

Faculty of Health Sciences Knowledge to Policy | K2P | Center

### Prompting Government Action for Tobacco Control in Lebanon during COVID-19 Pandemic



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### Citation

Saleh, R., Nakkash, R., Harb, A., El-Jardali, F. K2P COVID-19 Series: Prompting Government Action for Tobacco Control in Lebanon during COVID-19 Pandemic. Knowledge to Policy (K2P) Center, Beirut, Lebanon, May 19, 2020





# Key Messages



Tobacco use increases risk of complications and severe infection from COVID-19 by 1.4-1.45 times. The odds for COVID-19 progression among smokers are 1.73-2.25 times more than non-smokers. Smokers have 2.4 times higher risk of requiring mechanical ventilation, needing intensive care, and dying. COVID-19 patients who were smokers had a higher mortality rate of 38.5%.

Tobacco use increases the risk of infection with the Novel Coronavirus through repetitive hand-to-face motions, sharing waterpipe apparatus (chamber, hose and mouth piece), compromising social distancing, reducing immunity and predisposing to respiratory tract infections.

International public health institutions have called on governments to strengthen tobacco control measures amid the COVID-19 pandemic. This can contribute to COVID-19 crisis mitigation and longterm health systems benefits and sustainability, including reduction in economic losses associated with smoking.

Lebanon ratified the WHO Framework Convention on Tobacco Control (FCTC) in 2005, a legally binding international treaty. Accordingly, Lebanon issued Law 174 for "Tobacco Control and Regulation of Tobacco Products' Manufacturing, Packaging and Advertising" in 2011. However, smoking rates in Lebanon are among the highest in region and enforcement of Law 174 is weak, especially with regards to the ban in closed public places.

The challenges for tobacco control policy implementation in Lebanon include limited political will by consecutive governments, low levels of coordination between the responsible authorities, limited resources, vested interests, and tobacco industry and allies' interference. Tobacco products in Lebanon continue to be highly available, affordable and accessible.

### Immediate Actions for the Government to Reduce Tobacco Use Harm Amid COVID-19:

- Raise awareness on the harms of tobacco use, home-smoking and secondhand smoke and increased risk of COVID-19 infection through media campaigns and community awareness in municipalities and primary healthcare centers.



## Preamble

While tobacco use in Lebanon kills more than 4800 people yearly, increases risk of noncommunicable diseases (including coronary heart diseases, stroke, lung cancer and other types of cancer, and diabetes among others) and some communicable diseases and holds economic costs of USD 327.1 million per year, evidence now is mounting on the effect of tobacco use on the increased risk of infection, severity and mortality from COVID-19. International public health institutions have called on governments to strengthen tobacco control measures amid COVID-19 and stated that there has never been a better time to quit.





Lebanon, already crippled by the smoking pandemic, has one of the highest smoking rates in the region, especially among youth and has also been impacted by the COVID-19 Pandemic since February 2020. As part of a plan to ease the strict lockdown measures imposed by the government, on May 2 2020, the Minister of Interior issued Memo  $48/\rho$ . 1/2020 to re-open Lebanese restaurants but with complete ban of waterpipe due to risk of novel corona virus infections. Maintenance and proper enforcement of this measure is important as well as those stipulated by the "WHO Framework Convention on Tobacco control (FCTC)", the international treaty ratified by the Lebanese Parliament in 2005. The treaty led to the issuance of Law 174 for "Tobacco Control and Regulation of Tobacco Products' Manufacturing, Packaging and Advertising" in 2011, an evidence based tobacco control policy, which legislates a complete smoking ban in closed public places. It is high time that tobacco control measures of Law 174 are firmly enforced to protect the public from the harmful health, economic, social, and environmental effects of tobacco use.



### Selection process of the studies and systematic reviews included in this Rapid Response

We identified relevant studies and systematic reviews by searching the following databases: Medline, PubMed, HealthSystems Evidence, and Social Systems Evidence during the past 10 years.

We used a combination of free word, controlled vocabulary and MeSH terms for the following concepts: "Smok\*, tobacco, cigarettes, waterpipe, cigarette smoking, smoking waterpipe", "Smok\* ban, tobacco control policy, Smoke-Free Policy, Smoking Prevention, Smoking reduction", "COVID-19, corona virus infection, coronavirus"

We also searched Google Scholar and grey literature for additional evidence.



The objective of this rapid response is to highlight the link between tobacco use and COVID-19, present a review of the challenges for tobacco control policy implementation to date and present evidence-informed counter-arguments for opposition.

We propose immediate actions required to control and prevent waves of infection with COVID-19 along with a long-term roadmap and recommendations to protect the public from the harmful health, economic, social, and environmental effects of tobacco use.

While this document and its recommendations are contextualized to Lebanon, the evidence and insights can also apply to many countries in the Eastern Mediterranean Region.

# A Double Pandemic: The Intersection of Tobacco and COVID-19

### Higher risk of infection among smokers with novel corona virus

- Waterpipe smoking is often practiced while sharing the mouth piece and hoses (2). In restaurants, cafes and delivery services, the same waterpipe is commonly shared across multiple customers with minimal cleaning of the apparatus (3).

- -----> Smoking compromises the immunity and increases the risk of contracting respiratory tract infections (influenza, colds, pneumonia, Tuberculosis and others) (8) and developing acute respiratory distress symptoms (ARDS) (9).



Lebanon declared the first case of infection from the novel coronavirus on February 21, 2020. Since then, COVID-19 continued to progress in the Lebanese community.

As of May 18, 2020, Lebanon has officially registered 931 COVID-19 cases, from which 26 died and 251 recoverd.

The government had a series of decisions to curb the pandemic progression in Lebanon including the General Mobilization Decision and closing public places on March 13th, 2020.

As the lockdown started to ease, Minister of Interior issued the Memo 48/o.1/2020 on May 2nd, 2020 to reopen the hospitality sector; however, and due to the higher risk of infection from waterpipe smoking, waterpipe is completely banned (17).

Almost 9 years after the issuance of Law 174 "Tobacco Control and Regulation of Tobacco Products' Manufacturing, Packaging and Advertising", the implementation of the smoking ban in closed public places is low because of the successive governments' lack of will to enforce the law.

It is now more important than ever to promote quitting smoking and ensuring an effective enforcement of Law 174!

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#### Increased risk of complications and mortality from COVID-19

Six systematic reviews and meta-analysis addressing the relation between COVID-19 and the smoking pandemic (10-15) showed that:

- Smoking was among the most prevalent underlying conditions of COVID-19 hospitalized patients (10)
- Current and previous smokers are at 1.4-1.45 times more risk of developing a severe infection than non-smokers (11, 12) and others have shown that smokers had higher odds of having severe COVID-19 and its progression by 1.73-2.25 times (13-15)
- Patients who smoke are 2.4 times at a higher risk of requiring mechanical ventilation, Intensive Care and dying from tobacco induced diseases (11)

While other studies did not validate those results (16-18), researchers have questioned the rigor of its methodologies and identified links with the tobacco industry (19, 20).

