

# Acceptability of Population Level Interventions

**Theresa M Marteau**

**Behaviour and Health Research Unit  
University of Cambridge**

**5<sup>th</sup> EUSPR**

**Palma, Majorca, 18th October 2014**



# Acceptability of Population Interventions

1. Why should we care about acceptability?
2. What influences acceptability?
3. Can we increase acceptability of effective interventions?

# Acceptability of Population Interventions

1. Why should we care about acceptability?
2. What influences acceptability?
3. Can we increase acceptability of effective interventions?

# 1. Why should we care about acceptability?

- Major threats to health involve behaviour change
- Many of the more effective interventions require government intervention
- Public acceptability influences political acceptability of government intervention

# Four sets of Behaviours and Disease Risk

- 63% deaths worldwide are due to *Cancer, Cardiovascular disease, Diabetes, Respiratory Disease*

- Key causes -



- Eliminating these major risk factors will prevent -

75% of diabetes and cardiovascular disease

40% of cancer



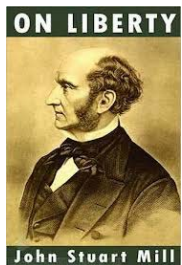
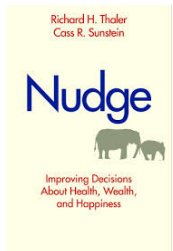
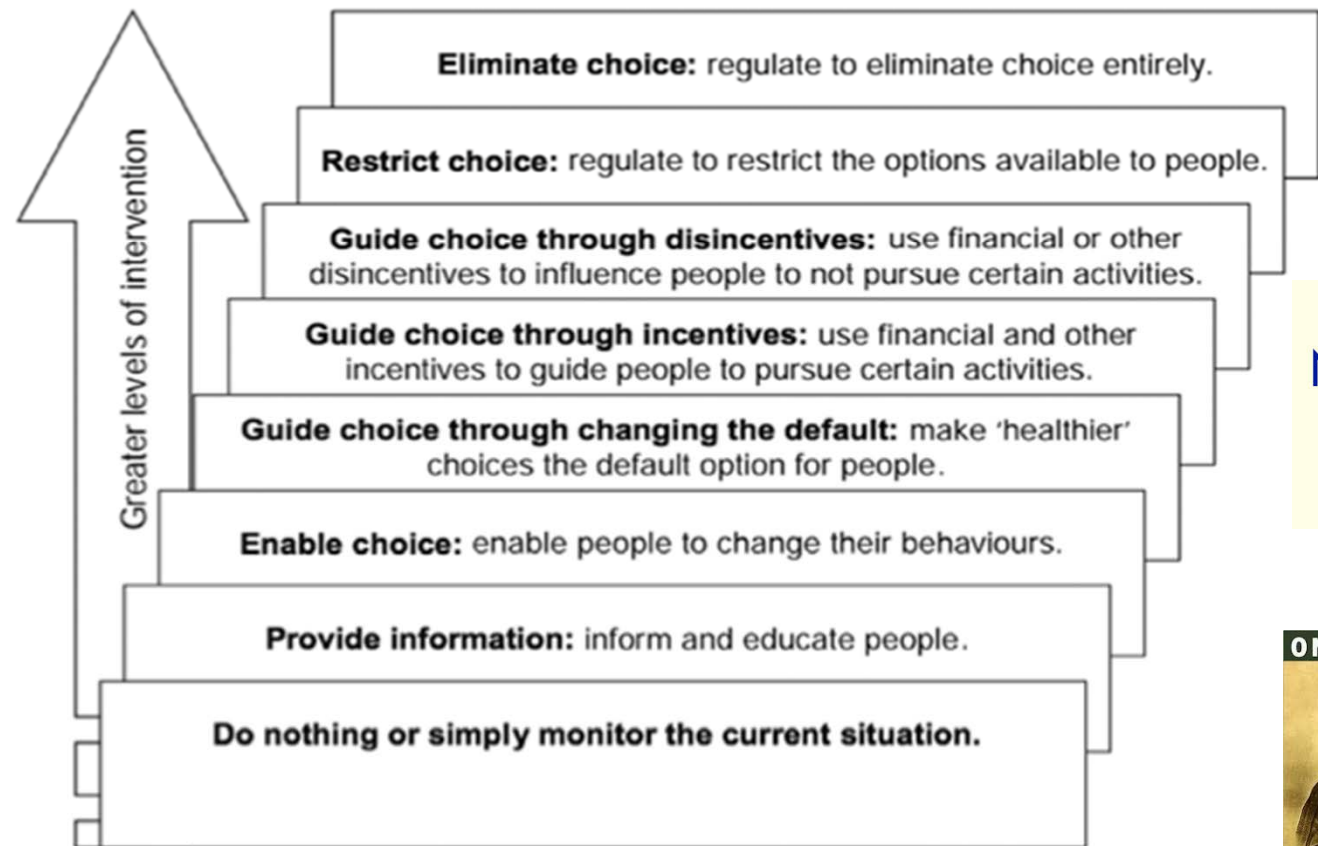
**AND reduce health inequalities by about 50%**



# 1. Why should we care about acceptability?

- Major threats to health involve behaviour change
- Many of the more effective interventions require government intervention
- Public acceptability influences political acceptability of government intervention

# Levels of Intervention



# 1. Why should we care about acceptability?

- Major threats to health involve behaviour change
- Many of the more effective interventions require government intervention
- Public acceptability influences political acceptability of government intervention



# Acceptability of Population Interventions

1. Why should we care about acceptability?
2. What influences acceptability?
3. Can we increase acceptability of effective interventions?

