



## A survey of the knowledge and awareness about anti-smoking strategies among doctors in India

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### ABSTRACT

**Background :** Barriers faced by doctors in providing anti-smoking strategies include insufficient awareness and skills, lack of time, reimbursement and referral possibilities and unsuitable environment. Since, only 30% of tobacco users have access to adequate cessation services, therefore it is necessary to make all health care workers self-sufficient in dispensing and providing effective anti-tobacco guidance.

**Objective:** This study aims to assess the knowledge of doctors with regards to various anti-smoking methods, their efficacies, along with their willingness in discussing harm reduction with smoking patients. This survey also aims to identify the barriers faced by smokers during the process of quitting.

**Methods:** A randomly selected sample of 200 doctors were administered a questionnaire in an online as well as offline manner, to assess their knowledge and perspectives on smoking harm reduction. The inclusion criteria were minimum 3 years of experience. Frequency distribution, cross-tabulation and descriptive statistics were applied on the data.

**Results:** Cardiovascular disease (CVD) [12%] was found to be the most common reason behind patient visit. 78.5% doctors have offered anti-smoking advice regularly to their patients. Only 7% doctors consider themselves to be aware of the recent advances in anti-smoking strategies. Behavioural therapy (28%) and counselling and support groups (26%) have been rated as the most effective for smoking cessation.

**Conclusion:** Doctors and health care workers should be encouraged to strictly adhere to the practice of enquiring and recording of the patient's tobacco consumption status at every visit. Novel alternatives (with or without tobacco) like E-cigarettes, heat-not-burn (HNB) products could be valuable as cigarette substitutes in reducing the burden of tobacco addiction in India. Science-backed policy making may strengthen the ability of doctors, researchers, and medical practitioners to

explore newer options and actively recommend safer options in their fight against tobacco addiction.

### I. INTRODUCTION

India has 275 million tobacco consumers, making it the second largest tobacco consumer in the world after China. The prevalence of cigarette and bidi smoking is the highest among all other forms of tobacco consumption, pegged at 13% and 7% respectively. Consumption of tobacco in any form is more common among men living in rural areas (43%) as compared to those belonging to urban areas (29%).[1] According to WHO, if appropriate interventions aren't promptly applied for prevention and control of non-communicable diseases (NCDs), the total annual death toll will increase to 55 million by 2030.[2]

The MPOWER package introduced by WHO provides six essential parameters to control the tobacco epidemic, indicating as follows: M stands for monitor tobacco use, P stands for protecting people from tobacco smoke, O stands for offering help to quit, W stands for warning about the dangers of tobacco, E stands for enforcing bans on tobacco advertising, promotion, and sponsorship, and R stands for raising taxes on tobacco products. Studies have highlighted the need for harsher steps to reach the non-communicable disease global voluntary goal of 30% reduction in tobacco consumption by people above 15 years by 2025.[1]

Aggressive strategies for tobacco cessation and health promotion have been adopted with healthcare providers playing an essential role.[1] The WHO clinical guidelines have established healthcare providers as well placed to shoulder the responsibility of counselling smokers to quit and discouraging tobacco consumption. Health concerns is one of the major reasons for smokers to quit smoking. A study mentioned the healthcare provider's advice to stop smoking as being a motivating factor for many Dutch ex-smokers to attempt quitting.[3] Smokers are more open and accepting of advice on smoking when



given by a health care professional. [4]

The U.S. Preventive Services Task Force (USPSTF) in its latest guidelines have recommended clinicians to consider smoking status as a vital sign and record the smoking status of the patient at every health visit and use it as a tool to assess. The USPSTF directs that all patients should be asked about tobacco use, whether risk factors for use are present and be encouraged to stop its consumption.[5]

According to a study by Singh et al, 30% of men have tried to quit tobacco, 62% were exposed to second-hand smoke, and 54% of men were advised to quit tobacco when they visited the hospital in the last 12 months.[1] The Global Adult Tobacco Survey [GATS-2] data has ranked India with the second-lowest quit rate among GATS-2 countries as only 55.4 percent of smokers have ever considered or intended to quit.[6]

The armamentarium of clinicians consists of various interventions proven as effective for smoking cessation like brief advice, nicotine replacers and pharmacotherapy, behavioural counselling, and e-health interventions. The barriers to effective anti-smoking counselling as faced by health care practitioners include lack of time, reimbursement and referral possibilities and unsuitable environment. Clinicians are less prone to provide anti-smoking advice to patients with health complaints not attributed to smoking or those who appear unmotivated to quit or aren't open to the idea as it can lead to deterioration of patient-doctor relationship.

