







# Weight of Evidence (WoE) paper to support the expansion of Smoke and Aerosol-Free Environments (SAFE) in EU

JATC2-WP8-Webinar

30th November 2023

OKPI, IRFMN, NPHO, ICO-IDIBELL

Presented by: Dolors Carnicer-Pont, MD, MPH, PhD















### Background

- Article 8 of WHO FCTC: (2005)
  - Acknowledges the effects of second-hand smoke (SHS) on health
  - Aims to protect citizens from exposure to SHS in indoor workplaces, public places, public transport
- Conference of the Parties in decision FCTC/COP1 and the WHO: (2021)
  - Reported on the Global tobacco epidemic 2021
  - Highlighted:
    - There are No safe levels of exposure to SHS
    - Ventilation, air exchange and the use of designated smoking areas, do not protect against exposure to SHS
- JATC2, prompted by the European Commission
  - Aims to expand Smoke and Aerosol Free Environments (SAFE) across EU countries.

### Objective of the WoE paper

To assess and create the framework for the expansion of SAFE in Europe including outdoor areas and some private settings

### Methods: Key questions

- 1. What is the current situation on **coverage and compliance** of SAFE legislation?
- 2. What is the **evidence for the expansion** of SAFE?
- 3. What are the **barriers** to the expansion, compliance with and enforcement of SAFE policies?
- 4. What are the **opportunities** for the expansion, compliance with and enforcement of SAFE policies?

Question 1:

1. What is the current situation on coverage and compliance of safe legislation?

### **SAFE** legislation in Europe



ABOUT US SFP COALITION OUR WORK SMOKEFREE MAP NEWS JOIN SFP Q f Members' Area

### № 2022 Smokefree Map

Article 8 of the World Health Organisation Framework Convention on Tobacco Control (WHO FCTC) acknowledges the effects of secondhand smoke on health and aims at

9 countries continue to lead... 5 continue to disappoint!

How does your country rate on tobacco control?

2021 Rank	Country		2019 Rank	Score
1	Ireland	<b>A</b>	3	82
1	UK	-	1	82
3	France	•	2	71
4	Netherlands	<b>A</b>	14	67
5	Hungary	<b>A</b>	8	65
6	Norway	•	5	63
7	Finland		6	62
8	Iceland	•	4	61
8	Romania	<b>A</b>	12	61
10	Belgium	-	10	59
11	Spain		10	58
12	Turkey	<b>A</b>	17	58
13	Denmark	<b>A</b>	29	56
14	Israel	•	7	55
14	Greece		13	55
14	Malta	<b>A</b>	17	55
17	Slovenia	•	8	54
18	Italy	•	15	52
18	Russian Federation	<b>A</b>	29	52
18	Lithuania	<b>A</b>	29	52
21	Czechia	<b>A</b>	23	49
21	Estonia	<b>A</b>	23	49
21	Poland	<b>A</b>	23	49
21	Sweden	7	15	49
21	Croatia	•	17	49
26	Latvia		23	48
26	Austria	•	20	48
28	Cyprus	•	27	47
28	Luxembourg	<b>A</b>	34	47
30	Portugal	•	20	46
30	Slovakia	<b>A</b>	32	46
30	Ukraine	7	20	46
33	Bulgaria	•	27	44
34	Germany	<b>A</b>	36	43
35	Serbia	•	33	38
36	Switzerland	•	35	35
37	Bosnia & Herzegovina		(new)	25

TOBACCO CONTROL scale 2021

noke: "Each Party shall adopt and implement in areas of actively promote at other jurisdictional levels the adoption ative and/or other measures, providing for protection from ort, indoor public places and, as appropriate, other public

nplement measures to protect people from those effects.

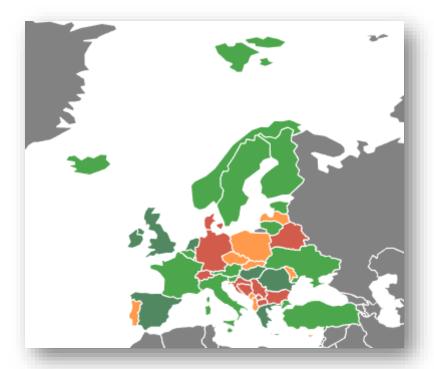
on of the UN Sustainable Development Goals (SDGs), as Target 3.a of the 2030



### Coverage and compliance of SAFE legislation, in force 1-6-2022, 43 countries Europe

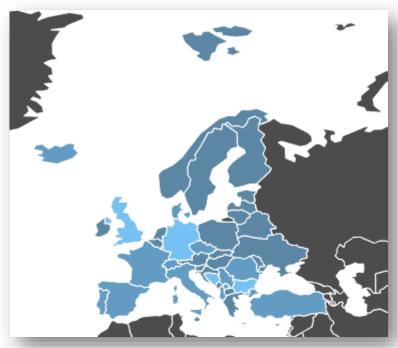
#### **Smoke free legislation**

Very strong and well enforced legislation and good compliance: NO Smoking in workplaces, hospitality venues and other public settings Strong and well enforced legislation but some smoking Strong legislation but weak enforcement and compliance Weak legislation, enforcement and compliance