# 2. What influences acceptability?

Diepeveen et al. BMC Public Health 2013, 13:756  
http://www.biomedcentral.com/1471-2458/13/756



RESEARCH ARTICLE

Open Access

Public acceptability of government intervention to change health-related behaviours: a systematic review and narrative synthesis

Stephanie Diepeveen<sup>1</sup>, Tom Ling<sup>1</sup>, Marc Suhrcke<sup>2,3</sup>, Martin Roland<sup>3</sup> and Theresa M Marteau<sup>3\*</sup>

## Abstract

**Background:** Governments can intervene to change health-related behaviours using various measures but are sensitive to public attitudes towards such interventions. This review describes public attitudes towards a range of policy interventions aimed at changing tobacco and alcohol use, diet, and physical activity, and the extent to which these attitudes vary with characteristics of (a) the targeted behaviour (b) the intervention and (c) the respondents.

**Methods:** We searched electronic databases and conducted a narrative synthesis of empirical studies that reported public attitudes in Europe, North America, Australia and New Zealand towards interventions relating to tobacco, alcohol, diet and physical activity. Two hundred studies met the inclusion criteria.

**Results:** Over half the studies (105/200, 53%) were conducted in North America, with the most common interventions relating to tobacco control (110/200, 55%), followed by alcohol (42/200, 21%), diet-related interventions (18/200, 9%), interventions targeting both diet and physical activity (18/200, 9%), and physical activity alone (3/200, 2%). Most studies used survey-based methods (160/200, 80%), and only ten used experimental designs. Acceptability varied as a function of: (a) the targeted behaviour, with more support observed for smoking-related interventions; (b) the type of intervention, with less intrusive interventions, those already implemented, and those targeting children and young people attracting most support; and (c) the characteristics of respondents, with support being highest in those not engaging in the targeted behaviour, and with women and older respondents being more likely to endorse more restrictive measures.

**Conclusions:** Public acceptability of government interventions to change behaviour is greatest for the least intrusive interventions, which are often the least effective, and for interventions targeting the behaviour of others, rather than the respondent him or herself. Experimental studies are needed to assess how the presentation of the problem and the benefits of intervention might increase acceptability for those interventions which are more effective but currently less acceptable.

**Keywords:** Health behaviour, Attitude, Public opinion, Policy

Narrative synthesis of 200 studies  
105/200: N America

110/200: Tobacco

42/200: Alcohol

18/200: Diet

18/200: Diet & Physical Activity

3/200: Physical Activity

Diepeveen et al., 2013 - BMC Public Health

## 2. What influences acceptability?

Acceptability varies with:

- i. Target behaviour  
Most support for tobacco control
- ii. Type of intervention  
Most support for Education (generally ineffective)  
Least support for Price (generally more effective)
- iii. Respondents  
Most support from those **not** engaging in the target behaviour  
Most support for more intrusive interventions from women and older respondents

Diepeveen et al. BMC Public Health 2013, 13:756  
http://www.biomedcentral.com/10.1186/1471-2481-13-756



RESEARCH ARTICLE

Open Access

Public acceptability of government intervention to change health-related behaviours: a systematic review and narrative synthesis

Stephanie Diepeveen<sup>1</sup>, Tom Ling<sup>1</sup>, Marc Suhrieck<sup>2,3</sup>, Martin Roland<sup>3</sup> and Theresa M Marteau<sup>4\*</sup>

### Abstract

**Background:** Governments can intervene to change health-related behaviour using various measures but are sensitive to public attitudes towards such interventions. This review describes public attitudes towards a range of policy interventions aimed at changing tobacco and alcohol use, diet, and physical activity, and the extent to which these attitudes vary with characteristics of (a) the targeted behaviour (b) the intervention and (c) the respondents.

**Methods:** We searched electronic databases and conducted a narrative synthesis of empirical studies that reported public attitudes in Europe, North America, Australia and New Zealand towards interventions relating to tobacco, alcohol, diet and physical activity. Two hundred studies met the inclusion criteria.

**Results:** Over half the studies (110/200, 55%) were conducted in North America, with the most common interventions relating to tobacco control (110/200, 55%), followed by alcohol (42/200, 21%), diet-related interventions (18/200, 9%), interventions targeting both diet and physical activity (18/200, 9%), and physical activity alone (12/200, 6%). Most studies used survey-based methods (149/200, 80%), and only ten used experimental designs. Acceptability varied as a function of (a) the targeted behaviour, with more support observed for smoking-related interventions; (b) the type of intervention, with less intrusive interventions, those already implemented, and those targeting children and young people attracting most support; and (c) the characteristics of respondents, with support being highest in those not engaging in the targeted behaviour, and with women and older respondents being more likely to endorse more restrictive measures.