Data from the Indian Global Health Professionals Students Survey between 2005 and 2008 showed a general lack of training among health professionals in patient cessation counseling techniques. A study in Bihar found that over two-thirds of medical doctors felt the need to increase their tobacco cessation training.[6]

Hence, this study aims to assess the knowledge of doctors with regards to various anti-smoking methods, their efficacies, along with their willingness in discussing harm reduction with smoking patients. This survey also aims to identify the barriers faced by smokers during the process of

quitting.

## II. METHODOLOGY

### Subjects

A sample of 200 doctors was randomly selected for participation in the survey. The target sample represented diverse medical specialities and experience levels. The inclusion criteria were minimum 3 years of experience.

### Questionnaire Design

The questionnaire comprised of a mix of closed-ended and multiple-choice questions to assess the doctors' knowledge and perspectives on smoking harm reduction. It also included open-ended questions to gather additional feedback and suggestions.

### Data Collection

The questionnaire was administered online in metro as well as non-metro cities and offline in Mumbai, Delhi and Bengaluru. Anonymity of respondents and confidentiality of responses was maintained during the survey.

## III. ANALYSIS

Statistical analysis techniques such as frequency distribution, cross-tabulation and descriptive statistics were applied to the collected data for extracting information regarding the doctors' levels of knowledge and understanding of smoking harm reduction strategies.

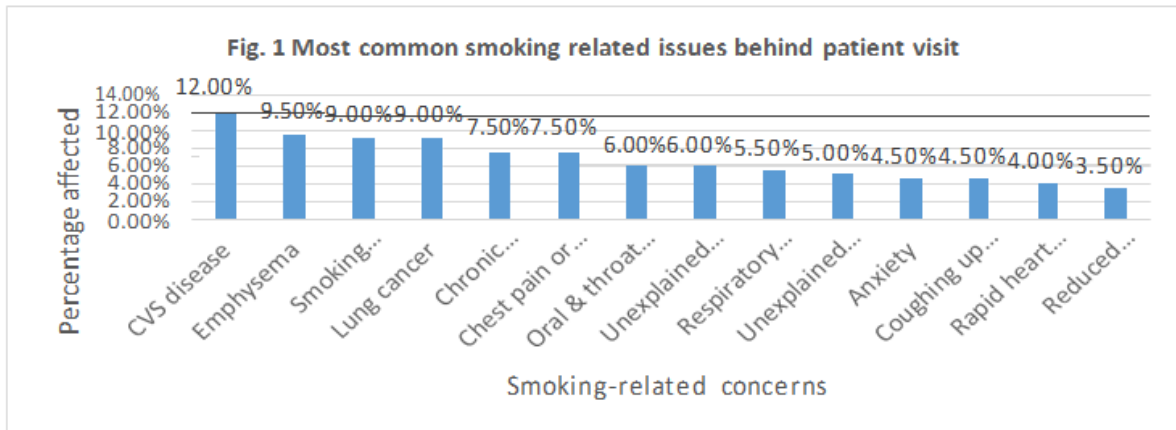
### Ethical Considerations

Ethical guidelines are followed throughout the survey process, including informed consent, data protection and maintaining participant confidentiality.

## IV. RESULTS

Most common smoking related issues behind patient visit

Figure 1: Graph representing percentage breakdown of most common smoking related issues behind patient visit



According to Figure 1, cardiovascular disease (12%) is the most common smoking related complication for which the patient seeks medical consultation, followed closely by emphysema (9.5%) and lung cancer (9%) as well as smoking

addiction (9%) itself. Rapid heart rate (4%) and fertility related complications (3.5%) are the least common complaints related to smoking. Frequency of offering advice or support to patient for smoking cessation