#### **Aerosol free legislation**

Complete ban for e-cigarettes
Partial ban for e-cigarettes
No ban for e-cigarettes



https://www.smokefreepartnership.eu/smokefree-map

### Overview of settings to apply SAFE (indoor and outdoor)

#### **Ten settings**



Parks and Beaches



Work indoor



Hospitality venues



Hospitals



Private vehicles



Work outdoor



**Terraces** 



Sports settings



**Public transport** 



Educational facilities

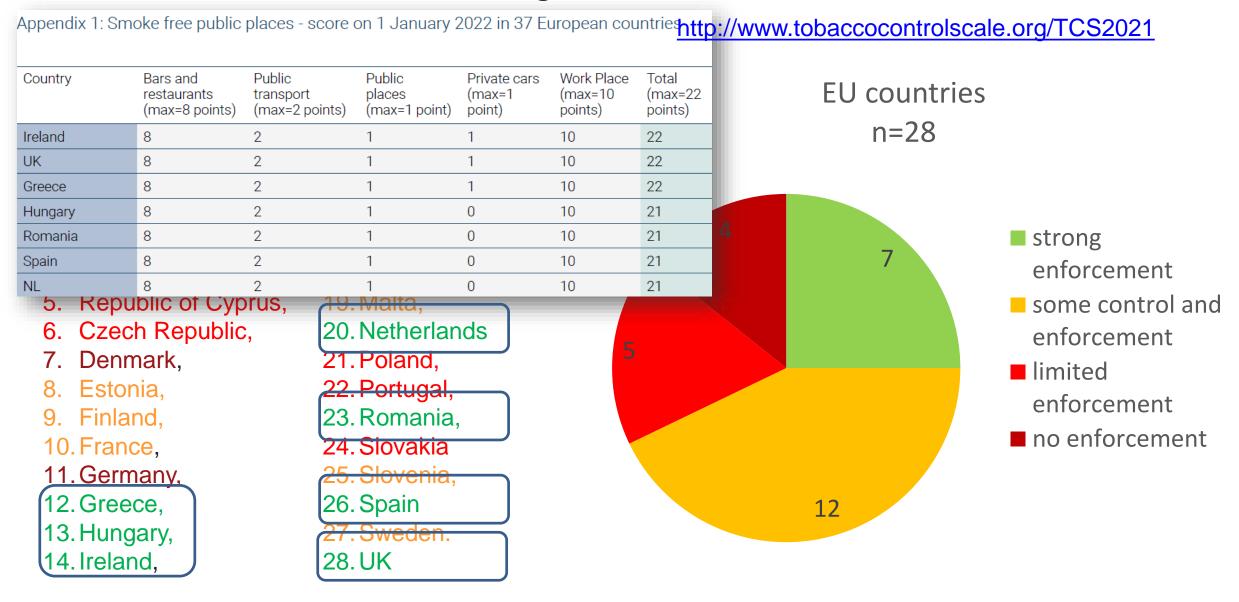
https://www.smokefreepartnership.eu/smokefree-map

### SAFE legislation, June-2022, 43 countries Europe

### **Ten Settings**



### **Enforcement of SAFE legislation, 28 EU countries, June 2022**



Adapted from: <a href="https://www.smokefreepartnership.eu/smokefree-map">https://www.smokefreepartnership.eu/smokefree-map</a>

### Overview of settings to apply SAFE policies (indoor and outdoor)



Work indoor



Work outdoor



Health care (indoor & outdoor)



Public transport (indoor & outdoor)



Schools indoor



Schools outdoor



Sports settings



University (indoor & outdoor)