**Conclusions:** Public acceptability of government interventions to change behaviour is greatest for the least intrusive interventions, which are often the least effective, and for interventions targeting the behaviour of others, rather than the respondent him or herself. Experimental studies are needed to assess how the presentation of the problem and the benefits of intervention might increase acceptability for those interventions which are more effective but currently less acceptable.

**Keywords:** Health behaviour, Attitude, Public opinion, Policy

## 2. What influences acceptability?

Public attitudes towards pricing policies to change health-related behaviours: a UK focus group study

12 Focus Groups

Common protocol with stimulus materials used to promote discussion of pricing policies to change three behaviours:

- Smoking
- Diet
- Alcohol consumption

Somerville, Kinmonth, Marteau & Cohn, Under Review

## 2. What influences acceptability?

Beliefs associated with low acceptability of price interventions:

- i. pricing makes no difference to behaviour  
*It's not going to stop people (066)*
- ii. government operates as an enterprise and introduces pricing policies to generate income (not change behaviour)  
*Every time the government do something I just think they're doing it for their own benefit, they just want your money (068)*
- iii. government and the evidence it cites is not trustworthy  
*To be honest with you I don't trust government whatsoever (061)*

## 2. What Influences Acceptability?

### Reducing Sugary Drinks Consumption: USA & UK

Study Aim: To describe (UK & US) public acceptability of government interventions to reduce sugary drinks consumption

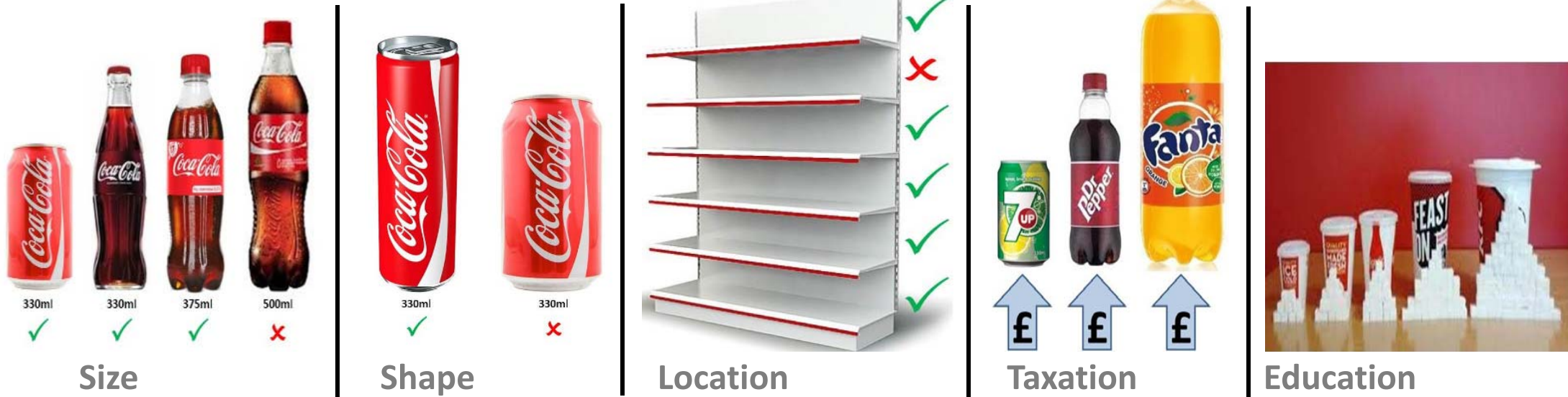
Limiting the size  
Changing the shape  
Changing the location } “Nudge” interventions

Increased taxation - high intrusion  
Education campaign - low intrusion } “Traditional” interventions

**Hypothesis:** *describing the mechanism by which interventions are expected to work as “non-conscious” decreases public acceptability*



# Reducing sugary drink consumption



## Group 1 - Control

This new policy would work like this:

- The size of sugary drinks containers (e.g., bottles & cans) will be limited to smaller versions
- Changing the size of containers for sugary drinks means people will tend to drink less
- People will still be able to drink as much as they like

## Group 2 - Conscious

This new policy would work like this:

- The size of sugary drinks containers (e.g., bottles & cans) will be limited to smaller versions
- Changing the size of containers for sugary drinks means people will tend to drink less
- People will be conscious (i.e. aware) of how this change in container size makes them drink less
- People will still be able to drink as much as they like