Nonetheless, a living systematic review concluded that the quality of the data collected so far and studies to date do not allow a clear association between smoking and SARS-CoV-2 infection, hospitalization or mortality. Yet, smoking cessation remains a public health priority and advice to quit smoking shall continue and further research is warranted (22).



Countries response to control tobacco use amid COVID-19:

- Numerous countries in the Eastern Mediterranean Region: banned waterpipe in public places (29)
- Botswana, India, South Africa have removed Tobacco from the list of essential products that can be purchased during lockdown (6).
- Wietnam and Wisconson: closed tobacco shops during lockdown (6).

#### How can tobacco affect COVID-19?

It is still unclear how tobacco increases susceptibility for a severe COVID-19 infection due to the absence of long-term studies, but what is clear is that the damage that tobacco exerts on the respiratory and immune systems indirectly predisposes smokers to a severe infection as COVID-19 and was shown to cause aggravated symptoms in individuals with comorbidities (1, 23). While tobacco is associated with multiple non-communicable diseases, evidence has shown that the fatality rate for COVID-19 patients is higher for those with diabetes, cancer, hypertension, chronic respiratory diseases, and cardiovascular diseases in comparison with those with no pre-existing non-communicable disease (24).

This is further supported by the increased rate and severity of other respiratory infections such as influenza (25), tuberculosis (26) and Middle East Respiratory Syndrome (MERS) in smoking individuals (27-29). Another virus from the coronavirus family, MERS, was found to infect smokers at a higher rate (37%) than non-smokers (19%) (28).

For MERS, current and previously smoking patients had a fatality rate of 75% in comparison to 29.4% in patients who never smoked (29). Moreover, researchers showed that smoking upregulates the production of a cellular receptor for MERS, and they extrapolated that this receptor can also bind to the novel corona virus. However, further research is required to validate this hypothesis (30-32).

#### The tobacco industry during COVID-19

The Industry has been utilizing the COVID-19 Pandemic to promote their own interests and undermine tobacco control efforts in Lebanon as well as other countries through (33, 34):

- Promoting vaping or heated tobacco and speculating that vaping has antiviral effects that can kill the virus.
- Attempting to confuse the science around smoking through commissioning and funding research (at least 7 researches so far) that produced skewed results based on the interest of the industry.

- Actively seeking policymakers with Corporate Social Responsibility efforts for funding vaccine development and donations such as ventilators while at the same time asking officials to continue distributing their products.

Similarly in Lebanon, the Tobacco Industry-Regie donated one million dollars to purchase ventilators and support response to COVID-19 which is considered a clear violation of article 5.3 of the WHO Framework Convention for Tobacco Control (FCTC) International treaty (35).





Considering the vast health, social, economic and environmental consequences of smoking and during the current the potential vulnerability of smokers to COVID-19 infection, International Public Health institutions have called upon governments to strengthen tobacco control efforts during COVID-19 pandemic.

Many propositions have been made to promote smoking cessation measures and interventions for tobacco control as a means of "flattening the curve" (1, 10, 30, 36, 37).

## Current Tobacco Use in Lebanon



Current adult cigarette smoking in Lebanon (unpublished data)



Current adult waterpipe smoking in Lebanon (unpublished data)



Current young users of Medwakh in Lebanon (12-18 yrs) (39)

Lebanese youth waterpipe smoking is the highest among 68 countries worldwide! (40)

Lebanon ranks 3rd in the world for the highest consumption of cigarettes. 3023.15 cigarettes are smoked per capita each year in Lebanon (41)

## **Consequences of Tobacco** Use

#### In Lebanon

- More than 4800 people are killed yearly by tobacco (42)
- ------> Current total cost of tobacco mortality, morbidity, loss of work productivity and environmental costs in Lebanon: USD 327.1 million or 1.1% of GDP (43).
- -----> Smokers and past smokers sick days cost due to lost production is \$102.2 million per year (44).
- A smoker in Lebanon would have to spend 4.58% of their average income (measured by per capita GDP) to purchase 10 of the most popular cigarettes to smoke daily each year! (42)
- It is estimated that 4385 tons of butts and packs wind up as toxic trash in Lebanon each year (42).



#### **Health Consequences:**

- Higher diabetes risk by 30-40%(49)

- Tobacco kills half of its users and
   1/7 of secondhand smokers (52)

#### **Economic Consequences:**

Globally, the total economic expenditure on smoking is estimated to be around US\$ 1.4 trillion annually which include healthcare costs, equivalent to 1.8% of the world's gross domestic product (GDP) (53, 54).

#### Social Consequences:

- 80% of the total number of smokers worldwide is distributed in middle and low income countries (57).



#### **Environmental Consequences:**

- Tobacco products result in around 340-680 million kilograms of nonbiodegradable waste each year worldwide (59, 60).
- In 2012, the WHO estimated that about 6,000 metric tons of formaldehyde and 47,000 metric tons of nicotine were emitted into the atmosphere (60).
- Cigarettes are the main cause of accidental fires where they caused 8–10% of all fires in the USA in the past 10 years resulting in 621 million dollars in property damage and injured 1640 civilian (59).

# The Current Status of Tobacco Control Policies in Lebanon

In 2005, Lebanon ratified the WHO Framework Convention on Tobacco Control (FCTC) international treaty with 180 other countries that aims to protect the future and current generations from the health, social, economic and environmental consequences of tobacco (57). It includes a package of evidence-informed policies that ratifying countries had to adopt and implement (58).



According to the Lebanese constitution, ratified international treaties are legally binding and paramount to national laws. Consequently, Lebanon had to adapt existing laws and develop and implement new laws that are concurrent with the treaty's articles to protect people from the harms of tobacco (63).

On August 29, 2011, Law 174 for "Tobacco Control and Regulation of Tobacco Products' Manufacturing, Packaging and Advertising" was passed after years of research, advocacy and partnerships between policymakers, civil society activists, local and international NGOs, and researchers (62). The law has multiple articles covering the availability and use of tobacco, smoke ban in public places, labeling and packaging, publicity and advertising along with chapters on implementation and sanction (64).



Aside from Law 174, Lebanon does not have other national legislations that cover all effective tobacco control policies including taxation, control of illicit trade, controlling industry interference, plain packaging, national tobacco control prevention programs, and cessation programs.

While larger textual warnings covering 40% of the tobacco pack and the ban of advertising and publicity has been widely implemented, the smoking ban in public places' implementation has been laxed and the decree on pictorial warnings has not been adopted yet (62, 65, 66).

The pictorial warnings in Lebanon, as per Law 174, requires an implementation decree that stipulates how it will be implemented and monitored. This decree has to be approved mainly by the Ministry of Health and Ministry of Finance. Even though the evidence-informed draft Decree has been developed since 2011 and updated in 2016, industry interference and lobbying has led to an absent political will to approve it (67).