### Overview of settings to apply SAFE (indoor and outdoor)









Restaurants indoor

Bars indoor

**Terraces** 

**Airports** 







Beaches

Playgrounds

**Parks** 

### Overview of settings to apply SAFE (indoor and outdoor)



Private vehicles

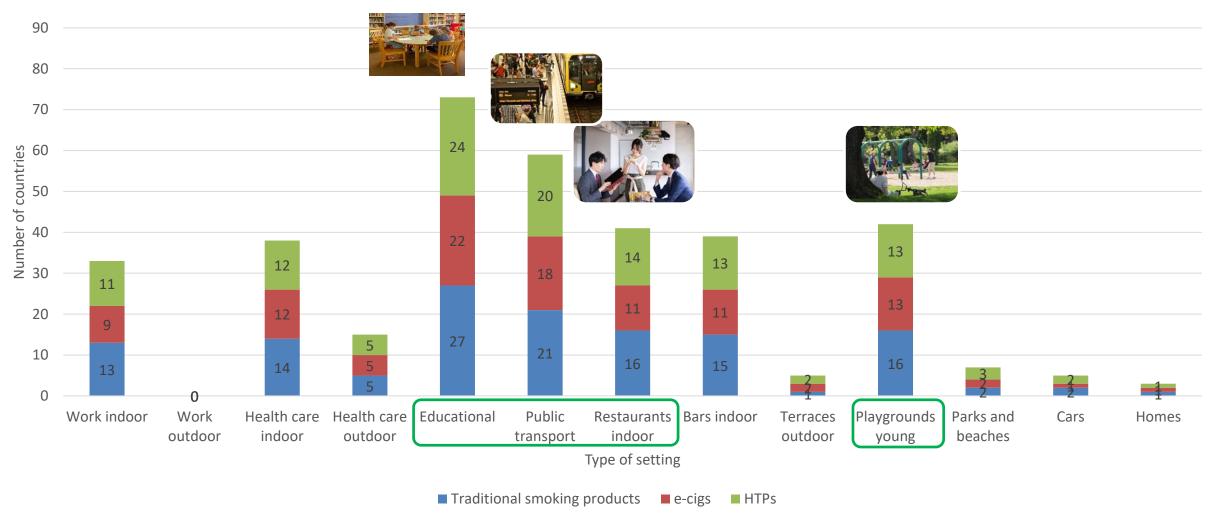


Private homes



Multiunit housing

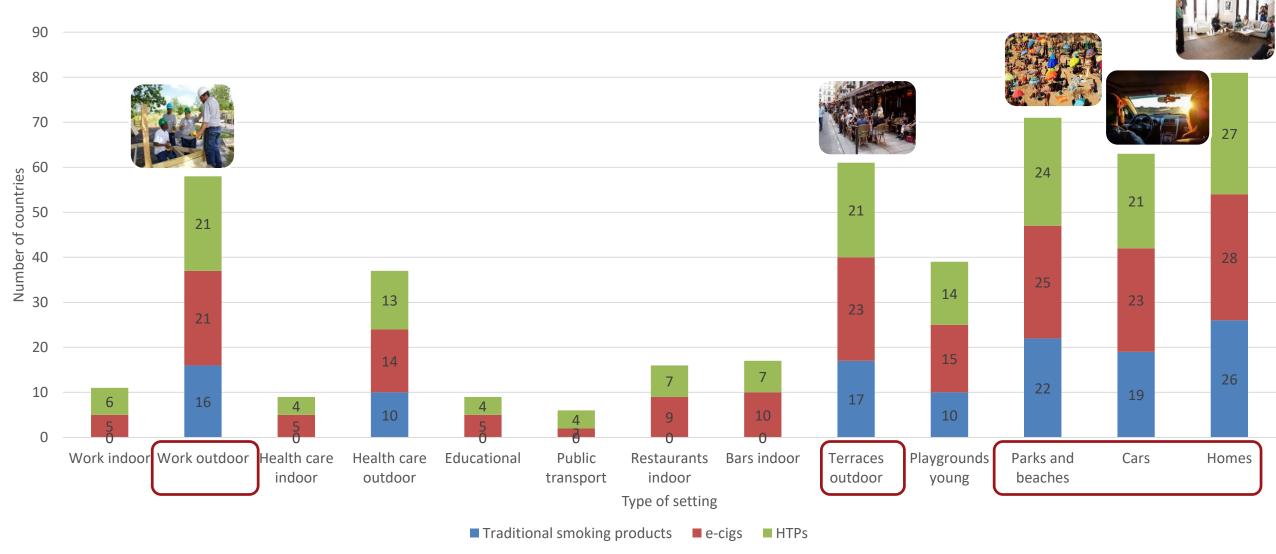
### Self reported **full bans** for aerosol and smoke from 30 countries in the EU



https://op.europa.eu/en/publication-detail/-/publication/68ce81fc-5d55-11ec-9c6c-01aa75ed71a1/language-en

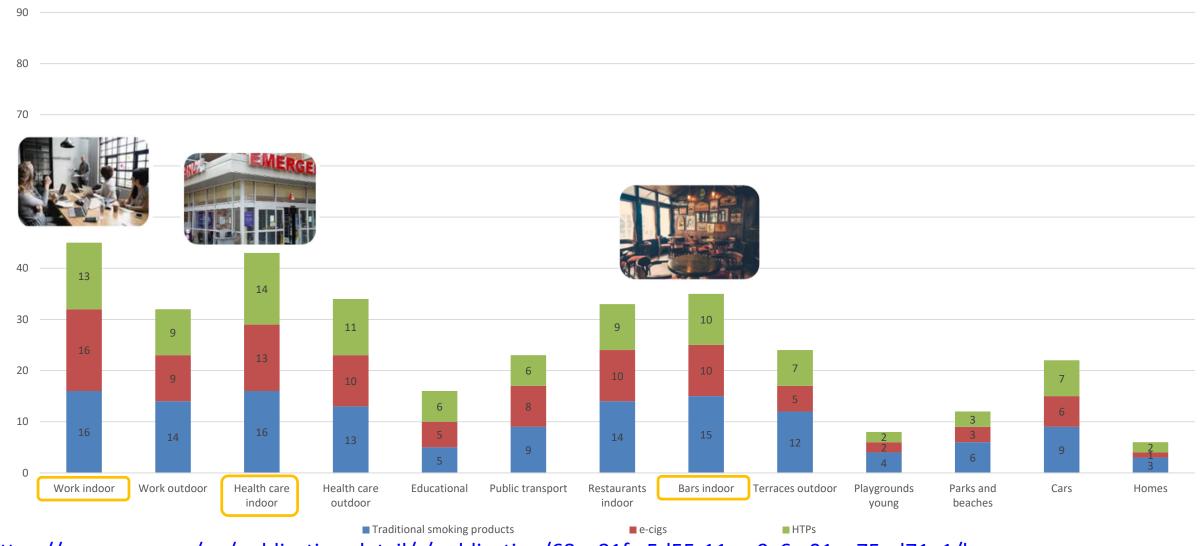
Source: Self-compiled from the Study on smoke-free environments and advertising of tobacco and related products, EU, 2021