## Group 3 - Non-Conscious

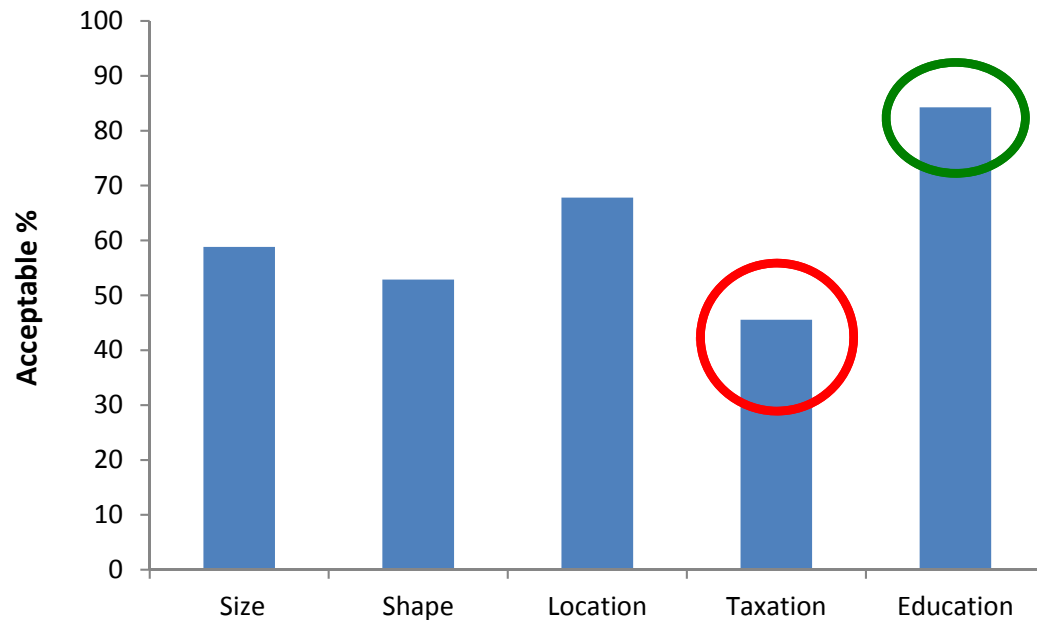
This new policy would work like this:

- The size of sugary drinks containers (e.g., bottles & cans) will be limited to smaller versions
- Changing the size of containers for sugary drinks means people will tend to drink less
- People will not be conscious (i.e. aware) of how this change in container size makes them drink less
- People will still be able to drink as much as they like

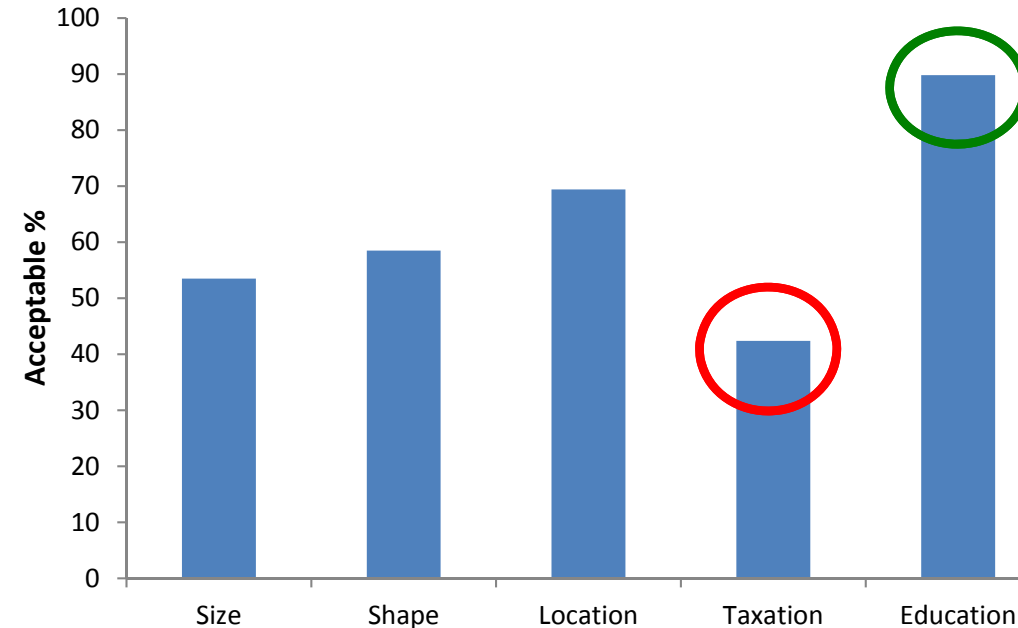
## 2. What influences acceptability?

