Screening and brief alcohol intervention in primary care – a perfect fit or a round peg in a square hole?

Professor Eileen F. S. Kaner

Chair of Public Health & Primary Care Research

Sydney Smith – The Smith of Smiths

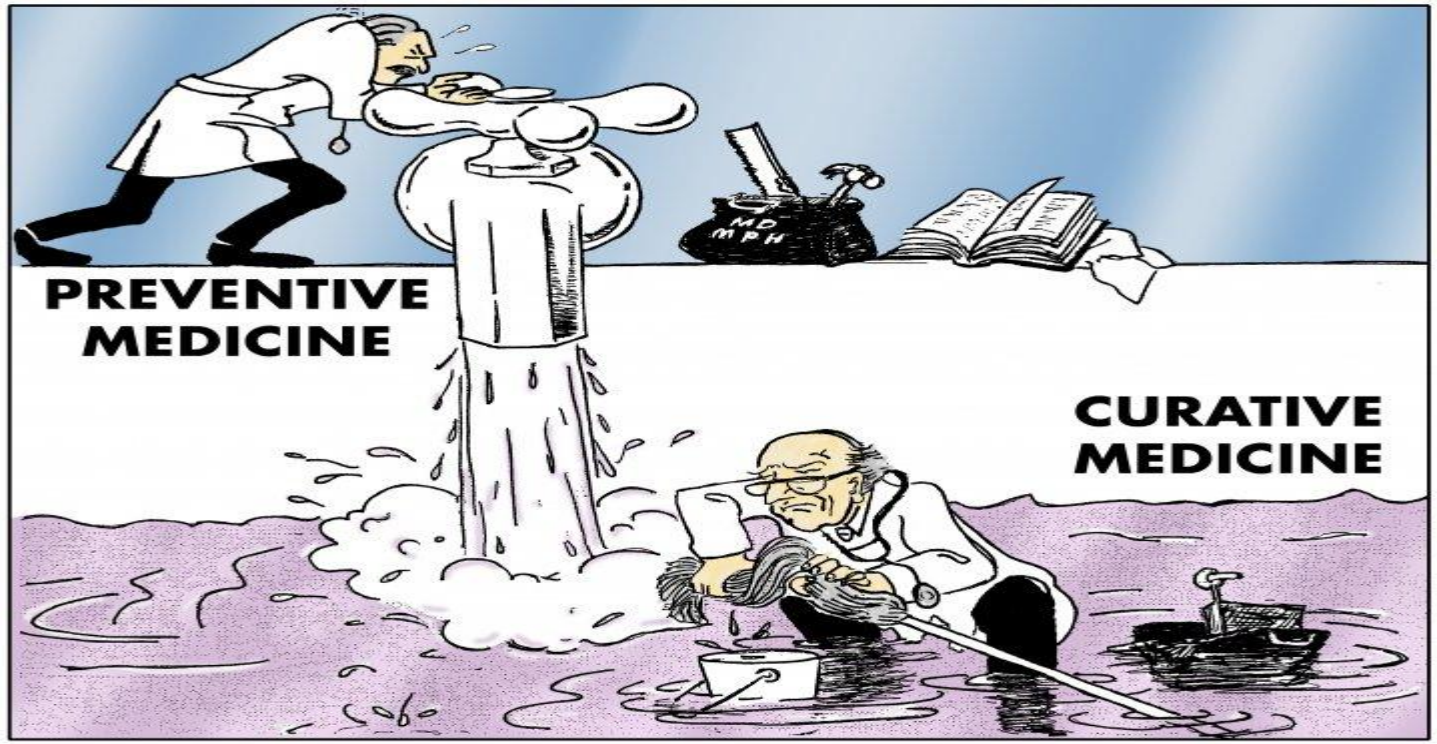
‘If you choose to represent the various parts in life by holes upon a table, of different shapes - some circular, some triangular, some square, some oblong - and the person acting these parts by bits of wood of similar shapes, we shall generally find that the triangular person has got into the square hole, the oblong into the triangular, and a square person has squeezed himself into the round hole. The officer and the office, the doer and the thing done, seldom fit so exactly, that we can say they were almost made for each other’.

From *Elementary Sketches of Moral Philosophy based on lectures delivered at the Royal Institution, 1804-6* (Spottiswoodes and Shaw, London 1849).

Journal of Epidemiology and Community Health 1995;49:113–116

Editorial By Raj Bhopal

Public health medicine and primary health care: convergent, divergent, or parallel paths?



Overview

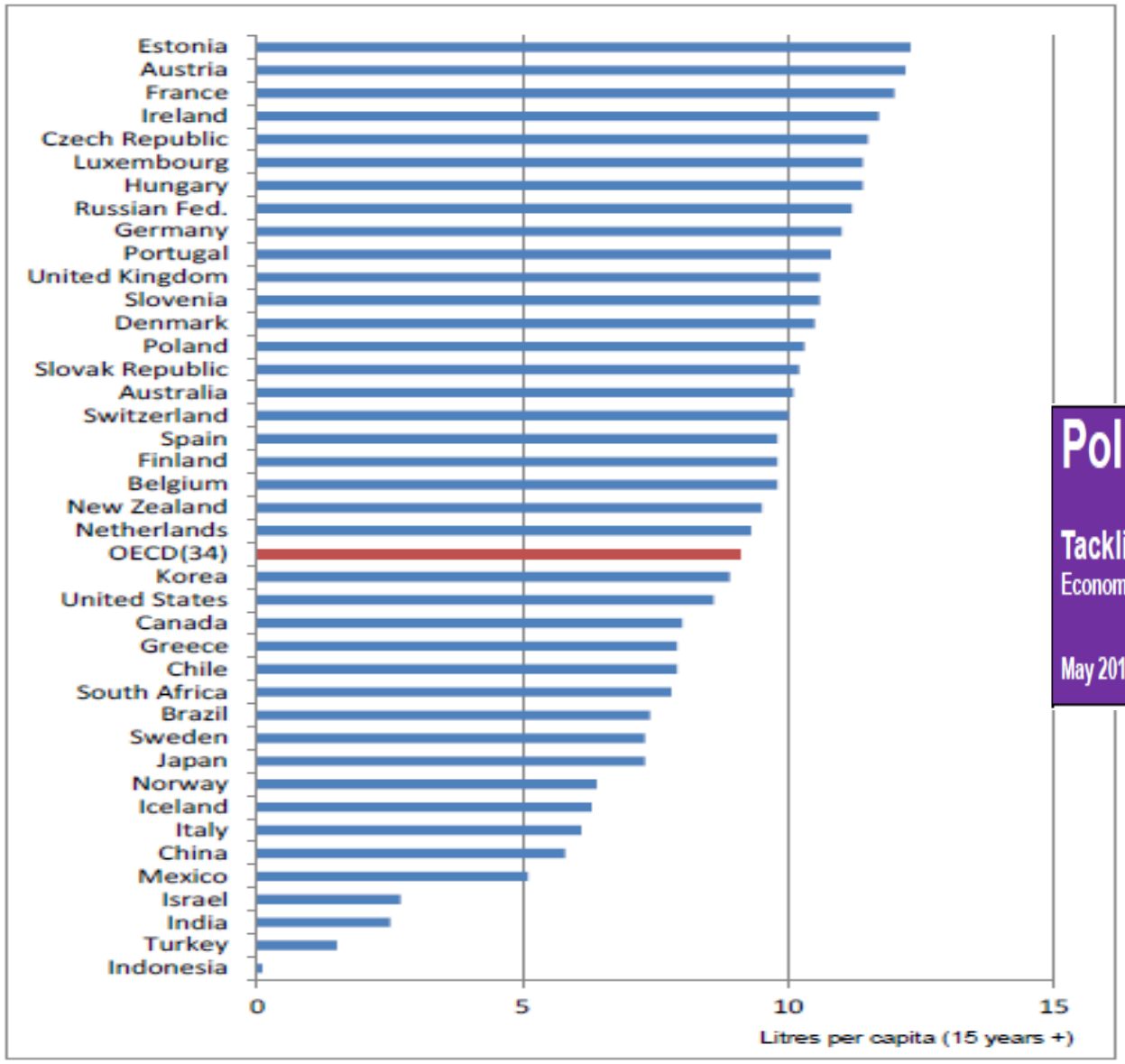
- Context underpinning SBI
- Evidence update – Cochrane reviews
- What this evidence means for (in) practice
- Conclusions – some reflections for the future