The ban of smoking in closed public places came into effect in September 2012, after providing one year to prepare the sectors from the date of the issuance of the law in 2011 (62). Soon after that, the implementation was highly enforced with an estimated compliance of 90% in the hospitality sector (67). Three months later, the implementation of the ban laxed. More than half of smokers continued to smoke in public places (65).

In light of the current COVID-19 pandemic and the established harmful effects of tobacco on the users, the second-hand exposed and the economy, it is now more relevant than ever to enforce smoking ban in closed public places and ensure that the issued Memo  $48/\rho$ . 1/2020 banning waterpipe in restaurants shall continue long after the end of the lockdown phase-out (21). Maintenance and proper enforcement of this memo is a core element of Law 174, which forbids smoking in closed public spaces.

## Timeline of Tobacco Control Policies in Lebanon





### 2012

- ------> Dec: Ministerial Decision 2074/1 in 2012 Banning E-Cigarettes

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WHO FCTC				
Smoke-Free/ Smoking Ban in Public and Closed Spaces	Hospitality Sector (hotels, restaurants, bars, night clubs, cafes); Public Transportation; workplace, governmental buildings, universities, schools, hospitals			
Labelling and packaging	Size of warnings above 50% of the package (front and back)			
	Textual warnings			
	Pictorial Warnings			
F	Plain Packaging			
	Labelling guidelines and product disclosure			
E E	Ban Misleading Packaging			
	Direct Advertising (media, point of sale)			
	Indirect Advertising (sponsorship, free samples, promotions, corporate social responsibility)			
Community Based interventions E	Education, communications, training and public awareness			
Dependece Programs f	Cessation programs in educational, healthcare, workplace and sporting facilities with diagnosis, treatment and rehabilitation			
Reducing Demand: Tobacco Taxation (≥75% o	of retail price of tobacco products is tax)			
Controlling Sales to and by Minors				
Controlling Illicit Trade, Counterfeiting and Smuggling				
Controlling Industry Interference				

### Current Status of Tobacco Control Policies in Lebanon versus the international recomemndations by WHO FCTC (53, 68)

Law/ Policy/ Intervention Available in Lebanon	Law/ Policy/ Intervention Adequately Implemented in Lebanon
√(Law 174)	× (Minimal Compliance)
× (Size of warning labels is 40%)	×
√ (Law 174)	$\checkmark$
× (Law 174, but missing implementation decree)	×
×	x
<ul> <li>✓ (Law 174)</li> <li>(does not include ban on labelling flavors and information on emissions)</li> </ul>	<ul> <li>✓ (does not include all required criteria for effectiveness)</li> </ul>
√ (Law 174)	$\checkmark$
✓ (Law 174)	<ul> <li>✓ (very high implementation for media; low enforcement at points of sale)</li> </ul>
✓ (Law 174)	× (low compliance)
× (some sporadic interventions, not part of a national comprehensive program)	× (suboptimal design and implementation of interventions)
× (Not nationally: only in few healthcare facilities)	× (Not nationally: only in few healthcare facilities)
×	× (inadequate taxation currently available; no trend change in affordability since 2008)
√ (Law 174)	x
x	x
x	×

## Challenges to Implement Chapter 3 of the Law 174:

**Ban of Smoking in Closed Public Places** 

While compliance to the smoking ban is medium-high in healthcare and educational facilities, it is low in the public transportation and hospitality sector in Lebanon (53). There are a number of compounding reasons that have led to this situation which are summarized here:

The very limited political will and support for law enforcement by the consecutive Ministers of Interior and Ministers of Tourism in an attempt to ease the burden of the hospitality sector was one of the main reasons for the lack of enforcement of Law 174 (62, 67, 69-71). Furthermore, the political will and leadership to comply is missing from multiple educational establishments, public transportation sector and other public places (53). The compliance with the ban even in governmental establishments is still low. It was only until 2019 that the Ministry of Health was declared a Smoke-Free Ministry (72).

Low levels of coordination between responsible authorities contributed to weak compliance. As per Law 174, Ministries of Health, Tourism, Economy and Trade and Interior have been charged to enforce the provisions of Law 174. Yet, there is no clear role definition between these ministries leading to fragmentation of efforts and lack of clarity contributing to inefficient and limited enforcement. While the enforcement of the advertising ban was monitored by the Ministry of Economy and Trade with higher levels of enforcement, enforcement of the smoke-ban by the Tourism police was not as efficient (67).

- -----> Judiciary system has a slow process in following up with fines and repeated violators, as such, violators continued their law breaches (73).
- Corruption, conflict of interest and bribery among the regulation bodies and some of the police officers (74).

These have created a low perceived threat of enforcement/punishment and thus further contributed to the lack of compliance.

Limited available **funds** to enforce ban has been stated as a reason for the limited enforcement. In Lebanon, government's expenditure on tobacco control is around USD 30,000 per year whereas Kuwait, Qatar, Jordan, Saudi Arabia for example, spend around USD 78,000, USD 500,000, USD 120,000, USD 4,800,000 respectively (53). The Ministries responsible for the enforcement claim they have limited resources and officers to monitor the implementation (67, 74), even though enforcement does not necessarily require extensive funding sources as has been shown in other countries.

**Vested interests** highly influenced the enforcement of Law 174, mainly the Syndicate of Owners of Restaurants, Cafes, Pubs and Pastries (SRCPP) in Lebanon and the Union of Syndicates of the Hospitality Sector through:

- -----> Multiple protests, sit-ins and demonstrations to halt the implementation of law 174 (75-77).
- Multiple statements, press-releases and conferences declaring that they will not implement the law and asking for amendments as to include smoking-nonsmoking sections, longer grace periods, and licensing for designated restaurants for smoking (69, 75, 76, 78-82).
- Parliamentarians also put forward multiple suggestions to amend the law in favor of the interest of the hospitality sector (83).
- Lobbying and partnering with highlevel officials and decision makers (80, 83, 84).
- -----> Commissioning consultancy companies to produce studies, with questionable quality, showing the economic losses (67, 80, 84).
- Establishments were not abiding by the law, not paying fines and/ or finding ways to get around the ban through changing the physical structure of the establishments and relying on favoritism (67, 69).