### Interventions to reduce SSB consumption

UK sample n=1069



US sample n= 1082



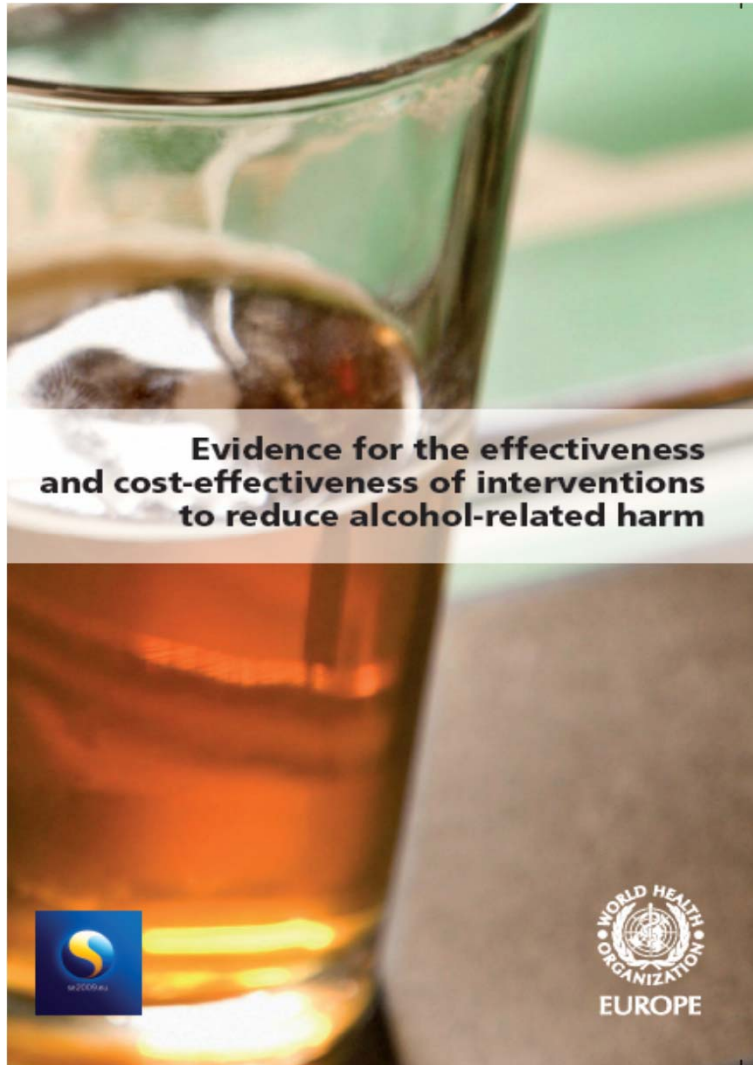
Petrescu, Hollands & Marteau *Under Review*



# Acceptability of Population Interventions

1. Why should we care about acceptability?
2. What influences acceptability?
3. Can we increase acceptability of effective interventions?

# Alcohol Policies



## Policy implications of the evidence of public support for alcohol policies

There is a range of effective policy measures, including those on drinking and driving, consumer labelling, advertising controls and controls on a minimum age of purchase, for which there is overwhelming public support from European citizens. The one policy measure that European citizens are sceptical about is that which is most effective – price. Concerted campaigns could be mounted to seek public support for price policy measures.

## Summary of the evidence of addressing pricing of alcohol

### What we know

- ✓ There is extensive and consistent evidence that raising the price of alcohol reduces alcohol-related harm.
- ✓ There is consistent evidence that, to be effective, rises in the price of alcohol need to account for changes in income and the prices of other commodities.
- ✓ There is consistent evidence that price has an impact on younger and heavier drinkers.
- ✓ There is some evidence from economic models that setting a minimum price of alcohol could reduce alcohol-related harm.
- ✓ There is some evidence from economic models that price increases and setting a minimum price affect the consumption and expenditure of heavier drinkers to a much greater extent than lighter drinkers.
- ✓ There is some evidence that the EU economic treaties have led to lower alcohol taxes.
- ✓ There is some evidence that lowering taxes to reduce cross-border trade can lead to increased alcohol-related harm.

### What we do not know

- ⊗ The most efficient way to obtain public and political support for raising taxes or introducing a minimum price.