WHO Global Burden of Disease 2013

	Risk factor	DALYS (Millions)	1990 rank
	World		
1	High blood pressure	173	4
2	Tobacco smoking	156	3
3	Household air pollution	108	2
4	Diet low in fruit	104	7
5	**Alcohol use**	**97**	**8**
6	High body mass index	93	10
7	High fasting plasma glucose level	89	9
8	Childhood underweight	77	1
9	Exposure ambient particulate matter pollution	76	6
10	Physical inactivity	69	--

Murray et al. Measuring the Global Burden of Disease. NEJM 2013;369:448-57

Adult Alcohol consumption 2012



Policy Brief

Tackling Harmful Alcohol Use

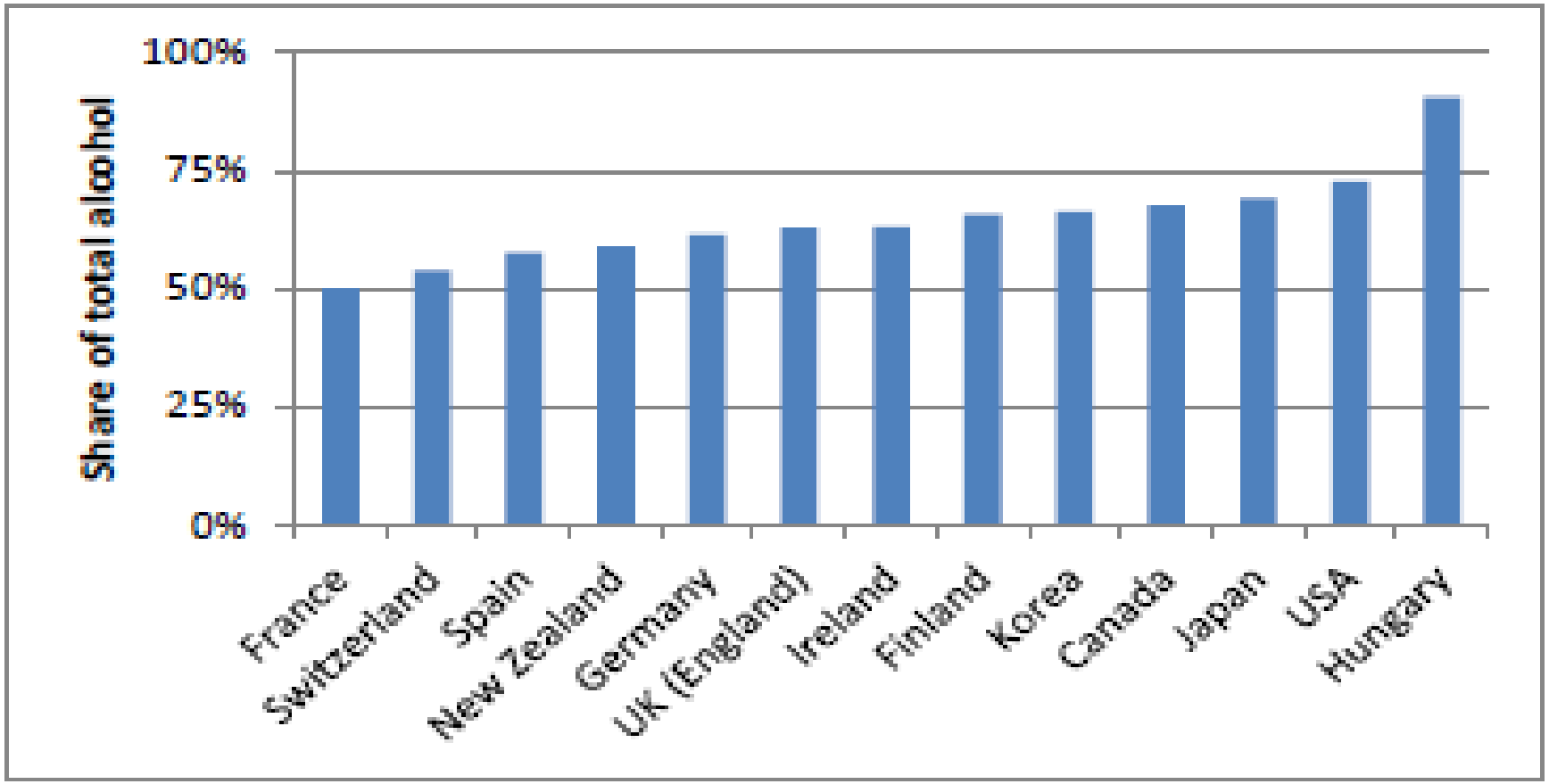
Economics and Public Health Policy

May 2015

OECD

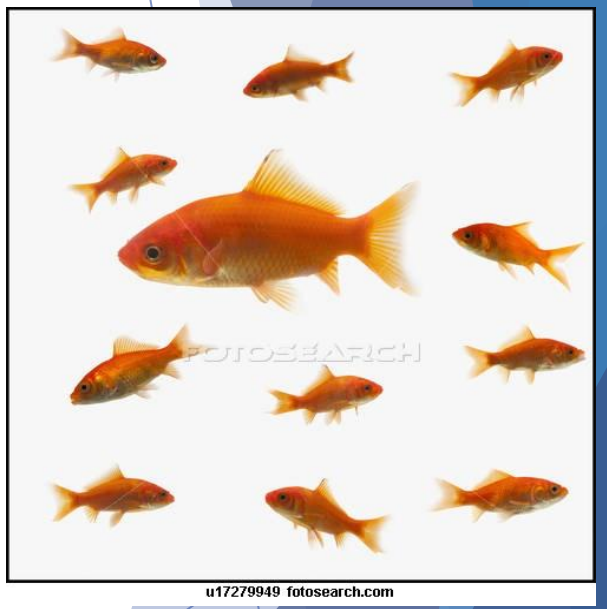
Directorate for Employment, Labour and Social Affairs