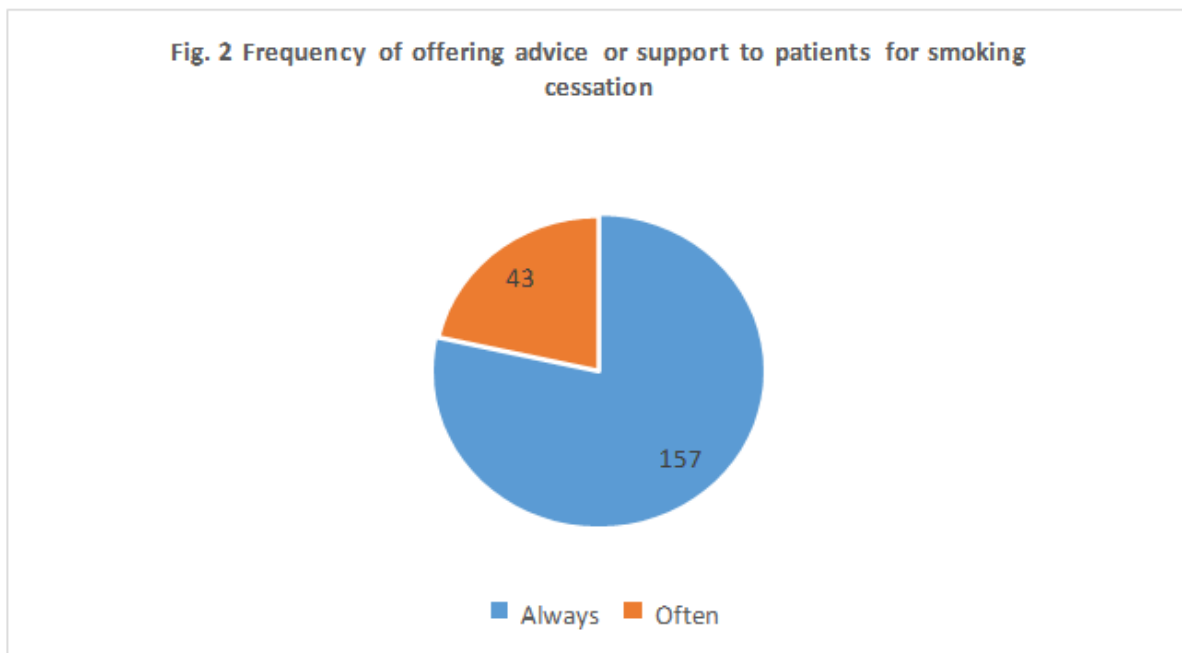


Figure 2: Graph representing the frequency of support or advice offered by doctors to their patients with regards to smoking cessation

Majority of the doctors have always offered anti-smoking advice and support to their patients while only few have not been regular in this practice. It should be noted that all the doctors in

this survey have promoted anti-smoking strategies at least once to their patients. Doctors self-rating their awareness of global trends in smoking cessation



**Fig 3. Awareness about recent trends in smoking cessation**

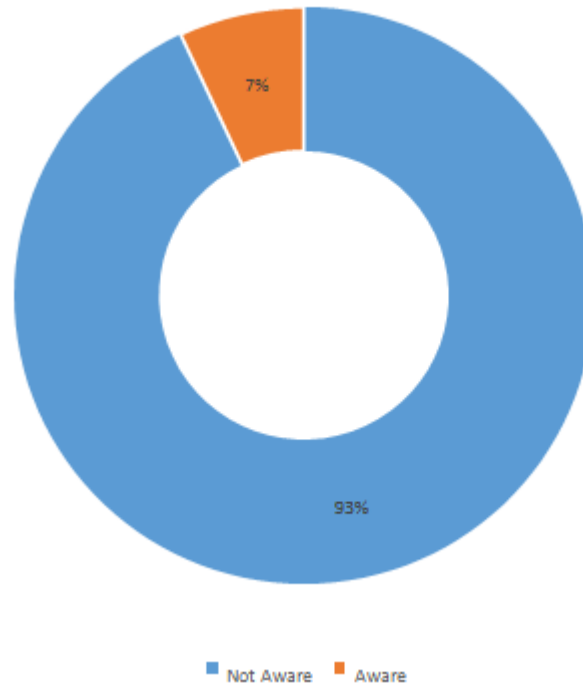


Figure 3: Graph representing awareness of advances in smoking cessation strategies among doctors