Self reported **no ban** for aerosol and smoke from 30 countries in the EU



Source: Self-compiled from the Study on smoke-free environments and advertising of tobacco and related products, EU, 2021

### Self reported partial bans for aerosol and smoke from 30 countries in the EU



https://op.europa.eu/en/publication-detail/-/publication/68ce81fc-5d55-11ec-9c6c-01aa75ed71a1/language-en

Source: Self-compiled from the Study on smoke-free environments and advertising of tobacco and related products, EU, 2021

Question 2:

### 2. What is the evidence for the expansion of SAFE?

### What is the **evidence for the expansion** of SAFE? The literature review:

- PubMed and Science Direct databases
- papers published after January 2010 and prior to August 2022
- key words: Smoke-free environments, second-hand smoke (SHS), aerosol-free environments, vaping, tobacco, ecigarettes, novel tobacco products, indoor, outdoor, protection, exposure, legislation, public places and private places.
- A total of eighty-three papers were retrieved

## What is the evidence for the expansion of SAFE? Types of studies:

- literature review studies
- randomized controlled trials
- quasi-experimental studies,
- prospective cohort studies,
- cross-sectional studies,
- uncontrolled pre and post bans or implementation of policies,
- prospective panel studies,
- letters to the editors

### What is the evidence for the expansion of SAFE? Lines of evidence (LoE) in the literature review

- LoE 1: Environmental markers: 25 studies
- LoE 2: Personal biomarkers: 7 studies
- LoE 3: Self-reported SHS/SHA exposure: 39 studies

## What is the evidence for the expansion of SAFE? Line of evidence (LoE) 1:

Environmental markers=25 studies

- Particulate matter (PM2.5)
- Airborne nicotine
- CO
- CO2
- PPAHs
- NNK









High SHS exposure in all settings





### Airborne nicotine

Tack SHS EU project



**Environ Res.** 2023 Feb 15:219:115118. doi: 10.1016/j.envres.2022.115118. Epub 2022 Dec 22.

Measurement of airborne nicotine, as a marker of secondhand smoke exposure, in homes with residents who smoke in 9 European countries

Elisabet Henderson <sup>1</sup>, Luis A Rodriguez Guerrero <sup>1</sup>, Xavier Continente <sup>2</sup>, Esteve Fernández <sup>3</sup>, Olena Tigova <sup>3</sup>, Nuria Cortés-Francisco <sup>4</sup>, Sean Semple <sup>5</sup>, Ruaraidh Dobson <sup>5</sup>, Anna Tzortzi <sup>6</sup>, Vergina K Vyzikidou <sup>6</sup>, Giuseppe Gorini <sup>7</sup>, Gergana Geshanova <sup>8</sup>, Ute Mons <sup>9</sup>, Krzysztof Przewozniak <sup>10</sup>, José Precioso <sup>11</sup>, Ramona Brad <sup>12</sup>, Maria J López <sup>13</sup>; TackSHS project Investigators

**Environ Res.** 2021 Sep:200:111355. doi: 10.1016/j.envres.2021.111355. Epub 2021 May 19.

### Secondhand smoke exposure assessment in outdoor hospitality venues across 11 European countries

Elisabet Henderson <sup>1</sup>, Xavier Continente <sup>2</sup>, Esteve Fernández <sup>3</sup>, Olena Tigova <sup>3</sup>, Nuria Cortés-Francisco <sup>4</sup>, Silvano Gallus <sup>5</sup>, Alessandra Lugo <sup>5</sup>, Sean Semple <sup>6</sup>, Ruaraidh Dobson <sup>6</sup>, Luke Clancy <sup>7</sup>, Sheila Keogan <sup>7</sup>, Ario Ruprecht <sup>8</sup>, Alessandro Borgini <sup>8</sup>, Anna Tzortzi <sup>9</sup>, Vergina K Vyzikidou <sup>9</sup>, Giuseppe Gorini <sup>10</sup>, Angel López-Nicolás <sup>11</sup>, Joan B Soriano <sup>12</sup>, Gergana Geshanova <sup>13</sup>, Joseph Osman <sup>14</sup>, Ute Mons <sup>15</sup>, Krzysztof Przewozniak <sup>16</sup>, José Precioso <sup>17</sup>, Ramona Brad <sup>18</sup>, Maria J López <sup>19</sup>; TackSHS project Investigators