Share of alcohol consumed by the 20% of people who drink most (OECD 2015)



Impact on public services - England

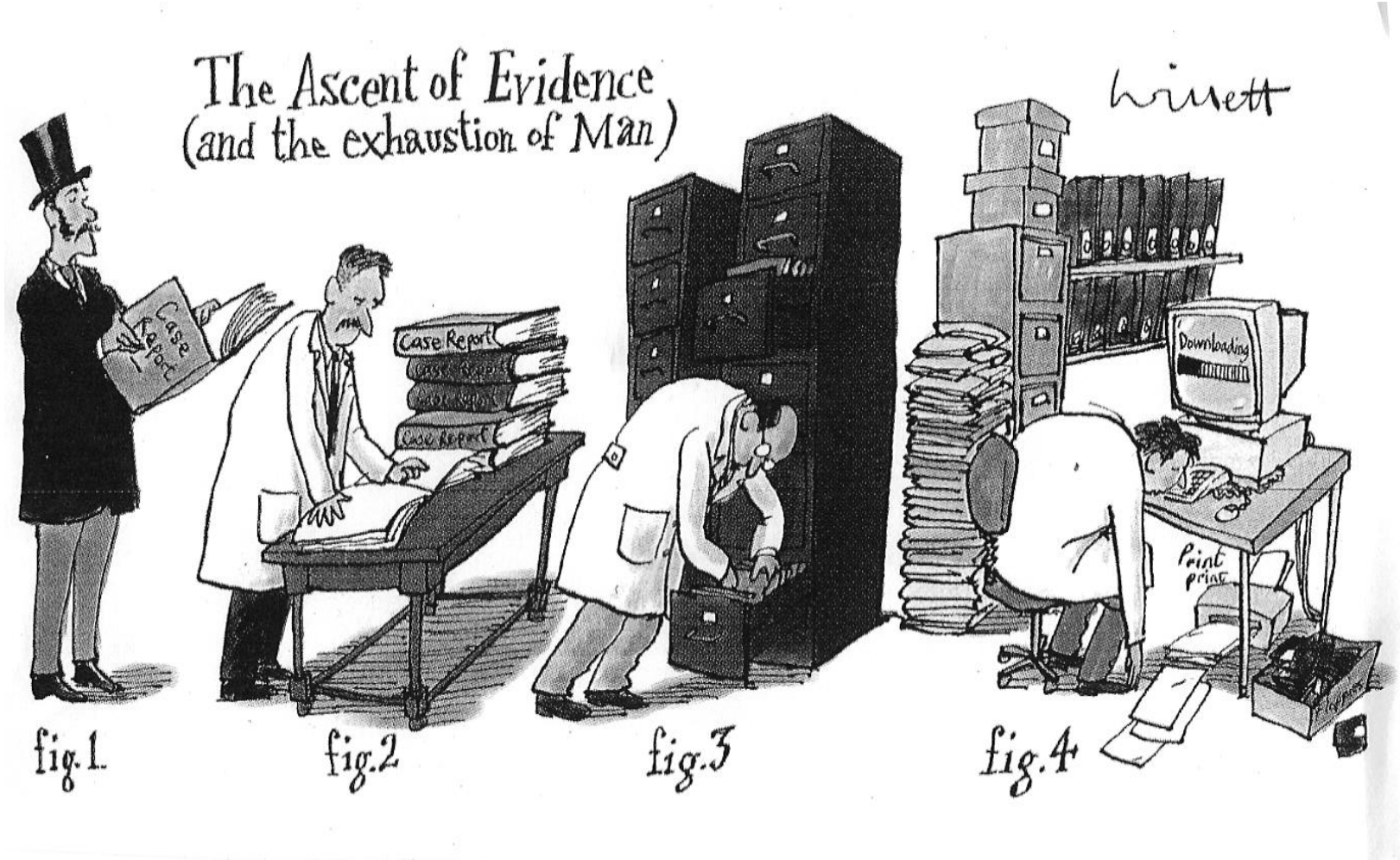
- 20% of PHC patients
- 70% of A&E visits - midnight to 5am
- 7-40% hospital admissions (non A&E)*
  - 7% planned
  - 25-40% acute/unplanned
- 37% mental health service cases
- 63% of criminal justice cases
- 36-52% community pharmacy visitors



* RCP 2001 Alcohol – can the NHS afford it?

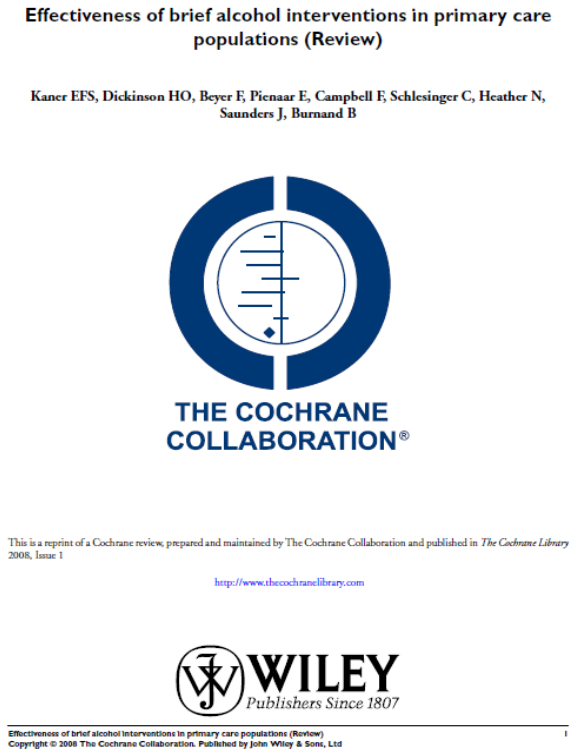
Screening and brief alcohol intervention

The evidence base



Cochrane - old and new

- 2007 review: 29 included PHC trials
  - 7619 patients overall
  - 24 general practice; 5 A&E
  - 22 trials in primary meta-analysis, n=5860
  - -38g/week [95% CI -54 to -23] at 12M
- 2016 review: 69 trials (old & new)
  - 33,642 participants overall
  - 74% Caucasian; mean age 43yrs (SD=8.9)
  - 34 USA, 10 UK, 6 Spain, 4 Australia, 2 Canada/Finland/Sweden, 1 Denmark/France/Germany/Poland/Switzerland/South Africa/Kenya/Brazil/Thailand
  - 40 general practice; 27 A&E
  - 34 trials in primary meta-analysis, n=15,197