Majority of the surveyed doctors have rated themselves as unaware about the recent national and international developments in smoking cessation

strategies. Common barriers faced by patients when trying to quit smoking

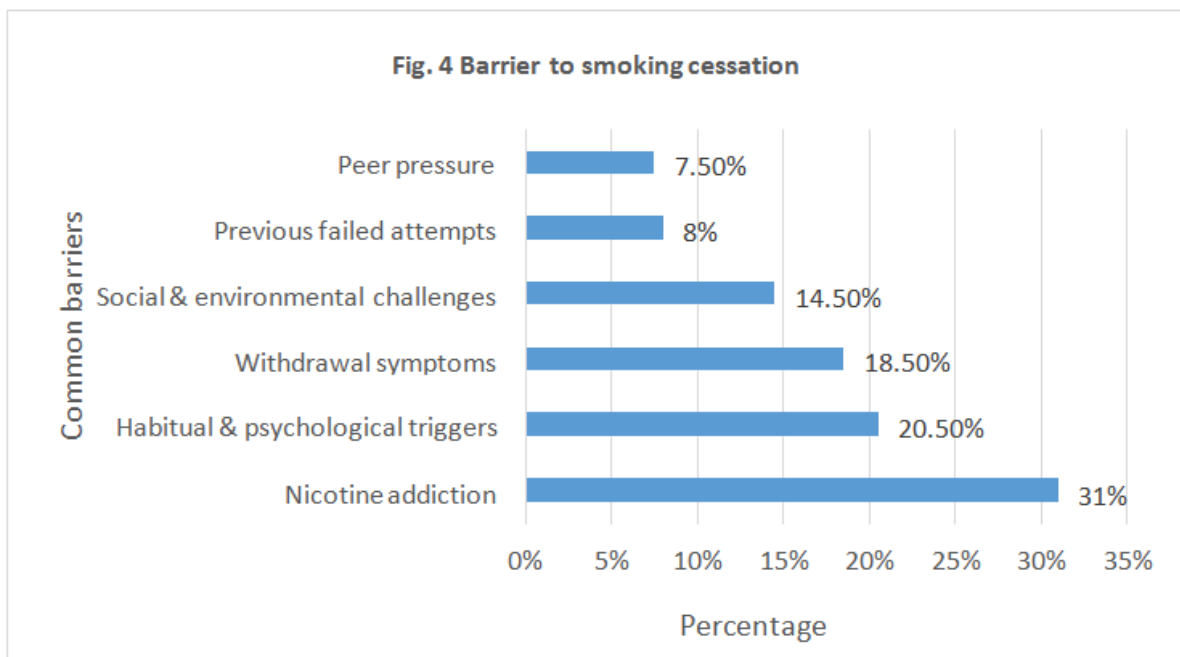


Figure 4: Graph representing barriers faced by patients when trying to quit smoking according to doctors



While nicotine addiction remains the most common barrier faced by patients trying to quit, followed closely by habitual and psychological triggers and withdrawal symptoms. Peer- pressure is reported to be the least common barrier for the

same.