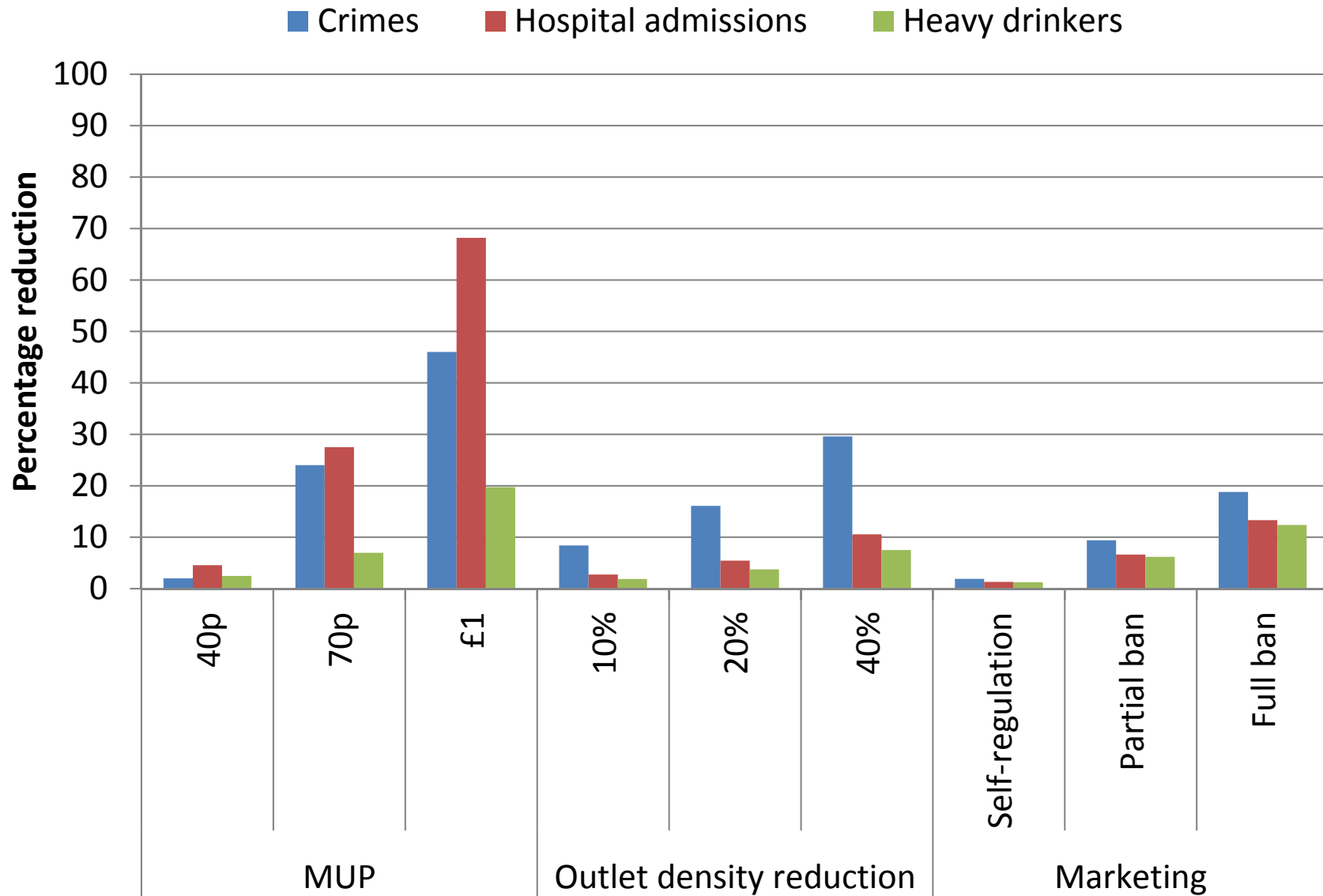
# 3. Can we increase acceptability of effective interventions?

Study Aim To estimate the extent to which public acceptability of government intervention to reduce alcohol consumption varies with:

- 1. The type of intervention**  
(MUP vs. Outlet density vs. Marketing)
- 2. The intensity of the intervention**  
(Low, medium, high)
- 3. The domain of outcome**  
(Crimes vs. Hospital admissions vs. Heavy drinkers)
- 4. The size of outcome effect**  
(9 levels: Small – large)

....and socioeconomic status and heaviness of drinking

# Estimated Outcomes

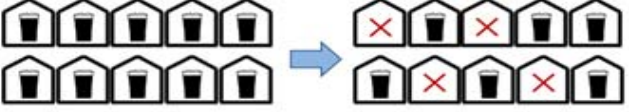












# Choice Sets

Each participant responded to 9 choice sets, e.g.

CHOICE 6:

Which of the following should the government choose?

No change	Cutting down on places selling alcohol	Limiting adverts for alcohol
	<p>40% cut in pubs and shops that sell alcohol</p>  <p>For example: If there are 10 pubs and shops selling alcohol in your town or city, 4 would close or stop selling alcohol</p>	<p>Part ban on alcohol adverts</p>  <p>Adverts for alcohol would be banned from TV and in cinemas</p>
<b>In a community of 100,000 people, over a year we would expect there to be:</b>		
<p><b>1,600</b> alcohol-related hospital admissions</p>  <p><b>22,000</b> heavy drinkers</p>  <p><b>1,000</b> alcohol-related crimes</p> 	<p><b>73 fewer</b> alcohol-related hospital admissions</p>  <p><b>4,342 fewer</b> heavy drinkers</p>  <p><b>84 fewer</b> alcohol-related crimes</p> 	<p><b>106 fewer</b> alcohol-related hospital admissions</p>  <p><b>827 fewer</b> heavy drinkers</p>  <p><b>240 fewer</b> alcohol-related crimes</p> 

Which should the government choose?