Effectiveness of brief alcohol interventions in primary care populations (Review)

Kaner EFS, Dickinson HO, Beyer F, Pienaar E, Campbell F, Schlesinger C, Heather N, Saunders J, Burnand B

THE COCHRANE COLLABORATION®

This is a reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in *The Cochrane Library* 2008, Issue 1

http://www.thecochranelibrary.com

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Effectiveness of brief alcohol interventions in primary care populations (Review) 1
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Cochrane Library

Cochrane Database of Systematic Reviews

Effectiveness of brief alcohol interventions in primary care populations (Review)

Kaner EF, Beyer FR, Campbell F, Saunders JB, Burnand B, Pienaar ED, Muirhead C, Bertholet N, Daeppen JB

Kaner EF, Beyer FR, Campbell F, Saunders JB, Burnand B, Pienaar ED, Muirhead C, Bertholet N, Daeppen JB. Effectiveness of brief alcohol interventions in primary care populations. *Cochrane Database of Systematic Reviews* 2016, Issue 9. Art. No.: CD004148. DOI: 10.1002/14651858.CD004148.pub3.

www.cochranelibrary.com

Effectiveness of brief alcohol interventions in primary care populations (Review)
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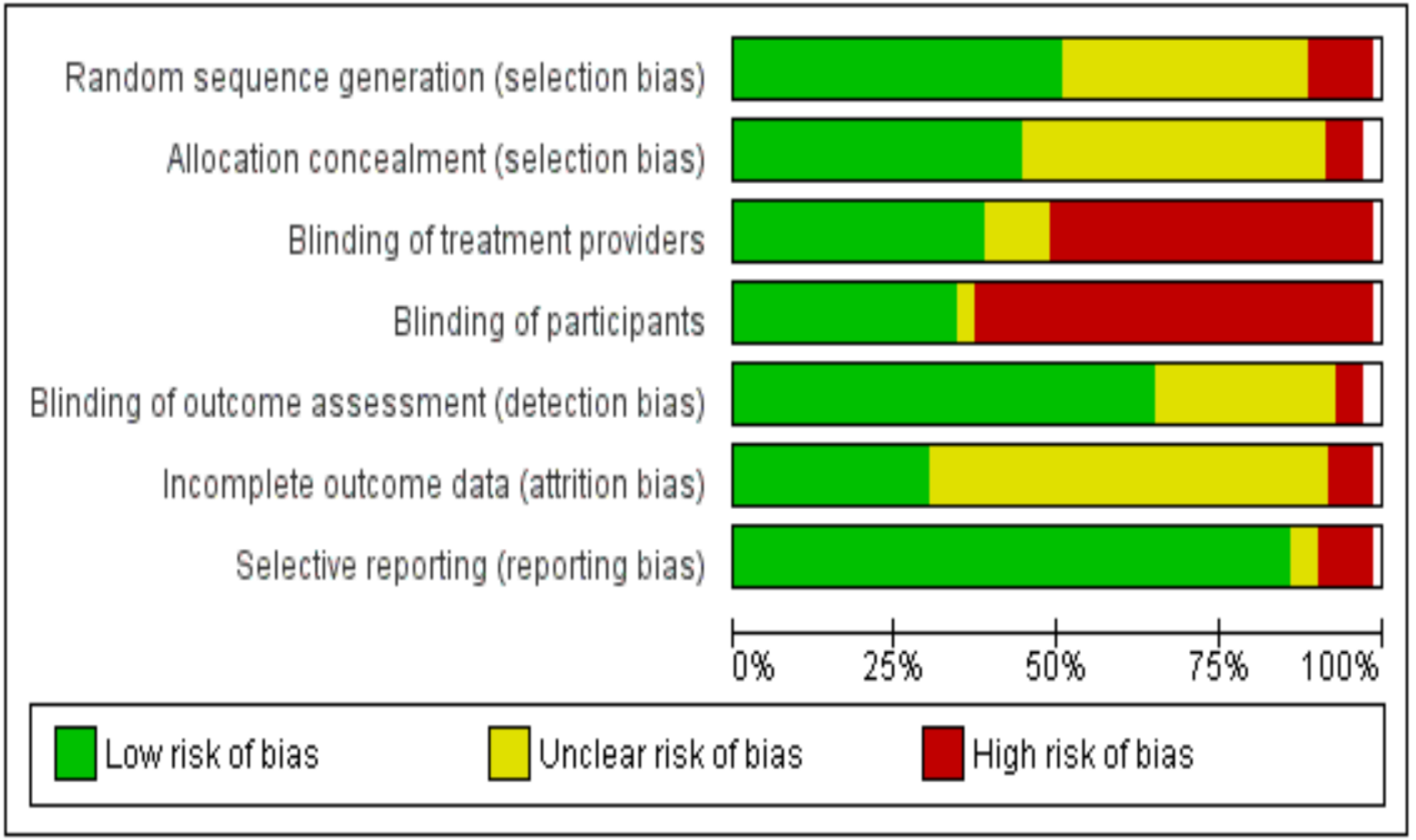
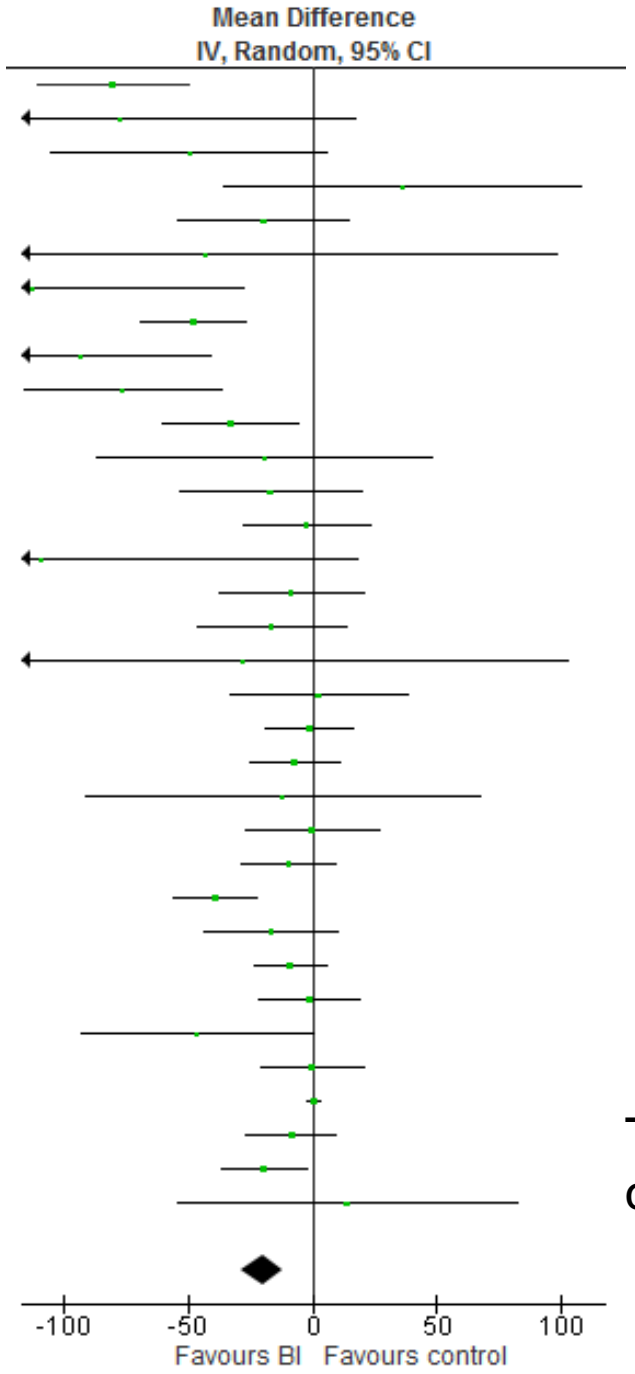
Risk of bias across included trials