THE TOBACCO INDUSTRY AND THEIR ALLIES HAVE BEEN USING SIMILAR **STRATEGIES** AROUND THE GLOBE TO UNDERMINE TOBACCO CONTROL EFFORTS (85). THESE HAVE BEEN COUNTERACTED IN MULTIPLE COUNTRIES:

- -----> DIRECT LOBBYING WITH POLICYMAKERS AND ESTABLISHING COLLABORATIONS
- -----> SHAPING THE EVIDENCE THROUGH COMMISSIONING OR PRODUCING RESEARCH EVIDENCE AND POSITION PAPERS
- ------> CONSTITUENCY BUILDING THROUGH FORMING ALLIES WITHIN AND OUTSIDE THE INDUSTRY ESPECIALLY WITH UNIONS AND MEDIA ADVOCACY.
- POLICY SUBSTITUTION THROUGH PROMOTING ALTERNATIVE POLICY, SELF-REGULATION AND NON-REGULATORY INITIATIVES THAT ARE LESS EFFECTIVE (EDUCATION PROGRAMS)
- FRAGMENTATION AND DESTABILIZATION OF THEIR OPPOSITION
- PROVIDING FINANCIAL INCENTIVES SUCH AS OFFERING FUTURE EMPLOYMENT AND OTHER GIFTS





**Tobacco Industry** has a long-standing history in influencing the adoption and implementation of tobacco control policies in Lebanon, even dating back to the 1970s (86). Industry documents in Lebanon reveal strategies to deliberately weaken tobacco control regulations (86). Lebanon does not control the industry interference and does not have national policies to manage conflict of interest as stipulated by article 5.3 of the WHO FCTC. In fact, low-middle income countries are considered targets for the big tobacco firms due to weaker regulations for sale, advertising and conflict of interest management (87).

In Lebanon, the tobacco industry is run by the Regie, a governmental body under the jurisdiction of the Ministry of Finance, holding exclusive rights to produce, export and import tobacco (88). The revenues of the Regie feed the Lebanese treasury which further complicates measures to control the tobacco industry. Furthermore, the Ministry of Finance signs on tobacco laws and decrees and as such influences the decision-making process while in conflict of interest.

In 2019, Lebanon ranked 30th out of 33 countries assessed for the Tobacco Industry Interference Index with very high scores on industry's participation in policymaking process, benefits provided for the industry, tobacco industry corporate social responsibility, and limited measures for transparency, conflict of interest and preventing interference (89).

- Retired government officials have now joined the tobacco industry (89).
- Regie representatives attended parliamentary sessions in an aim to influence the articles of the law (67, 88). The industry's interest was prioritized in some articles of the law and its implementation including delaying the implementation of the advertising ban and blocking pictorial warnings (83).

- The industry also uses corporate social responsibility as a method for advertising and polishing their public image (89).

Tobacco Industry and their partners have been using similar <u>arguments</u> around the globe to undermine efforts for tobacco control (85). These have been counteracted in multiple countries:

- Negative economic consequences for the manufacturers including
- financial and job losses; public revenues; and the associated industries
- Regulation is more extensive than necessary
- Industry will adhere to self-regulation and only market to those of legal age
- There exists insufficient evidence about the health/economic consequences and the effectiveness of the tobacco control policy.

The wide **availability, affordability, social pressure and continuous innovation** in tobacco products, mainly for waterpipe.

- Nicotine in tobacco is addictive and the addictive nature of tobacco products makes it very difficult of people to quit smoking on their own (91).
- -----> The affordability of tobacco products further contributed to the high utilization (93). Tobacco products are more affordable in Lebanon than the neighboring countries such as Jordan, West Bank and Gaza, Turkey and Egypt (94). This is in part also due to the low excise tax on tobacco products. Cigarettes are affordable and similarly waterpipe is affordable at home, in restaurants and through delivery services (93).



LEBANESE YOUTH HAVE IDENTIFIED THAT RESTAURANTS SERVING WATERPIPE WAS THE MOST IMPORTANT PREDICTOR FOR DIFFICULTY REFRAINING FROM WATERPIPE SMOKING AND PROGRESSING WITH NICOTINE ADDICTIVE SYMPTOMS (115).

Despite the high demand on waterpipe, more than 80% of the Lebanese smokers and non-smokers believe that tobacco control policies can control the waterpipe smoking epidemic (93) and are in favor of the law implementation.

## Immediate Actions for the Government to Reduce Tobacco Use Harm Amid COVID-19





#### Enforce Law 174

- Strengthen and continue enforcing the Memo 48/o.1/2020 that bans waterpipe in restaurants and cafes long after the General Mobilization and expand it to include all types of tobacco use to avoid the second wave of COVID-19 and to comply with the articles of Law 174.
- Assign and train employees to monitor the implementation (99) and capitalize on and support the teams that are already active in the General Mobilization and those monitoring public facilities such as MOPH teams that assess food quality, MOET Consumer Protection teams, Tourism police, internal security forces and municipality police.
- Ministry of Justice should create and implement processes to facilitate the enforcement of law 174 including swift decisions on the penal provisions for violators
- Minister of Public Works and Transport and Minister of Interior should enforce and monitor the smoking ban in public transportation to avoid COVID-19 infections through removing masks and constant mouth-to-face motions



#### Control and prevent tobacco industry and allies' interference

- Prevent tobacco industry and allies' interference in the decision-making process and funding, ban tobacco related corporate social responsibility along with controlling commercial and other vested interests in COVID-19 response as per article 5.3 of the WHO FCTC (68, 89)
- Raise awareness and expose industry activities and its tactics in the COVID-19 Pandemic

Benefits of the effective implementation of the smoking-ban in public places:

- Supports in curbing the epidemic of smoking, especially among youth (95).
- Reduces hospital admissions risk for coronary artery events (by 81%), heart disease (by 61%), cerebrovascular accidents (by 84%) and respiratory diseases (by 76%) (7) and thus reduces healthcare costs.
- Protects people (especially children) and workers in these establishments from second-hand smoke, can reduce the smoking cigarettes and may encourage others to quit smoking (96, 97).
- Increase revenues of the hospitality sector by responding to customers' requests of a smoke-free areas, especially for families and children; provide them with a competitive edge; and support in meeting international standards of quality and safety (88).



#### Raise awareness on the risks of tobacco and promote quitting tobacco

- - harms of tobacco use
  - harms of home-smoking and second-hand smoke
  - increased risk of COVID-19 infection
  - benefits and methods for quitting
  - smoking is not an excuse to remove masks in areas/times when wearing masks is a necessity (especially in public transportation and closed public spaces).
- Promote and strengthen current cessation programs available in some healthcare facilities and primary healthcare centers to support tobacco control efforts in times of COVID-19



#### Conduct research and surveillance and promote transparency

- ------> Develop a data collection system that properly records data on the smoking history of patients with the novel corona virus and promote data sharing to conduct further research
- -----> Implement freedom of information act and promote transparency and accountability through sharing government data, reports and plans that might enhance or impede efforts for effective tobacco control.









### Collaborate, delegate and monitor progress

- - Support in the enforcement of Law 174 through monitoring the public places (restaurants, cafes, hotels, delivery services, schools, universities, workplaces and municipality building) within the municipality jurisdiction.
  - Support in the provision of communitybased awareness programs on the harms of tobacco amid COVID-19

Governments should strengthen and maintain robust tobacco control policies and regulation in time of COVID-19. This can contribute to the crisis mitigation and long-term health systems benefits and sustainability (1).

## Roadmap for Effective Tobacco Control in Lebanon



Efforts for effective tobacco control require a coordinated multi-disciplinary and multi-sectoral response to address current challenges in Law 174 implementation and additional tobacco control policies to reduce tobacco harm during and beyond COVID-19. In addition to the immediate actions described earlier, below are the actions required by different sectors for effective tobacco control in Lebanon.

