Regulations to Ban Vaping in Indoor Settings

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Background: E-cigarettes internationally

- Diverse range of products – continuing to evolve
- Growth in e-cig market (US$28 billion by 2022?)
- Adult prevalence variable – but 5.9% in Poland
- Likely to be reducing harm (if vaping replaces smoking) but role in overall tobacco control still unclear
- Concerns: erosion of smokefree laws, normalisation of smoking/drug use, & youth uptake
Background: Risks for vapers

• Occupational limits exceeded by vaping for: intakes of formaldehyde, acrolein & diacetyl

• E-cig use associated with increased asthma risk [Schweitzer et al 2017, Prev Med] consistent with lab experiments

• Preliminary work (BODE³ Team): Review of 7 studies of the respiratory and cardiovascular toxicant acrolein: median: 31%; range: 15% to 48%, of the levels in vapers (vs levels in smokers)
Acrolein level (3-HPMA in urine) in exclusive vapers relative to smokers (Preliminary analyses)
Background: Risks for other people

- E-cigs produced maximal levels in excess of guidelines for acrolein, diethylene glycol, propylene glycol & cadmium (vs 7 for smoking) [Chen et al 2017, *IJERPH*]

- Bar situations: reference exposure levels exceeded for formaldehyde & acrolein [Logue et al 2017]


  - Recommended bans in indoor spaces or where smoking not allowed
Options for restricting vaping indoors

- No restrictions
- Up to the owner of the premises
- Same as for smokefree air laws
Arguments for allowing vaping in public indoor places

• Makes e-cigs more appealing to smokers → **enhanced transition** to vaping (argued by some users [Farrimond 2016, *Addiction*] but no studies of this)

• Easier for established vapers: reduced risk of nicotine **withdrawal** (eg, 12% of vapers reported difficulty refraining in banned areas) [Yingst et al 2017, *Tob Control*]
Arguments for banning indoor vaping

- If “smokefree = vapefree”, then simpler to understand and enforce
  - Reduced confusion given vaping can look like smoking at a distance
  - Clarity of message for many stakeholders: vapers, smokers, children, parents, people with asthma/allergies, site managers, officials
  - Simplicity of law has been important for successful smokefree laws (NZ experience)
- Health/nuisance impacts on non-vapers
- Workers’ rights to clean air (eg, in bars, restaurants)
Arguments for indoor vaping bans continued

- Reduced risk of ex-smoker / ex-vaper relapse (when exposed to vaping)
  - Experiment with video of vaping: Increased urge to smoke and vape [King et al 2016, *Psy Addict Behav*]

- Many smokers support smokefree areas as it helps them to quit – same for vapers?
Also recreational drug issues?

- If indoor vaping allowed – some vape recreational drugs
- 6% of nightclub patrons (UK sample) vaped recreational drugs [Thurtle et al 2017, *J Med Toxicol*]

Cannabis vaporiser
What governments have done:

**Countries:** 39 ban vaping in enclosed public spaces [http://globaltobaccocontrol.org/e-cigarette/policy-domains]

**State & local governments:** All but 4 US states have some types of bans
- mainly same as smokefree laws
- sometimes not bars/restaurants
- sometimes also outdoor areas: campuses, school grounds, events & parks [Wikipedia Sept 2017]
Countries with vapefree public places

**Americas:** Argentina, Barbados, Brazil, Colombia, Costa Rica, Ecuador, Honduras, Jamaica, Panama*, Venezuela

**Europe:** Austria, Belgium, Croatia, Cyprus, Denmark, Estonia, Finland, France, Greece, Malta, Poland, Portugal, Slovenia, Spain

**Asia:** Brunei Darussalam, Cambodia*, Nepal*, Philippines, Republic of Korea, Thailand, Viet Nam

**Middle East:** Bahrain, Jordan*, United Arab Emirates*

**Other:** Australia, Fiji, Togo, Turkmenistan*, Ukraine

* Prohibited in whole country

Red = also banned in vehicles with minors
Attitudes to restrictions?

Support for bans on vaping in public places is lower than for smoking bans. Eg, 30–45% during 2012–2014 in US states vs the 70–80% who supported smoke-free laws [Shi et al 2017]

NZ: 59% of smokers/ex-smokers supported smokefree=vapefree [Edwards et al, preliminary ITC data]
Vapers’ attitudes to restrictions?

• USA: 60% of vapers in 2014 had vaped where smoking was not allowed [Shi et al 2017]
  • Only 3% of these reported negative reactions from other people

• Vapers’ views: “ban would be counterproductive,” infringe on personal liberties [Sumner et al 2014, NTR]
Summary

• Vaping may not be so low risk to users or by-standers

• Secondhand aerosols likely to pose some health risk & nuisance to non-users

• Probably the most effective and least confusing approach is for “smokefree = vapefree” [Wilson et al 2017, Bull WHO]

• “Smokefree=vapefree” most common approach by jurisdictions which regulate