Brief intervention vs control at 12 months

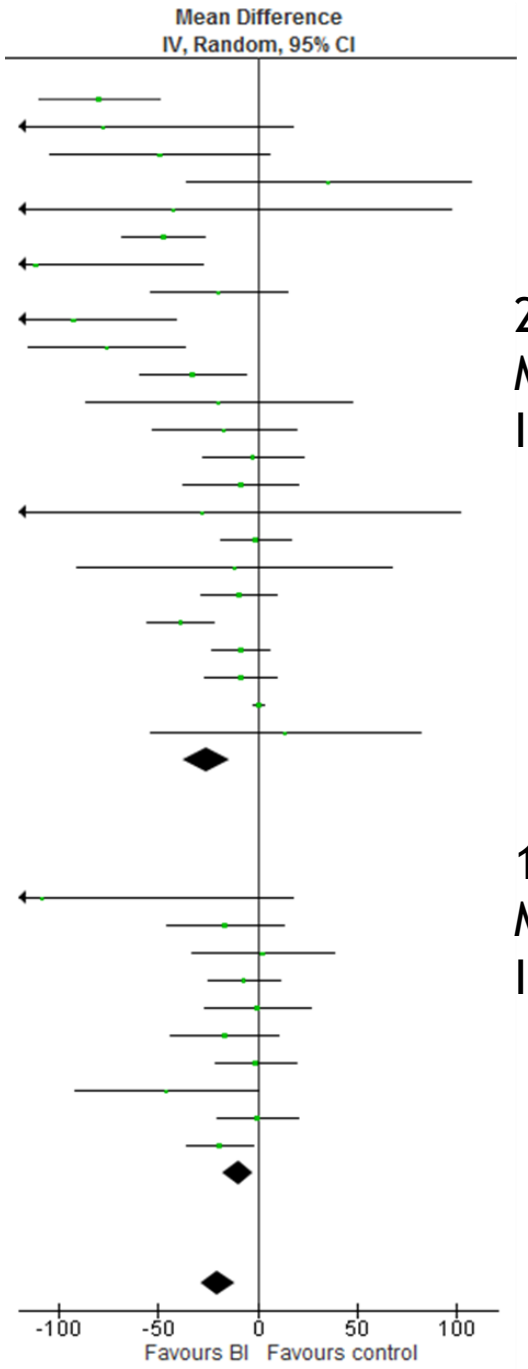
34 trials, 15,197 participants

Mean difference = -20 g/week [95% CI -28 to -12]
I^2 = 73%

Trials ordered chronologically (1988 to 2014)
oldest at the top and most recent at the bottom

Outcome by type of primary care

General practice



24 trials, 8811 participants
Mean difference (primary) = -26 g/week [95% CI -37 to -14]
I^2 = 79%

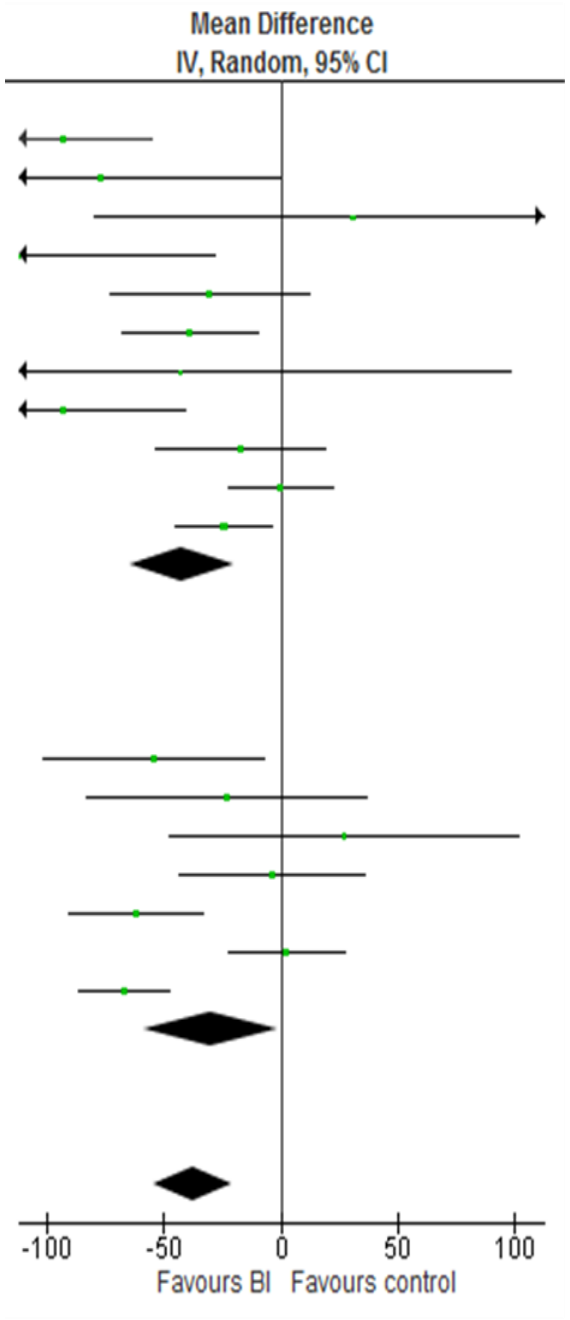
Emergency care

10 trials, 6386 participants
Mean difference (emergency) = -10 g/week [95% CI -17 to -2]
I^2 = 0%