# 01 Government

#### Enforce Law 174

- Develop educational and incentives programs (such as grading systems) targeting establishments that are considered public places to enhance enforcement and compliance and avoid tobacco-related COVID-19 infections

- Monitor and control indirect advertisement, sponsorship and internet advertisement

#### **Tobacco Industry and Allies Interference**

- -----> Develop and enforce a code of conduct for government officials and civil servants that prevents and controls conflict of interest and other vested interests (98).


#### **Conduct Research and Surveillance and Promote Transparency**

- Rely on the best-available local, regional and international evidence for implementing articles of the Law 174 and in designing new interventions, strategies, policies and legislations

#### Additional Efforts for Effective Tobacco Control

# 02 Parliament

- Monitor the government's response and exert pressure for enforcing Law 174
- Prevent and refuse amendments to Law 174 and suggestions that do not coincide with articles of WHO FCTC International Treaty (103)

- -----> Develop and pass a tobacco taxation legislation (98)

# 03 Municipalities



# O4 Researchers and Research Institutions

- Produce policy relevant local evidence on the health, economic, environmental and social consequences of tobacco along with evaluation and effectiveness studies for tobacco control policies (62)
- Collaborate, coordinate and advocate with civil society, national and international organizations and policymakers to adopt, implement and enforce evidence-informed tobacco control policies and interventions (62)

### O5 Tobacco Control Advocates, Civil society and National and International Organizations

- Secure sources of funding that can support the government with enforcing Law 174 and refuse funding from tobacco industry and allies





# 06 Media

- - Dedicate documentaries, reports, and TV time for awareness on the importance of tobacco control
  - Avoid portraying tobacco as attractive, cool and glamorous
  - Create an initiative to stop portraying tobacco use in shows and series
- Rely on credible sources of information and high quality evidence (105) on the link between smoking and COVID-19
- Take extra caution when interpreting and sharing the results of research evidence while taking into account the quality of the research article (source, sample size, characteristics of the population group and whether it resembles the local context and study limitations) and the source of funding and whether it poses any potential conflict of interest (105)
- Monitor the government enforcement of Law 174 and ensure government transparency and accountability

# 07 The Public





08 Hospitality Sector

# Annex

#### A Guide for Policymakers, Media and Civil Society: Evidence-Informed Counterarguments for Opposition

Based on the thorough analysis of the challenges for Law 174 implementation and the arguments of the opposition for more than a decade, it is exceptionally important to present evidence-informed counterarguments to support the decision-making process for effective tobacco control in Lebanon.

Opposition Argument	Counter-arguments
Hospitality sector is undergoing huge economic losses due to Law 174 according to a study by Ernest and Young	
Implementing the Law will cause thousands of workers to lose their jobs	
Lebanese cuisine requires tobacco smoking	
	> Mediterranean cuisine is well-known to be the healthiest cuisine worldwide
	Non-smokers and tourists should have an equal right to try the healthy Lebanese cuisine without being exposed to second-hand smoking risks
	ightarrow Studies have shown than 83% of tourists support smoking ban (110)
Law should be amended to include smoking/non-smoking section and licensing for designated restaurants for smoking	
It is not the time; Lebanon is going through enough	

<b>Opposition Argument</b>	Counter-arguments
There should be some exceptions to establishments that mainly rely on waterpipe for income	
	> The laws cannot be contradictory in text and articles of WHO FCTC
	> Exceptions will arise the issue of inequity to other institutions
	The Law only bans smoking in public "closed places" defined as ceiling and two walls. Restaurants and cafes can still serve waterpipe in "open places" (112)
People have the freedom to choose whether to smoke or not	Nicotine in tobacco is addictive. Addiction takes away the aspect of the "free-will" and makes quitting extremely difficult with cessation programs requiring around 1-1.5 yrs (91)
The law should respect the rights of both smokers and non-smokers; with adequate ventilation smoking can be resumed	→ No ventilation system can clear the air from the carcinogenic particles of tobacco → Around 600,000 people die yearly from second-hand smoke (112)
The law should allow for longer grace- periods	WHO FCT was ratified in 2005 and Law 174 was passed in 2011. Compliance of with the smoke ban is still low in 2020.
Corruption will never allow the law to be implemented	
	> Corruption lies also on the level of those who offer the bribery
	$\rightarrow$ Fighting corruption is a collective effort that can be achieved (110)
We will not implement the law	
We have corporate	
social responsibility (CSR) and will support families in-need, donate ventilators for hospitals and launch awareness programs on the harms of tobacco	
Implementing the law and issuing tobacco taxation legislation will increase smuggling and illicit trade	
Enforcing the law will harm the tobacco farmers in Lebanon	> Tobacco farmers in Lebanon are not faring well due to subsidy from Regie with a vicious cycle of debt
	Farmers are subject to grave health consequences from green tobacco sickness and poisoning from nicotine along with chemicals and pesticides used for tobacco crops
	> Many farmers want to switch from farming tobacco if provided the means and alternatives (114)