Current restrictions in outdoor areas of hospitality venues are insuficient and justify the adoption of total smoking bans for these areas



### Airborne nicotine



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> Environ Int. 2021 Apr:149:105775. doi: 10.1016/j.envint.2020.105775. Epub 2020 Nov 20.

Secondhand smoke exposure in outdoor children's playgrounds in 11 European countries

Elisabet Henderson <sup>1</sup>, Xavier Continente <sup>2</sup>, Esteve Fernández <sup>3</sup>, Olena Tigova <sup>3</sup>,
Nuria Cortés-Francisco <sup>4</sup>, Silvano Gallus <sup>5</sup>, Alessandra Lugo <sup>5</sup>, Sean Semple <sup>6</sup>, Rachel O'Donnell <sup>6</sup>,
Luke Clancy <sup>7</sup>, Sheila Keogan <sup>7</sup>, Ario Ruprecht <sup>8</sup>, Alessandro Borgini <sup>8</sup>, Anna Tzortzi <sup>9</sup>,
Vergina K Vyzikidou <sup>9</sup>, Giuseppe Gorini <sup>10</sup>, Angel López-Nicolás <sup>11</sup>, Joan B Soriano <sup>12</sup>,
Gergana Geshanova <sup>13</sup>, Joseph Osman <sup>14</sup>, Ute Mons <sup>15</sup>, Krzysztof Przewozniak <sup>16</sup>, José Precioso <sup>17</sup>,
Ramona Brad <sup>18</sup>, Maria J López <sup>19</sup>; TackSHS project investigators
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> Sci Total Environ. 2020 Nov 15:743:140743. doi: 10.1016/j.scitotenv.2020.140743. Epub 2020 Jul 7.

Secondhand smoke exposure and other signs of tobacco consumption at outdoor entrances of primary schools in 11 European countries

Elisabet Henderson <sup>1</sup>, Xavier Continente <sup>2</sup>, Esteve Fernández <sup>3</sup>, Olena Tigova <sup>3</sup>, Nuria Cortés-Francisco <sup>4</sup>, Silvano Gallus <sup>5</sup>, Alessandra Lugo <sup>5</sup>, Sean Semple <sup>6</sup>, Rachel O'Donnell <sup>6</sup>, Luke Clancy <sup>7</sup>, Sheila Keogan <sup>7</sup>, Ario Ruprecht <sup>8</sup>, Alessandro Borgini <sup>8</sup>, Anna Tzortzi <sup>9</sup>, Vergina K Vyzikidou <sup>9</sup>, Giuseppe Gorini <sup>10</sup>, Angel López-Nicolás <sup>11</sup>, Joan B Soriano <sup>12</sup>, Gergana Geshanova <sup>13</sup>, Joseph Osman <sup>14</sup>, Ute Mons <sup>15</sup>, Krzysztof Przewozniak <sup>16</sup>, José Precioso <sup>17</sup>, Ramona Brad <sup>18</sup>, Maria J López <sup>19</sup>; TackSHS project Investigators

- Airborne nicotine presence was found in 40.6% of the playgrounds
- People smoking were more common in schools from areas with lower socio economic status

Smoking bans should be extended to a clear perimeter of the schools outdoor entrances

### What is the **evidence for the expansion** of SAFE? **LoE 2:** Personal biomarkers.





- Salivary cotinine
- Urinary cotinine
- Plasma cotinine
- Urine NNAL: 4-(Methyl-d3-nitrosoamino)-1-(3-pyridinyl)-1-butanol

After 1 hour SHS exposure in a car even in the presence of air-conditioning or increased airflow from open windows. 4 fold increase plasma cotinine 6 fold increase urinary cotinine 27 fold increase urine NNAL

Smoking in cars should be BANNED for all the population

## What is the **evidence for the expansion** of SAFE? **LoE 3:** Self-reported SHS/SHA exposure= 39 studies

Work indoor
Work outdoor





Despite Smoke free policies at work place, nearly all studies reported SHS exposure

Private cars

Homes

Multiunit housing





Higher SHS exposure in cars correlates with lower socio-economic status and parental education

Smoke-free building policies are the most effective method to fully reduce SHS exposure in Multiunit Housing

## What is the **evidence for the expansion** of SAFE? **LoE 3:** Self-reported SHS/SHA exposure

Exposure to secondhand aerosol of electronic cigarettes in indoor settings in 12 European countries: data from the TackSHS survey

Beladenta Amalia 1 2 3 4, Xiaoqiu Liu 5, Alessandra Lugo 5, Marcela Fu 1 2 3 4, Anna Odone 6, Piet A van den Brandt 7, Sean Semple 8, Luke Clancy 9, Joan B Soriano 4 10, Esteve Fernández 11 2 3 4, Silvano Gallus 5; TackSHS Project Investigators

Observational Study > Tob Control. 2021 Jan;30(1):49-56.