Mean difference (overall) = -20 g/week [95% CI -28 to -12]
I^2 = 73%

Outcomes by gender

Men



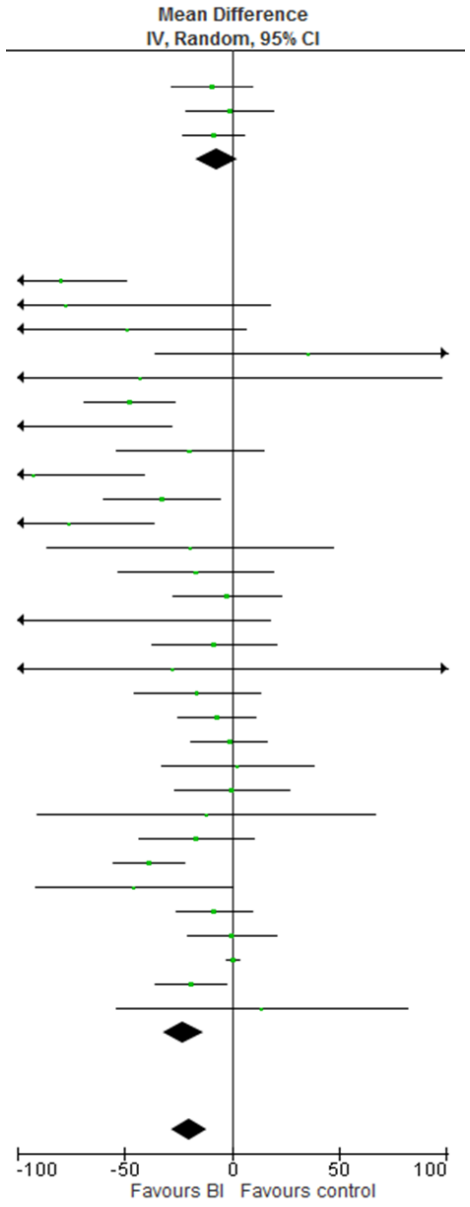
11 trials, 3486 participants
Mean difference (M) = -42 g/week [95% CI -64 to -20]
I^2 = 67%

Women

7 studies, 1350 participants
Mean difference (F) = -30 g/week [95% CI -59 to -1]
I^2 = 78%

Mean difference (overall) = -37 g/week [95% CI -54 to -20]
I^2 = 71%

Age-based analysis



Adolescents

3 trials, 1638 participants
Mean difference = -7 g/week [95% CI -17 to +3]
I^2 = 0%

Adults

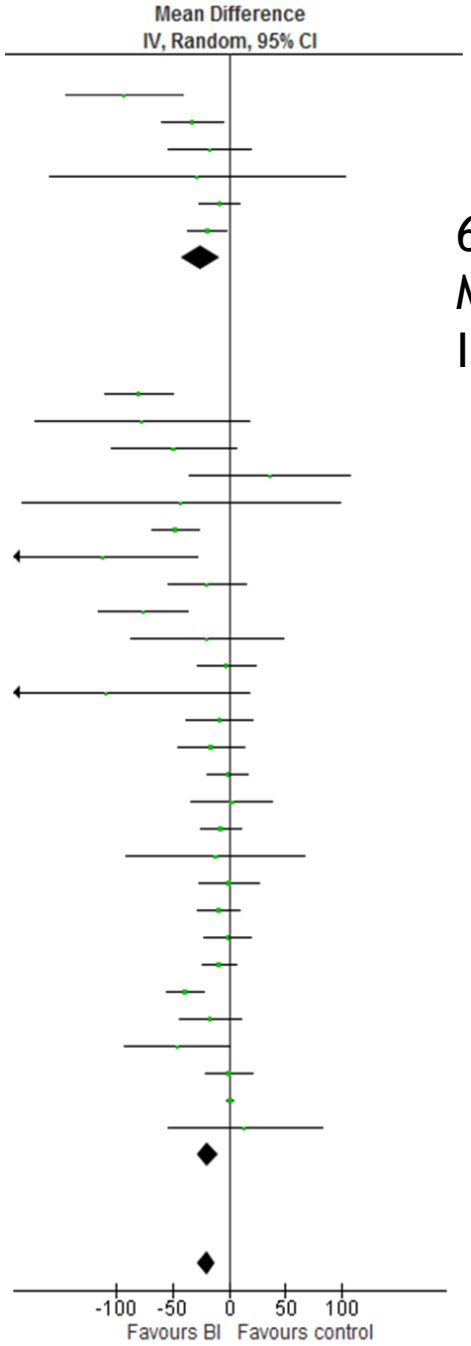
31 trials, 13,559 participants
Mean difference = -23 g/week [95% CI -32 to -13]
I^2 = 75%

Mean difference (overall) = -20 g/week [95% CI -28 to -12]
I^2 = 73%

Cluster or Individual randomization

Cluster randomised

6 trials, 2588 participants
Mean difference (cluster) = -25 g/week [95% CI -43 to -8]
I^2 = 51%

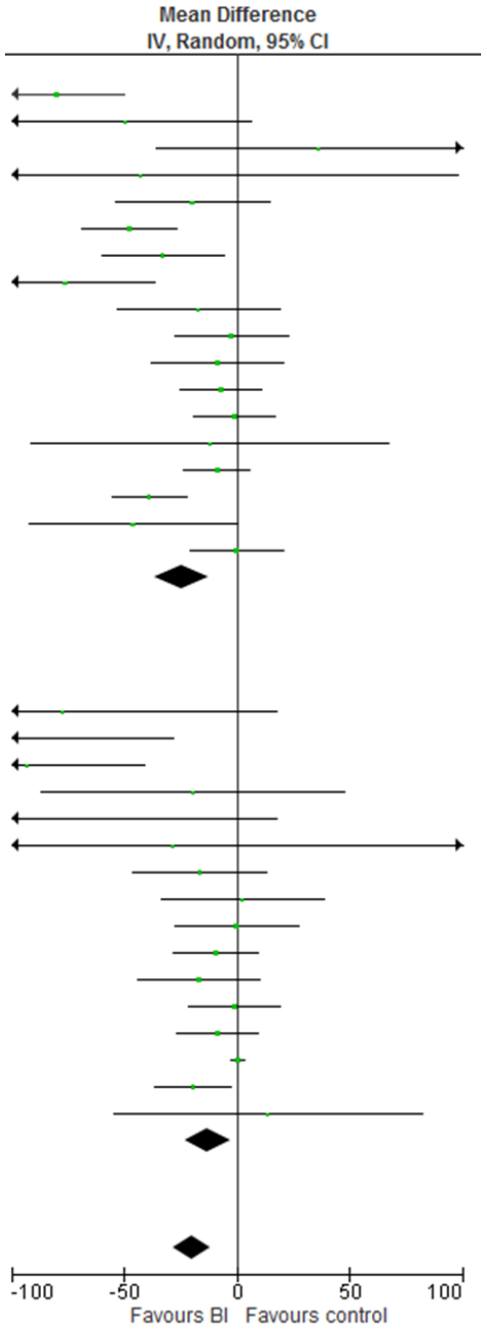


Individually randomised

28 trials, 12609 participants
Mean difference (individual) = -19 g/week [95% CI -28 to -9]
I^2 = 74%