## REFERENCES

- 1. World Health Organization EMRO. Tobacco and waterpipe use increases the risk of suffering from COVID-19. Tobacco Free initiative. Available from: https://bit.ly/3dR97xs [Accessed 8th May 2020].
- 2. Koul PA, Hajni MR, Sheikh MA, Khan UH, Shah A, Khan Y, et al. Hookah smoking and lung cancer in the Kashmir valley of the Indian subcontinent. Asian Pac J Cancer Prev. 2011;12(2):519-24.
- 3. Daniels KE, Roman NV. A descriptive study of the perceptions and behaviors of waterpipe use by university students in the Western Cape, South Africa. Tob Induc Dis. 2013;11(1):4-.
- 4. Habib M, Mohamed MK, Abdel-Aziz F, Magder LS, Abdel-Hamid M, Gamil F, et al. Hepatitis C virus infection in a community in the Nile Delta: risk factors for seropositivity. Hepatology. 2001;33(1):248-53.
- Munckhof W, Konstantinos A, Wamsley M, Mortlock M, Gilpin C. A cluster of tuberculosis associated with use of a marijuana water pipe. The International Journal of Tuberculosis and Lung Disease. 2003;7(9):860-5.
- 6. ASH Action on Smoking & Health. COVID-19 and Tobacco Policy and Communications Toolkit. Available from: https://bit.ly/36bQku8 [Accessed 8th May 2020].
- 7. Tan CE, Glantz SA. Association between smoke-free legislation and hospitalizations for cardiac, cerebrovascular, and respiratory diseases: a meta-analysis. Circulation. 2012;126(18):2177-83.
- 8. Bilello KS, MURIN S. Respiratory tract infections: another reason not to smoke. Cleve Clin J Med. 2005;72:916-20.
- 9. Calfee CS, Matthay MA, Kangelaris KN, Siew ED, Janz DR, Bernard GR, et al. Cigarette smoke exposure and the acute respiratory distress syndrome. Critical care medicine. 2015;43(9):1790.
- 10. Emami A, Javanmardi F, Pirbonyeh N, Akbari A. Prevalence of underlying diseases in hospitalized patients with COVID-19: a systematic review and meta-analysis. Archives of academic emergency medicine. 2020;8(1).
- 11. Vardavas CI, Nikitara K. COVID-19 and smoking: A systematic review of the evidence. Tobacco induced diseases. 2020;18.
- 12. Alqahtani, JS et al. Prevalence, Severity and Mortality associated with COPD and Smoking in patients with COVID-19: A Rapid Systematic Review and Meta-Analysis. PLoS One. 2020;15(5):e0233147.
- 13. Zhao X, Zhang B, Li P, Ma C, Gu J, Hou P, Guo Z, Wu H, Bai Y. Incidence, clinical characteristics and prognostic factor of patients with COVID-19: a systematic review and meta-analysis. MedRxiv. 2020 Jan 1.
- 14. Zhao Q, Meng M, Kumar R, Wu Y, Huang J, Lian N, Deng Y, Lin S. The impact of COPD and smoking history on the severity of COVID-19: A systemic review and meta-analysis. Journal of medical virology. 2020 Apr 15.
- 15. Patanavanich R, Glantz SA. Smoking is Associated with COVID-19 Progression: A Meta-Analysis. medRxiv. 2020 Jan 1.
- 16. Changeux j-p, Amoura Z, Rey F, Miyara M. A nicotinic hypothesis for Covid-19 with preventive and therapeutic implications. Qeios. 2020.
- 17. Farsalinos K, Barbouni A, Niaura RJQ. Smoking, vaping and hospitalization for COVID-19. Qeios. 2020.
- 18. Miyara M, Tubach F, Pourcher V, Morelot-Panzini C, Pernet J, Haroche J, et al. Low incidence of daily active tobacco smoking in patients with symptomatic COVID-19. Qeios. 2020.
- 19. Alliance Contre le taba. PRESS RELEASE : Covid-19 and smoking: the hypothesis of a protecting effect of nicotine to take with extreme precaution. Alliance contre le tabac. 2020.
- 20. Stopping Tobacco Organizations and Products. Studies That Suggest Smoking And Nicotine Protect Against COVID-19 Are Flawed. Available from: https://bit.ly/3bDNuPF [Accessed 8th May 2020].
- 21. Almodononline. In pictures: The Minister of Interior launches the second phase of the gradual retreat from the mobilization procedures. Available from: https://bit.ly/3dTEEyS [Accessed 8th May 2020].
- 22. Simons D, Shahab L, Brown J, Perski O. The association of smoking status with SARS-CoV-2 infection, hospitalisation and mortality from COVID-19: A living rapid evidence review. Qeios. 2020.

- 23. Kary T. FDA Says Smokers May Have Higher Risk of Catching COVID-19. Available from: https://bloom. bg/2Z7UPV1 [Accessed 8th May 2020].
- 24. World Headlth Organization. Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19). World Health Organization. 2020
- 25. Lawrence H, Hunter A, Murray R, Lim W, McKeever T. Cigarette smoking and the occurrence of influenza– Systematic review. Journal of Infection. 2019;79(5):401-6.
- 26. Rojewski AM, Baldassarri S, Cooperman NA, Gritz ER, Leone FT, Piper ME, et al. Exploring Issues of Comorbid Conditions in People Who Smoke. Nicotine & Tobacco Research. 2016;18(8):1684-96.
- 27. Sherbini N, Iskandrani A, Kharaba A, Khalid G, Abduljawad M, Hamdan A-J. Middle East respiratory syndrome coronavirus in Al-Madinah City, Saudi Arabia: demographic, clinical and survival data. Journal of epidemiology and global health. 2017;7(1):29-36.
- 28. Basem MA, John TW, Abdulatif A, Glen RA, Amal T, Musallam S, et al. Risk Factors for Primary Middle East Respiratory Syndrome Coronavirus Illness in Humans, Saudi Arabia, 2014. Emerging Infectious Disease journal. 2016;22(1):49.
- 29. Nam H-S, Park JW, Ki M, Yeon M-Y, Kim J, Kim SW. High fatality rates and associated factors in two hospital outbreaks of MERS in Daejeon, the Republic of Korea. International Journal of Infectious Diseases. 2017;58:37-42.
- 30. Berlin I, Thomas D, Le Faou A-L, Cornuz J. COVID-19 and Smoking. Nicotine & Tobacco Research. 2020.
- 31. Brake SJ, Barnsley K, Lu W, McAlinden KD, Eapen MS, Sohal SS. Smoking Upregulates Angiotensin-Converting Enzyme-2 Receptor: A Potential Adhesion Site for Novel Coronavirus SARS-CoV-2 (COVID-19). 2020;9(3):841.
- 32. Cai GJM. Bulk and single-cell transcriptomics identify tobacco-use disparity in lung gene expression of ACE2, the receptor of 2019-nCov. 2020.
- 33. Global Center for Good Governance in Tobacco Control. COVID-19 and Tobacco Industry Interference, 2020. Global Center for Good Governance in Tobacco Control. 2020.
- 34. STOP Monitoring Brief: Tobacco Industry responses to the COVID-19 pandemic. Stopping Tobacco Organizations and Products. 2020.
- 35. Annahar. مجموعة البحث للحدّ من التدخين في "الأميركية" تنتقد تبرع الريجي لمكافحة كورونا .Available from https://bit.ly/3fiwlhq [Accessed 8th May 2020].
- 36. Holm M, Schiöler L, Andersson E, Forsberg B, Gislason T, Janson C, et al. Predictors of smoking cessation: a longitudinal study in a large cohort of smokers. Respiratory medicine. 2017;132:164-9.
- 37. Campaign for Tobacco-Free Kids. COVID-19: Never Has It Been More Important For Smokers To Quit And For Individuals To Avoid Damaging Their Lungs By Vaping. Campaign for Tobacco-Free Kids. 2020.
- 38. Global School-based Student Health Survey- Lebanon Fact Sheet. Global Student Health Survey. 2017.
- 39. Afifi R, Saravanan M, El Salibi N, Nakkash R, Rady A, Sherman S, et al. Evidence from the Lebanon Global School-based Student Health Survey on midwakh tobacco smoking in school students: a harbinger of the next global tobacco pandemic?. Eastern Mediterranean health journal. 2020;26(1):116-21.
- 40. Jawad M, Charide R, Waziry R, Darzi A, Ballout RA, Akl EA. The prevalence and trends of waterpipe tobacco smoking: A systematic review. PloS one. 2018;13(2).
- 41. American University of Beirut. Neighborhood Initiative: Cigarette Butt Stand Up Paddle Board Launching. Available from: https://bit.ly/2AzRWIF [Accessed 8th May 2020].
- 42. The Tobacco Atlas. Lebanon. Available from: https://bit.ly/362Tosi [Accessed 8th May 2020].
- 43. Salti N, Brouwer E, Verguet SJSS, Medicine. The health, financial and distributional consequences of increases in the tobacco excise tax among smokers in Lebanon. 2016;170:161-9.