Smoke cessation methods most commonly recalled by doctors

Figure 5: Graph representing foremost on mind smoke cessation methods

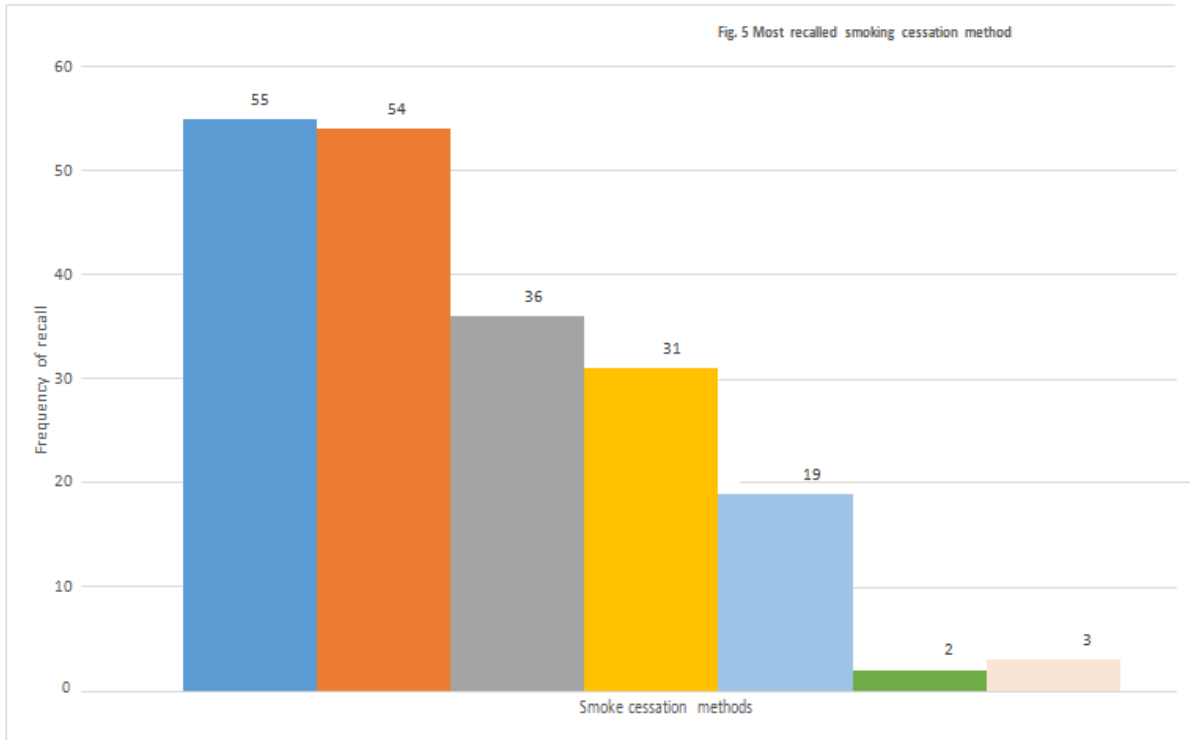


Fig. 5 Most recalled smoking cessation method

The most immediately recalled or foremost on mind smoke cessation methods according to surveyed doctors are behavioural therapy and counselling/support groups, while the least recalled are heat not burn tobacco products and Electronic Nicotine Delivery Systems- E-

Cigarettes or Vapes (this may be a factor of unavailability of all the alternative smoking cessation tools in India they are banned).

Factors considered important while recommending any anti-smoking methods

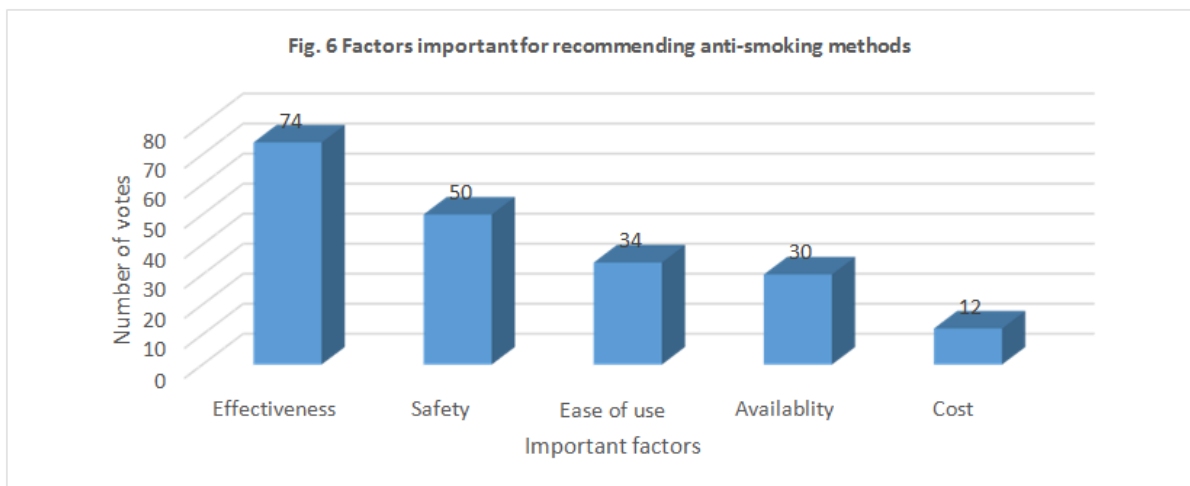


Figure 6: Graph representing factors considered important by doctors while recommending anti-smoking methods



Responding doctors consider effectiveness as the most important and cost as the least important factor to be considered while recommending any anti-smoking method.