Mean difference = -20 g/week [95% CI -28 to -12]
I^2 = 73%

Types of controls



Control: no alcohol content

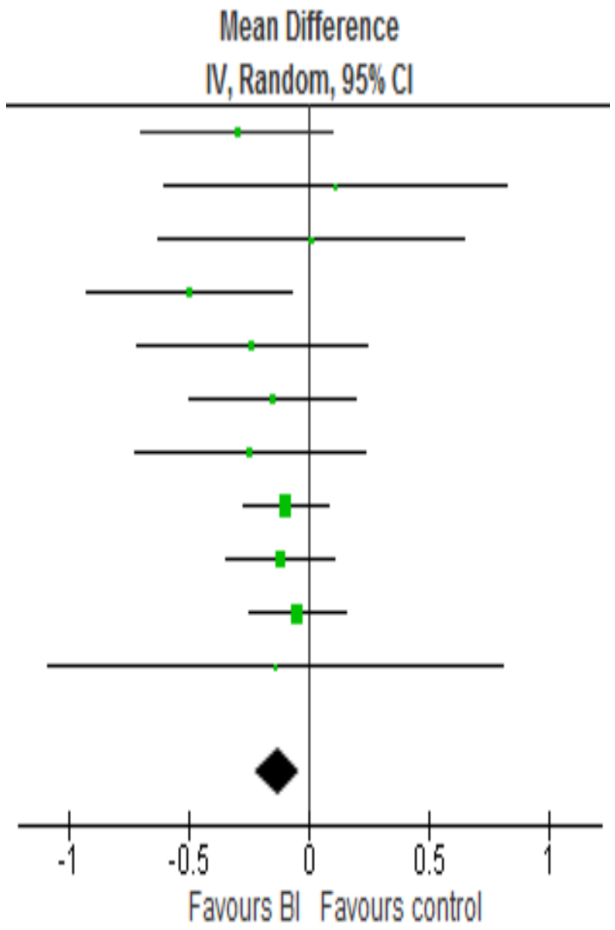
18 trials, 8606 participants
Mean difference (no alcohol) = -24 g/week [95% CI -36 to -12]
I^2 = 69%

Control: alcohol content

16 trials, 6591 participants
Mean difference (alcohol control) = -13 g/week [95% CI -23 to -3]
I^2 = 56%