## REFERENCES

- 44. Sibai A, Tohme R, Mahfoud Z, Chaaya M, Hwalla N. Non-communicable diseases and behavioral risk factor survey: comparison of estimates based on cell phone interviews with face to face interviews. World Health Organization office Lebanon. 2009.
- 45. Cleveland Clinic. Smoking. Available from: https://cle.clinic/3cDZwts [Accessed 8th May 2020].
- 46. Johns Hopkins Medicine. Smoking and Cardiovascular Disease. Available from: https://bit.ly/2T86vmY [Accessed 8th May 2020].
- 47. Centers for Disease Control and Prevention. What Are the Risk Factors for Lung Cancer. Available from: https://bit.ly/3cFceZ1 [Accessed 8th May 2020].
- 48. Stämpfli MR, Anderson GP. How cigarette smoke skews immune responses to promote infection, lung disease and cancer. Nature Reviews Immunology. 2009;9(5):377-84.
- 49. Food and Drug Administration. Cigarette Smoking: A Risk Factor for Type 2 Diabetes. Available from: https://bit.ly/364DbCP [Accessed 8th May 2020].
- 50. Cleveland Clinic . How Stopping Smoking Boosts Your Fertility Naturally. Available from: https://cle. clinic/3fUpfQx [Accessed 8th May 2020].
- 51. World Health Organization. WHO recommendations for the prevention and management of tobacco use and second-hand smoke exposure in pregnancy. World Health Organization. 2013.
- 52. World Health Organization. Tobacco. World Health Organization. 2019.
- 53. World Health Organization. WHO report on the global tobacco epidemic, 2019. World Health Organization. 2019.
- 54. World Bank. Tobacco. Available from: https://www.worldbank.org/en/topic/tobacco [Accessed 8th May 2020].
- 55. Hill S, Amos A, Clifford D, Platt S. Impact of tobacco control interventions on socioeconomic inequalities in smoking: review of the evidence. BMJ Journals. 2014;23(e2):e89-e97.
- 56. Frohlich KL, Poland B, Mykhalovskiy E, Alexander S, Maule C. Tobacco control and the inequitable socioeconomic distribution of smoking: smokers' discourses and implications for tobacco control. Critical Public Health. 2010;20(1):35-46.
- 57. World Heart Federation. Tobacco is responsible for more than one in ten deaths caused by cardiovascular disease. World Heart Federation. 2018.
- 58. Efroymson D, Pham HA, Jones L, FitzGerald S, Thu LT, Thu Hien LT. Tobacco and poverty: evidence from Vietnam. BMJ Journals. 2011;20(4):296-301.
- 59. Novotny TE, Bialous SA, Burt L, Curtis C, da Costa VL, Iqtidar SU, et al. The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption. Bull World Health Organ. 2015;93(12):877-80.
- 60. World Health Organization. Tobacco and its environmental impact: an overview. World Health Organization. 2017.
- 61. World Health Organization. The WHO Framework Convention on Tobacco Control: an overview. World Health Organization. 2018.
- 62. Nakkash R, Torossian L, El Hajj T, Khalil J, Afifi R. The passage of tobacco control law 174 in Lebanon: reflections on the problem, policies and politics. Health policy and planning. 2018;33(5):633-44.
- 63. Lebanese Republic Parliament. National Plan for Human Rights: Introduction. Available from: https://bit. ly/2Z8h4tV [Accessed 8th May 2020].
- 64. Mikaty M. Law No. 174 Tobacco Control and Regulation of Tobacco Products' Manufacturing, Packaging and Advertising. Lebanese Republic Parliament. 2011
- 65. Chaaya M, Nakkash R, Afifi R, Adame G, Fanous N, Tabbal N, et al. Implementation of a indoor air ban and an advertising and sponsorship ban in Lebanon: a baseline cross-sectional study. Tobacco Prevention & Cessation. 2016;2(May).

- 66. Tobacco Control Laws. Tobacco Control Policies: Lebanon Country Fact Sheet. Tobacco Control Laws. 2019
- قانون الحد من التدخين ...الى القضاء در. المجلة القضائية. Moufarrej E. 2012
- 68. The WHO Framework Convention on Tobacco Control. World Health Organization. 2005.
- 69. Dyke J. Old habits die hard: Smoking ban struggling in Lebanon. Available from: https://bit.ly/3dNRajc [Accessed 8th May 2020].
- 70. Karam M. Lebanon's Law 174 goes up in smoke. Available from: https://bit.ly/3fTxFHI [Accessed 8th May 2020].
- 71. Merhi N. Lebanon's antismoking law: will it be amended for better enforcement? Available from: https://bit. ly/3cAFd0c [Accessed 8th May 2020].
- 72. National News Agency. بعد 8 سنوات على صدور القانون 174 للحد من التدخين: نسبة المدخنين البالغين وصلت. Available from: https://bit.ly/2ZcGnLl [Accessed 8th May 2020].
- 73. Daily star. Available from: https://bit.ly/362U8hf [Accessed 8th May 2020].
- 74. Ohrstrom L. Lebanon makes resolution not to quit smoking. Available from: https://bit.ly/2WCJESD [Accessed 8th May 2020].
- 75. LBC Group. ملصقات منع التدخين في الحمرا والجميزة... وأصحاب المقاهي منقسمون. Available from: https:// bit.ly/2X4Jqmf [Accessed 8th May 2020].
- 76. Middle East Online (MEO) News.لبنانيون: منع التدخين يدخل البلاد في حالة 'طوارئ سياحية. Available from: https://meo.news/en/node/474788 [Accessed 8th May 2020].
- 77. Naharnet. نقابة اصحاب المطاعم تعلن مقاطعة قانون منع التدخين. Available from: http://www.naharnet.com/ stories/ar/59780 [Accessed 8th May 2020].
- 78. AlAkhbar. أين قانون منع التدخين؟ : 4000 ضحية سنوياً في لبنان. Available from: https://al-akhbar.com/ Community/251167 [Accessed 8th May 2020].
- 79. Almanar. لبنان: ميقاتي لا يستبعد تعديل قانون منع التدخين في الأماكن العامة. Available from: http://archive. almanar.com.lb/article.php?id=299931 [Accessed 8th May 2020].
- 80. Mustaqbal Web. النقابات السياحية تهدّد بالتصعيد إذا لم يعدّل منع التدخين وتقدر الخسائر بـ168 مليون دولار . Available from: https://bit.ly/3dNQI4v [Accessed 8th May 2020].
- 81. Saidaonline. نقابة اصحاب المطاعم تعلن مقاطعة قانون منع التدخين. Available from: https://www.saidaonline. com/news.php?go=fullnews&newsid=50861 [Accessed 8th May 2020].
- 82. Zhar R. لن تنفّخ عليها ولن تنجلي بعد اليوم في لبنان. Available from: https://bit.ly/3dRMzww [Accessed 8th May 2020].
- Nammour, K. التدخين، المكان العام وجمهورية المصالح الخاصة: حين يصل التفاوض الى حد المساومة على الصحة العامة وعلى مبدأ المساواة. Available from: https://www.legal-Agenda.com/article.php?id=201 [Accessed 8th May 2020].
- 84. Othmani F. كتاب من نقابة أصحاب المطاعم والمقاهي إلى النواب: ضريبة الـ1000 ليرة على النرجيلة. Available from: https://bit.ly/3dNRmyW [Accessed 8th May 2020].
- 85. Savell E, Gilmore AB, Fooks G. How does the tobacco industry attempt to influence marketing regulations? A systematic review. PloS one. 2014;9(2):e87389.
- 86. Nakkash R, Lee K. The tobacco industry's thwarting of marketing restrictions and health warnings in Lebanon. BMJ Journals. 2009;18(4):310-6.
- 87. Gilmore AB, Fooks G, Drope J, Bialous SA, Jackson RR. Exposing and addressing tobacco industry conduct in low-income and middle-income countries. The Lancet. 2015;385(9972):1029-43.
- 88. Nakkash RT, Khalil J, Chaaya M, Afifi RA. Building research evidence for policy advocacy: a qualitative evaluation of existing smoke-free policies in Lebanon. Asia Pacific Journal of Public Health. 2010;22(3\_suppl):168S-74S.