In 12 EU countries an average of **16.0%** of **e-cigarette non-users** were **exposed to SHAerosol** in any **indoor setting**.

Governments should consider extending their smoke-free legislation to e-cigs, to protect particularly young people.

> Prev Chronic Dis. 2020 Nov 25:17:E147. doi: 10.5888/pcd17.200201.

Self-Reported Exposure to Secondhand Smoke and Support for Complete Smoking Bans in Multiunit Housing Among Smokers in the United States, Canada, and the United Kingdom

Pete Driezen 1, Geoffrey T Fong 2 3, Andrew Hyland 4, Lorraine V Craig 2, Genevieve Sansone 2, Sara C Hitchman 5, K Michael Cummings 6

In US, Canada and UK
Prospective cohort study in MUH
36% of smokers preferred a complete ban rather than partial ban in all building areas.

Questions 3 and 4:

- **3.** What are the **barriers** to the expansion, compliance with and enforcement of SAFE policies?
- **4.** What are the **opportunities** for the expansion, compliance with and enforcement of SAFE policies?

### Methods

#### **Participants & Procedure**

- Experts' consultation (June–August, 2022)
- Online questionnaire

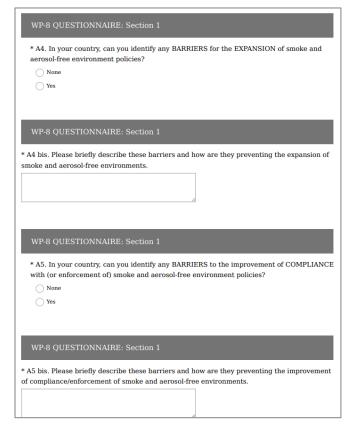
#### Measures

Qualitative & quantitative questions

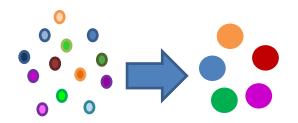
- barriers for the expansion
- opportunities for the expansion,
- barriers to the compliance with (enforcement of),
- opportunities to the compliance with (enforcement of),
- Tobacco/nicotine industries (and their allies) interference with

#### **Analysis**

- Thematic analysis for open-ended questions
  - Thematic categories → collapsed into broader thematic categories
- Frequencies