No change

Cutting down on places selling alcohol

Limiting adverts for alcohol

# Participant Characteristics

## Face-to-face interviews with 1202 participants

### *Gender*

- 46.2% male

### *Age*

- 27.6% aged 18-34
- 37.8% aged 35-54
- 34.6% aged 55+

### *Highest educational qualification*

- 16.7% no formal qualifications
- 39.9% GCSE or equivalent
- 16.8% A-level or equivalent
- 21.7% degree or higher

### *Working status*

- 45.2% working full-time
- 15.3% working part-time
- 39.3% not working

### *Socioeconomic group*

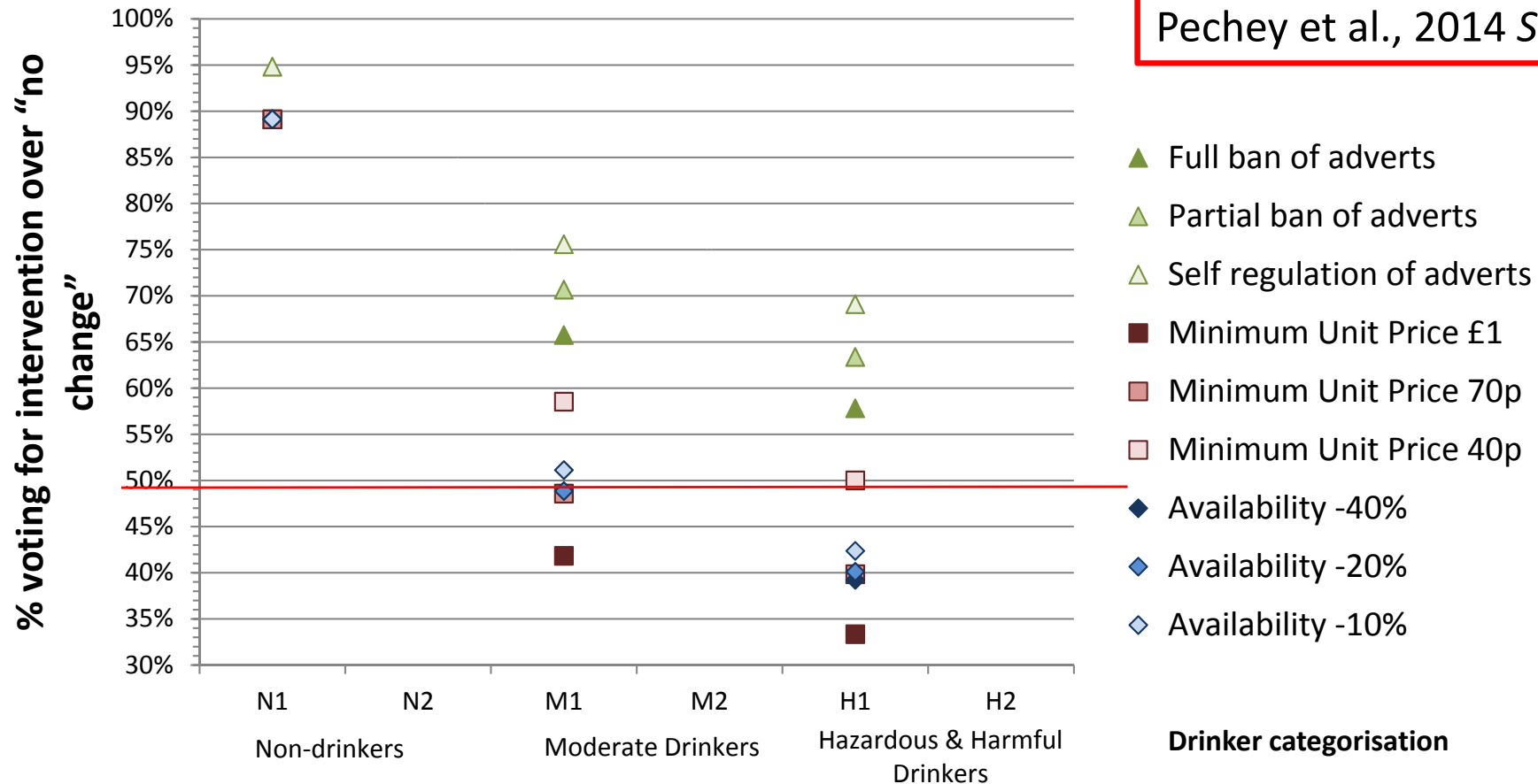
- 31.9% A or B
- 43.8% C1 or C2
- 24.3% D or E