## V. DISCUSSION

Out of 6 million deaths in the world each year caused due to tobacco and smoke exposure, 5 million are directly associated with tobacco use. By 2030, deaths due to tobacco consumptions are predicted to reach up to 8.3 million.[7] 10% of all cardiovascular diseases can be attributed to smoking according to data from WHO. [8]. According to studies tobacco consumption leads to increase in risk of coronary heart diseases by 2- to 3-fold, stroke by 1.5-fold, COPD by 1.4- fold and lung cancer by 12-fold. [9]

Evidence states smoking as a major risk factor for cancer not restricted to that of lung but also mouth, upper aero-digestive tract, bladder, cervix, colon, and rectum. Smoking is also directly associated with an increased incidence of chronic health conditions like osteoporosis, early menopause and reproductive issues [e.g. infertility, low sperm count, difficulties in conception]. Smoking during pregnancy can lead to prenatal and postnatal complications like spontaneous abortion, premature birth, low birth weight, neonatal death and sudden infant death syndrome.[10]

According to a study by Sampath et al, 68.8% doctors enquired about tobacco consumption in only those patients who presented with acute or chronic illnesses related to smoking while avoiding the question in other patients. Only 33.3% practiced regularly asking about patient's tobacco use status, quit plan and abstinence. [7]

According to Meijer et al, doctors should be trained for acquiring skills associated with tobacco cessation and not its knowledge as they perceive themselves to be ill-equipped to approach sensitive subjects or offer appropriate help. [3]

A study by Milcarz et al. rated 'craving cigarettes' (64.7%) as the most prominent barrier to quitting which can be correlated with 'nicotine addiction' found to be the most prominent barrier in this study. Milcarz et al stated that 'believing quitting is too difficult' [61.6%] followed closely as the second most prominent barrier similar to 'habitual and psychological triggers' barrier to quitting reported in this study. Other barriers noted by Milcarz et al were 'lack of willingness to quit' (55.5%); 'habit' (56.3%); 'stress and mood swings' (54.5%).[11]

A survey study found that among tobacco consumers, most popular methods of smoking cessation were reducing smoking consumption

[63%], use of pharmacotherapies [55%] and e-cigarettes [32%].[10] In one study, switching to HNB products resulted in a significant reduction in cigarette consumption in smokers with no intention of quitting, comparable to refillable ENDS. The author infers that HNB may be a useful addition to the arsenal of less risky cigarette alternatives and may contribute to smoking cessation.[12]

CAN-ADAPTT has recommended doctors to offer counselling along with pharmacotherapies; regular follow-ups and necessary treatment modifications for successfully achieving smoking cessation.[10] Similarly, the latest recommendations by USPSTF have advised a combination of behavioural counselling and pharmacotherapy for non-pregnant smokers.

In this study, the efficacy of the anti-smoking method was the most essential factor for doctors while recommending whereas cost was the least crucial factor. Also, safety played an important role during recommendations of anti-smoking methods.

### Limitations

The results of the survey are subjective in nature, hence correlation with clinical trials is required. The sample size is small, so generalization of results at a national level is not feasible. Although, this study has focussed on doctors specifically, such a survey can be carried out for all health workers including nurses, paramedics, psychologists etc.

## VI. CONCLUSION

Tobacco consumption increases health-expenditure, mortality and reduces productivity thus placing an undue economic burden on the country as well as the family. Doctors are the pillars of tobacco control programs with their ability to promote anti-smoking methods while also limiting its ill effects on health of smokers. Doctors and health care workers should be encouraged to strictly adhere to the practice of enquiring and recording of the patient's tobacco consumption status at every visit. Despite lacking sufficient awareness of latest advances in anti-smoking strategies, majority of the doctors have shown a positive approach towards learning and administering them to patients which will help succeed the anti-tobacco campaign nationally as well as internationally.

The important points which came out of this survey were:

1. The healthcare provider's advice to their patients on anti-smoking guidance is a motivating factor for many ex-smokers.





2. There is a general lack of awareness of advances in smoking cessation strategies among doctors (7% doctors are only aware)
3. Effectiveness of any anti-smoking method is the most important and cost the least important factor for doctors while recommending a less harmful alternative to cigarette.

Research backed low harm alternatives (with or without tobacco) like E-cigarettes, HNB products could be a valuable addition to the arsenal of risk-reducing products in terms of their potential as cigarette substitutes. Science-backed policy making would further strengthen the ability of doctors, researchers, and medical practitioners to explore new options and actively recommend safer options in their fight against addiction.

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