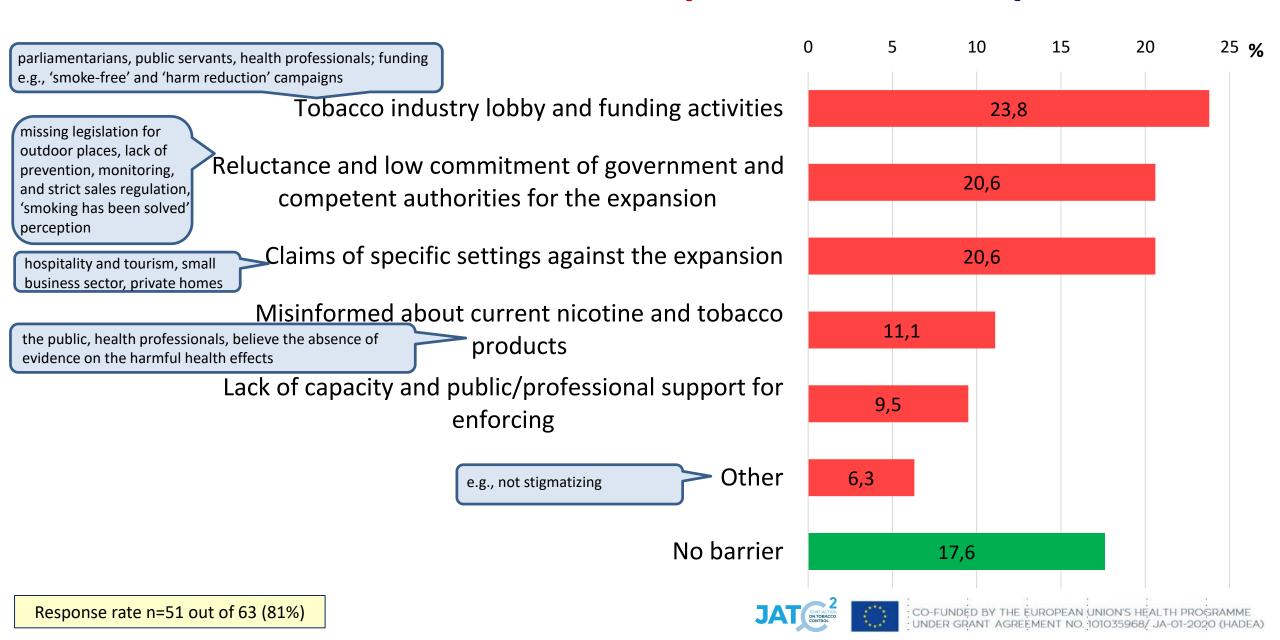
#### **SAFE** policies



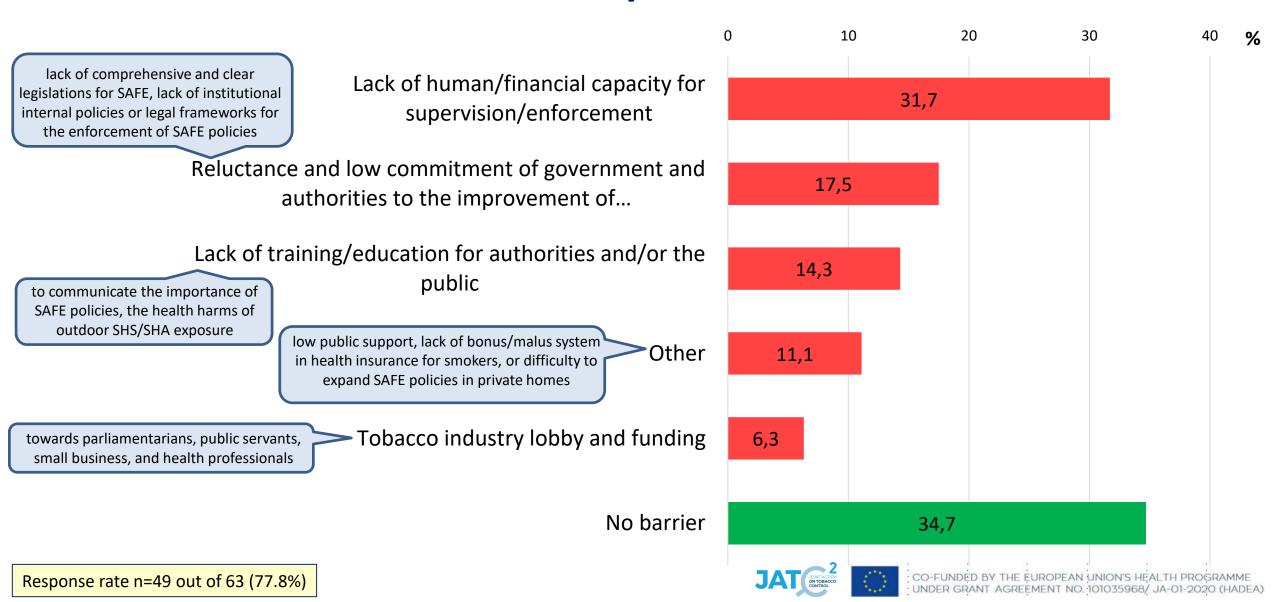




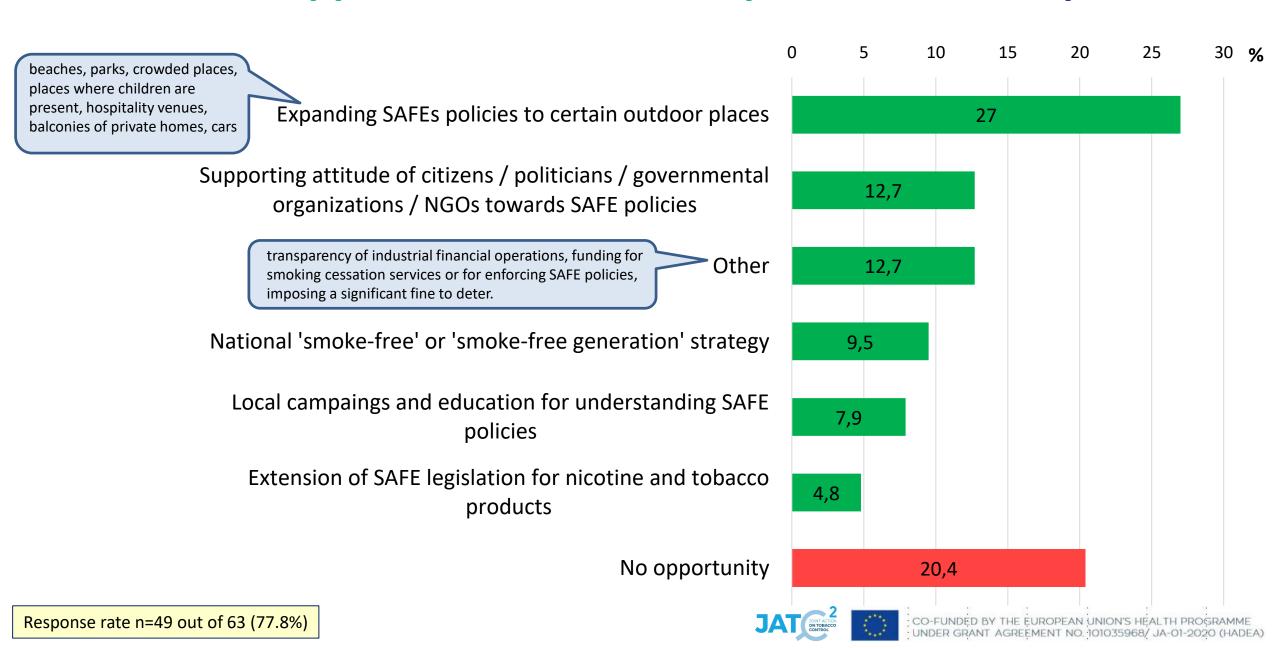
### Identified barriers for the expansion of SAFE policies