### *Drinker status*

- 13% non-drinkers
- 64% moderate drinkers
- 23% heavy drinkers

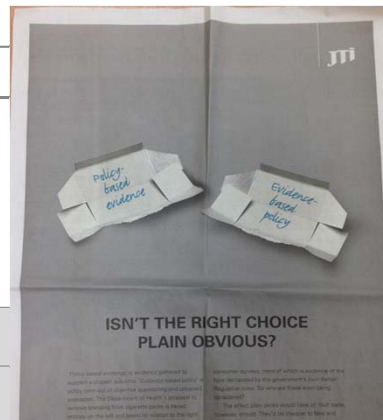
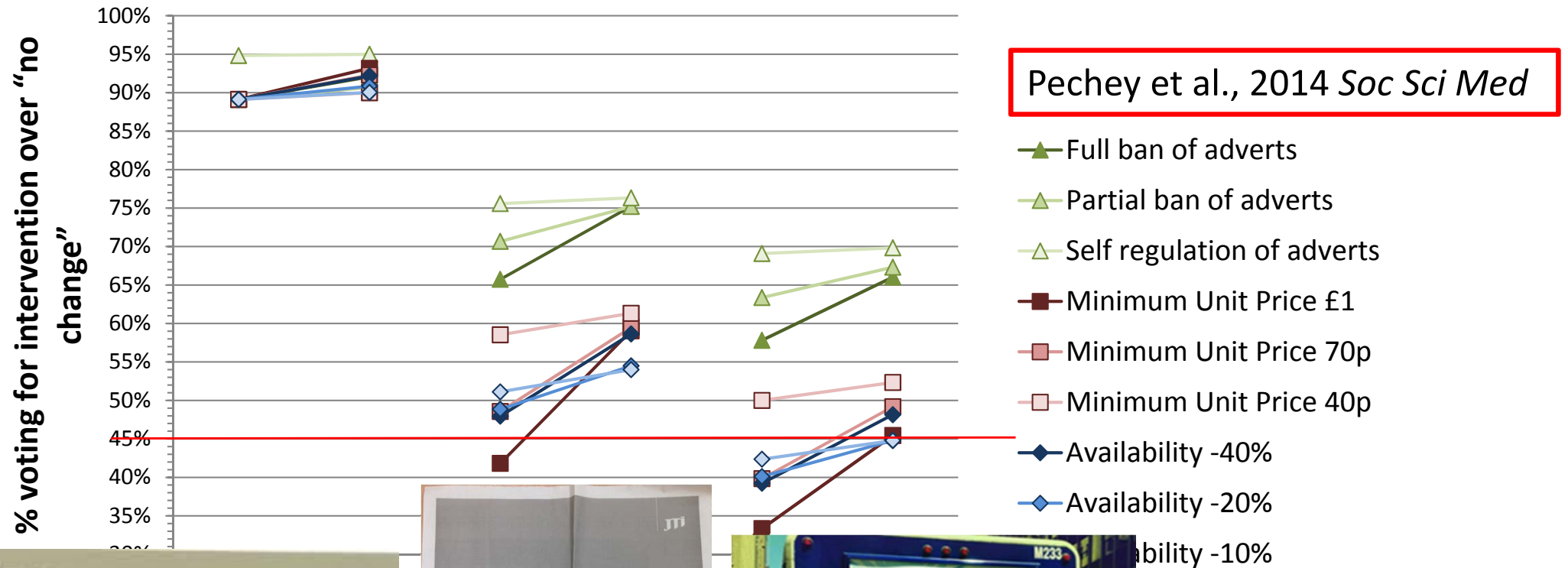
# Acceptability of alcohol policy interventions given no information on outcomes

Pechey et al., 2014 *Soc Sci Med*



Sample	13%	64%	23%
Population	16%	62%	22%

# Acceptability of alcohol policy interventions given full information on outcomes





# Acceptability of Population Interventions

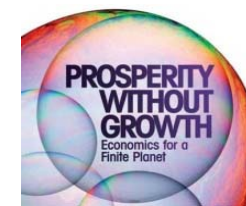
1. Why should we care about acceptability?  
Influences whether and how governments intervene
2. What influences acceptability?
  - i. The target behavior
  - ii. The nature of the intervention
  - iii. Characteristics of respondents
  - iv. Perceived effectiveness
3. Can we increase acceptability of effective interventions?  
General Public: With evidence of effectiveness BUT is it sustained?

### 3. Can we increase acceptability of effective interventions...amongst policy makers?



Main vectors of 21<sup>st</sup> Century disease – *alcohol, processed foods, tobacco, fossil fuels* - bring pleasure and profit

- Economies are built on over-consumption
- Health is built on reducing consumption
  - How might prosperity AND health be aligned?



# Acceptability of Population Interventions

## 1. Why should we care about acceptability?

Influences whether and how governments intervene

## 2. What influences acceptability?

- i. The target behavior
- ii. The nature of the intervention
- iii. Characteristics of respondents
- iv. Perceived effectiveness

## 3. Can we increase acceptability of effective interventions?

General Public: With evidence of effectiveness BUT is it sustained?

Policy Makers: Given competing values e.g. wealth vs. health creation can this be achieved and if so how?

# Acceptability of Population Interventions

Diepeveen S, Ling T, Suhrcke M, Roland M, & Marteau TM.

**Public acceptability of government intervention to change health-related behaviours: a systematic review and narrative synthesis.**

*BMC Public Health*, 2013 13, 756

Pechey R, Burge P, Mentzakis E, Suhrcke M & Marteau TM.

**Public acceptability of population-level interventions to reduce alcohol consumption: A discrete choice experiment**

*Social Science & Medicine*, 2014 113, 104–109

*Under Review*

Petrescu D, Hollands GJ, Ng Y, & Marteau TM.

**Public acceptability in the UK and USA of nudging to reduce obesity: the example of reducing sugary drinks consumption.**

Somerville C, Kinmonth AL, Marteau TM, Cohn S.

**Understanding public attitudes towards pricing policies to reduce consumption of alcohol and unhealthy foods: A focus group study**

tm388@cam.ac.uk