## REFERENCES

- 89. Global Center for Good Governance in Tobacco Control. Global Tobacco Index. Lebanon. Available from: https://globaltobaccoindex.org/country/LB [Accessed 8th May 2020].
- 90. Salloum RG, Nakkash RT, Myers AE, Wood KA, Ribisl KM. Point-of-sale tobacco advertising in Beirut, Lebanon following a national advertising ban. BMC Public Health. 2013;13(1):534.
- 91. Russo P, Nastrucci C, Alzetta G, Szalai C. Tobacco habit: historical, cultural, neurobiological, and genetic features of people's relationship with an addictive drug. Perspectives in biology medicine. 2011;54(4):557-77.
- 92. Khalil J, Afifi R, Fouad FM, Hammal F, Jarallah Y, Mohamed M, et al. Women and waterpipe tobacco smoking in the eastern Mediterranean region: allure or offensiveness. Women health 2013;53(1):100-16.
- 93. Nakkash RT, Khalil J, Afifi RA. The rise in narghile (shisha, hookah) waterpipe tobacco smoking: a qualitative study of perceptions of smokers and non smokers. BMC public health. 2011;11(1):315.
- 94. World Health Organization. Tobacco control profiles countries, territories and areas. Tobacco Free Initiative (TFI). Available from: https://bit.ly/2WzkGn8. [Accessed 8th May 2020].
- 95. Pieroni L, Daddi P, Salmasi L. Impact of Italian smoking ban on business activity of restaurants, cafés and bars. Economics Letters. 2013;121(1):70-3.
- 96. Callinan JE, Clarke A, Doherty K, Kelleher C. Legislative smoking bans for reducing secondhand smoke exposure, smoking prevalence and tobacco consumption. Cochrane database of systematic reviews. 2010(4).
- 97. Center for Research and Population Health. Level of exposure to secondhand smoke in Lebanon is high: Time to ban smoking in indoor public places. Center for Research and Population Health, American University of Beirut. 2010.
- 98. Center for Research and Population Health. Lebanon Needs Assessment Mission. The WHO Framework Convention on Tobacco Control. 2016.
- 99. Nagami DK. Enforcement methods used in applying the California smoke-free workplace act to bars and taverns. Hastings W-Nw J Envt'l L & Pol'y 2000;7:159.
- 100. Prevention ENfSaT. An elevated risk and a golden opportunity for quitting pandemic and smoking behavior. ENSP. 2020(1).
- 101. Ravara SB, Castelo-Branco M, Aguiar P, Calheiros JM. Compliance and enforcement of a partial smoking ban in Lisbon taxis: an exploratory cross-sectional study. BMC Public Health. 2013;13(1):134.
- 102. The WHO Framework Convention for Tobacco Control. Protocol to eliminate illicit trade in tobacco products. The WHO Framework Convention for Tobacco Control. 2013.
- استشارة عدم جواز تعديل القانون 174 تاريخ 29 آب 2011 على نحو يخفف أو يلغي حظر التدخين في.103. Refaat, H الأماكن المغلقة. American University of Beirut. 2012.
- 104. Nakkash, R. The transnational tobacco industry effectively hampers tobacco control policy-making in Lebanon. The Issam Fares Institute for Public Policy and International Affairs, American University of Beirut. 2010.
- 105. Knowledge to Policy Center. The COVID-19 Reality is not a Point of View: Media in the coronavirus era. Knowledge to Policy Center. American University of Beirut. Available from: https://bit.ly/365Vckm [Accessed 8th May 2020].
- 106. AUB TCRG. AUB tobacco researchers and Lebanese activists press conference on economic impacts of Law 174: The tobacco control law is good for the economy and public health. American University of Beirut. 2012.
- 107. Chaaban J. Smoking Ban Adds 3% to the Revenues of Restaurants, Cafés and Pubs in Lebanon A Research Brief. American University of Beirut. 2013.
- 108. Melberg HO, Lund KE. Do smoke-free laws affect revenues in pubs and restaurants? The European Journal of Health Economics. 2012;13(1):93-9.

- 109. Christophi CA, Paisi M, Pampaka D, Kehagias M, Vardavas C, Connolly GN. The impact of the Cyprus comprehensive smoking ban on air quality and economic business of hospitality venues. BMC Public Health. 2013;13(1):76.
- 110. Scollo M, Lal A, Hyland A, Glantz S. Review of the quality of studies on the economic effects of smoke-free policies on the hospitality industry. BMJ Journals. 2003;12(1):13-20.
- 111. Campaign for Tobacco-Free Kids. SMOKE-FREE LAWS DO NOT HARM BUSINESS AT RESTAURANTS AND BARS. Campaign for Tobacco-Free Kids. 2019.
- American University of Beirut. 2012 . حجة ورد رفضاً لتعديل قانون الحد من التدخين 15 .AUB TCRG
- 113. Hyland A, Barnoya J, Corral JE. Smoke-free air policies: past, present and future. 2012;21(2):154-61.
- 114. Leppan W. International tobacco control policy expert warns that tobacco is not only harmful to health but also to the economy. American University of Beirut. 2011.
- 115. Bahelah R, Ward KD, Taleb ZB, DiFranza JR, Eissenberg T, Jaber R, et al. Determinants of progression of nicotine dependence symptoms in adolescent waterpipe smokers. BMJ Journals. 2019;28(3):254-60.

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