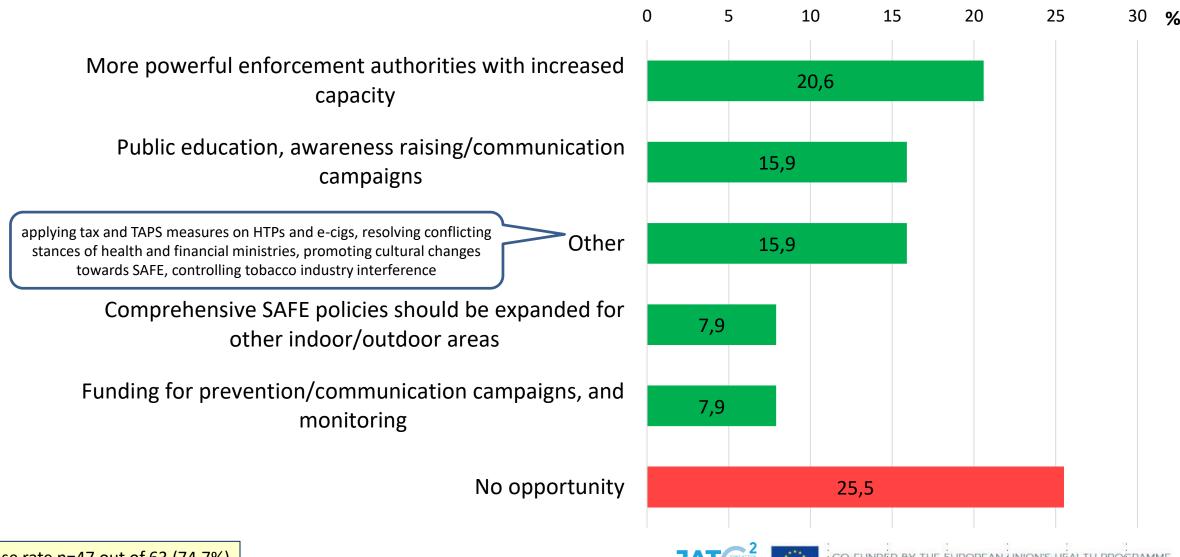
### Identified barriers to the compliance with (enforcement of) SAFE policies



### Identified opportunities for the expansion of SAFE policies



### Identified opportunities to the compliance with (enforcement of) SAFE policies



## Opportunities to expand SAFE: smoking ban in private cars when minors are present

Since 2013, in Europe there are 17 countries that have introduced a smoking ban in private cars when minors are present

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	Au	Austria	

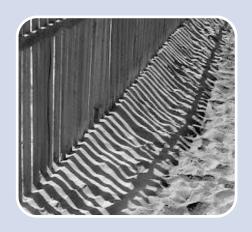
- 2. Belgium
- 3. Cyprus
- 4. Estonia
- 5. Finland
- 6. France
- 7. Greece
- 8. Ireland
- 9. Italy

- 10. Latvia
- 11. Lithuania
- 12. Luxembourg,
- 13. Malta
- 14. Slovakia
- 15. Slovenia
- 16. Turkey
- 17. UK

### Conclusions of Weight of Evidence on SAFE, April 2023









Harmonisation of SAFE laws for all EU

Gaps between legislation and implementation across EU

Explicit strategies to be provided to MS to reduce exposure

Exposure to
SHAerosol is
present across EU
countries

Implementation of SAFE should be evaluated

Barriers for
expansión are
industry lobby,
reluctance of
governments, lack

of monitoring

be an active
partner to
develop SAFE
Barriers
enforcement are
Lack of financial
capacity, reluctance
of governments,

Civil society to

### Conclusions of Weight of Evidence on SAFE, April 2023









Include legislation for new tobacco products (ecigs, HTPs)

No legislation

Enhance
Smoke &
Aerosol Free
outdoor and
private indoor

Low enforcement & compliance

Explicit strategies to reduce SHS exposure

Social inequalities

Smoking bans for outdoor settings

High EU citizens support



### THANK YOU

Any questions? You can find us at: JATC2\_WP8.ico@iconcologia.net

