attended 3 or less sessions quit and 86.6% relapsed or completely failed to quit; the result is highly significant (P value 0.001).

This finding is supported by previous studies which indicate that the success rate in quitting smoking increases with the intensity of treatment sessions specifically more than 3 sessions (Fiore, 2000; Brandon et al., 1987; British Thoracic Society, 1990).

**RECOMMENDATIONS**
1. Healthcare professionals should ask all individuals presenting to them about their smoking status and document that in patient/client file. It is essential that clinicians and health care delivery systems consistently identify and document tobacco use status.
2. Healthcare professionals should strongly advice all individuals who smoke to quit smoking and warn them against the health hazards of smoking,

inform them about the benefits of quitting and assist them in their attempt to quit smoking.

3. All individuals attempting to quit should be offered counseling to assist them in their quit attempt and encouraged to attend follow-up sessions; attending more than three treatment sessions increases the likelihood of succeeding in quitting smoking.

4. Whenever it is feasible and appropriate counseling should be combined with nicotine replacement therapy as the evidence has shown that it increases the success rate in quitting smoking. Counseling and medication are effective when used by themselves for treating tobacco dependence. The combination of counseling and medication, however, is more effective than either alone. Thus, clinicians should encourage all individuals making a quit attempt to use both counseling and medication.

5. Governments/healthcare systems should incorporate smoking cessation services into all health delivery facilities and these services should be covered by health insurance as they are effective.

6. Governments/Health care systems need to promote and strengthen public awareness of tobacco control issues, using all available communication tools, as appropriate; awareness about the health risks of tobacco consumption and exposure to tobacco smoke, and about the benefits of tobacco free lifestyles and the cessation of smoking. These campaigns should specifically target school children and their teachers and parents.

7. Governments/Health care systems should develop comprehensive training programs and resources for healthcare professionals to enable them to deliver smoking cessation therapy in accordance with best practice guidelines.

8. All universities and colleges should incorporate tobacco control into curricula of health sciences.

9. Governments/ educational organizations/ healthcare systems should develop and promote national research, with focus on locally used tobacco products, and to coordinate research programs at the regional and international levels in the field of tobacco control.

10. Governments should introduce comprehensive legislation that enforces complete bans on tobacco advertisement and sponsorship, prohibits smoking in public places, increasing taxes and revenue on tobacco products and utilizes part of the return on smoking cessation services.

11. The healthcare system should reach out to various sectors and collaborate and advocate for policy that combats the tobacco epidemic especially among youths.

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**APPENDICES**

Appendix (1): Smoking clinic assessment questionnaire.
Personal information
Name: …………………………..……………………………….
Sex:  M/F                    Occupation……………………………..
D.O.B: …………….....……………./………..……..…./…….……………
Level of Education: ..………………………………………………
Nationality…………………………………………………………
Address…………………..…………………………………………...
Contact number(s) …………………………………………………...
Marital status …………………………………………………...
No. of children ………………………………………………….
How did you get to know about our facility?
(Physician, friends, advertisements)
……………………………………………………………………
……………………………………………………………………

Problem identification
Age started smoking………………………..
No. of years smoking ………………………

Current pattern of smoking (cigarette, shisha, medwakh, other): …………………….…………………………………

No. of cigarettes or cmokes / day …………………………………………………………………………………………………..

Reasons for initiation of smoking (advertisement, peer influence, parent smoked, other

………………………………………………………………………………………………………………………………………………

Reasons for continuation of smoking ……………………………………………………….………………………..

When and where do you smoke (i.e. triggers)?

☐ After waking up ☐ During work ☐ After food ☐At home ☐ Others (specify)

………………………………………………………………………………………………………………

Can you specify the places and situations where you do not smoke? …………………………………………………

Did you try to quit smoking before…………………………………………………………………………………………

What was the longest period you spent without smoking ……………………………………………………………

Any other Substance Abuse, if yes what? …………………………………………………………………………..

Why do you want to quit smoking? (Physician advice, Health Problem, Legislation, other) ………………………………

Problems  attributed to smoking ……………………………………………………………………..

Medical history

Family history

| Condition | Yes | No | Relation degree |
|---|---|---|---|
| Diabetes Mellitus | | | |
| Hypertension | | | |
| Coronary Heart Disease | | | |
| Cancer | | | |
| Bronchial Asthma | | | |
| Cerebrovascular Accidents | | | |
| Allergy | | | |
| Psychiatric Diseases | | | |
| Others ( specify): | | | |

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