Mean difference (overall) = -20 g/week [95% CI -28 to -12]
I^2 = 73%

Frequency of drinking

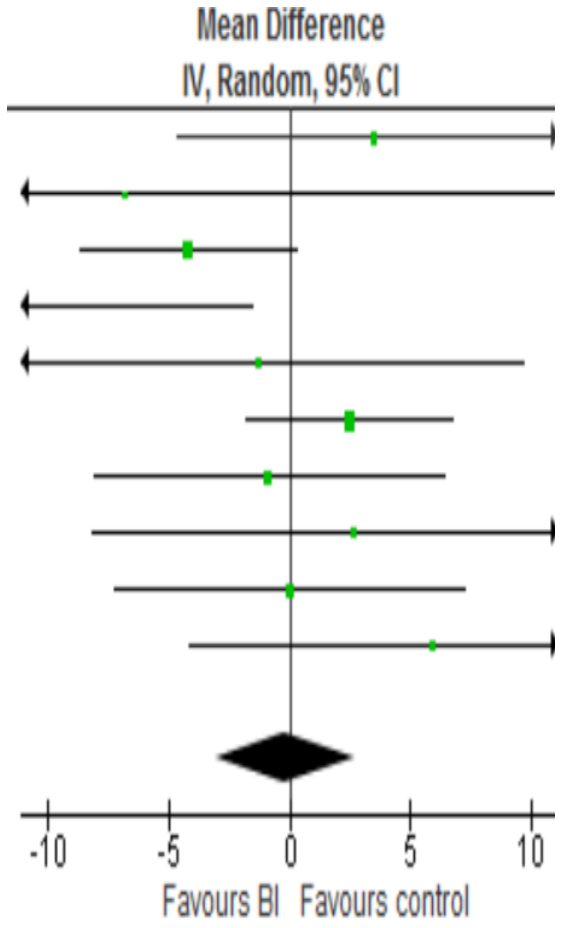


Number of drinking days per week

11 trials,
5469 participants

Mean difference = -0.13 days/week [95%CI -0.23 to -0.04]
I^2 = 0%

High intensity drinking - quantity

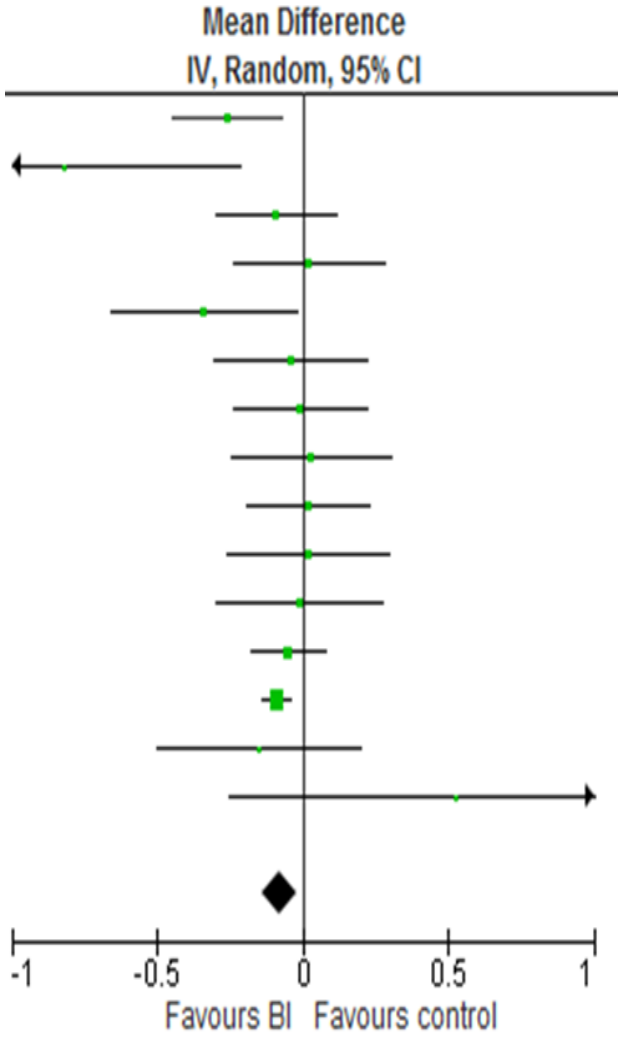


Number of grams per drinking day at 12 months

10 trials,
3128 participants

Mean difference = -0.2 g/drinking day [95%CI -3 to +3]
I^2 = 25%

High intensity drinking - frequency

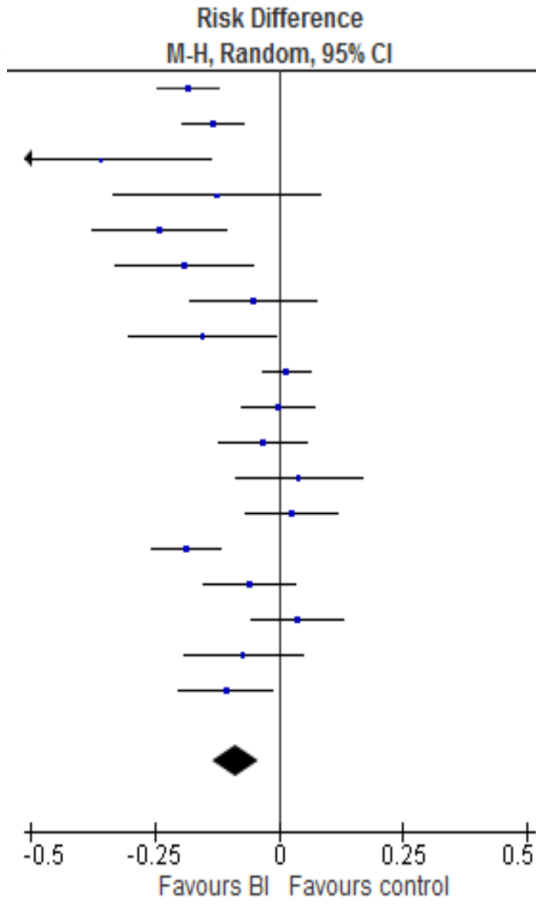


Number of binges/week at 12 months

15 trials,
6946 participants

Mean difference = -0.1 binges/week [95%CI -0.14 to -0.02]
I^2 = 22%

Proportion of Heavy Drinking patients

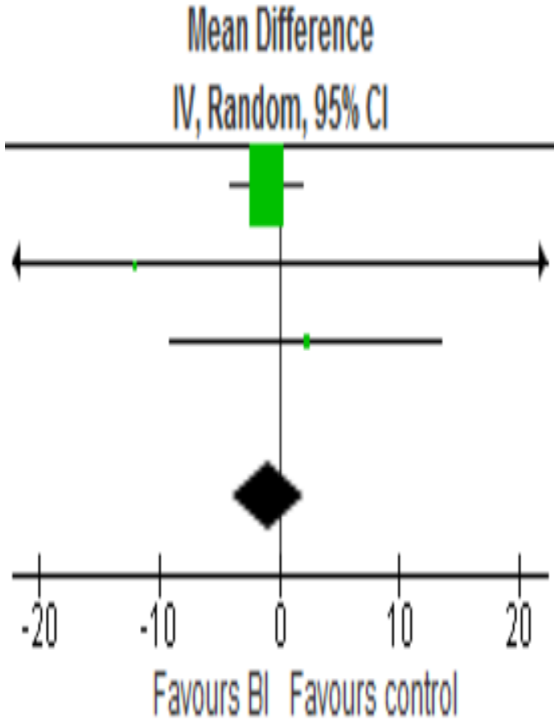


Proportion of heavy drinkers at 12M follow-up

18 trials,
7623 participants

Risk difference = -0.09 % [95%CI -0.13 to -0.04]
I^2 = 77%

Physiological measure – GGT

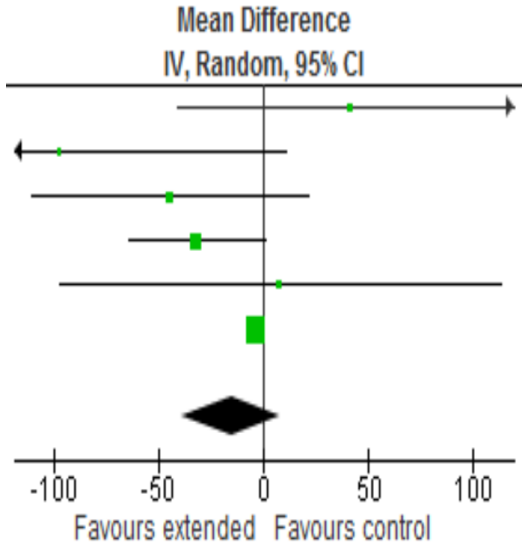


Gamma-Glutamyl transpeptidase (GGT) blood test (International Unit per litre or IU/l).

3 studies,
1166 participants

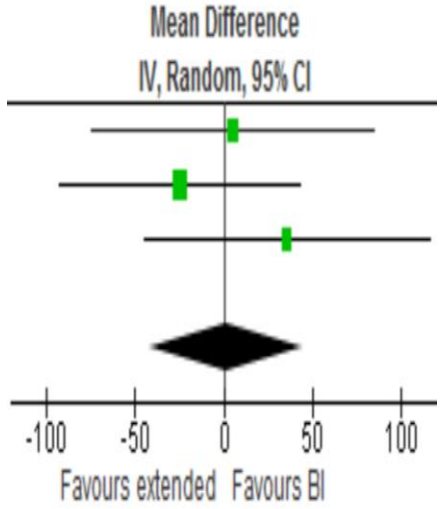
Mean difference = -0.9 IU/l [95%CI -3.9 to +2.1]
I^2 = 0%

Impact of extended interventions



Extended intervention vs control at 12 months

6 studies, 1203 participants
Mean difference = -15 g/week [95%CI -39 to +8]
I^2 = 41%



Extended vs brief intervention at 12 months

3 studies, 552 participants
Mean difference = 1.5 g/week [95%CI -42 to +45]
I^2 = 0%

Impact of time (drinking g/week)

- 6M 21 trials -21g/week [95% CI -31 to -11]
- 9M 2 trials -16g/week [95% CI -34 to -3]
- 12M 34 trials -20g/week [95% CI -28 to -12]
- 36M 1 trial -6g/week [95% CI -79 to +63]

What does this mean?

- Around 30 years of robust research – many high quality trials
  - 24 other systematic reviews (at least) – O'Donnell et al. 2013
  - Positive effects are consistently reported for average consumption (g/week)
  - Effects sizes relatively small and have dropped since 2007 (-38g to -20g)
  - Larger effects in general practice compared to emergency care
  - Definition of 'risky' drinking has expanded:
    - 2016 - mean drinking 183g/week in new trials (that reported it)
    - 2007 – mean drinking 285g/week
  - Content of control conditions has typically increased

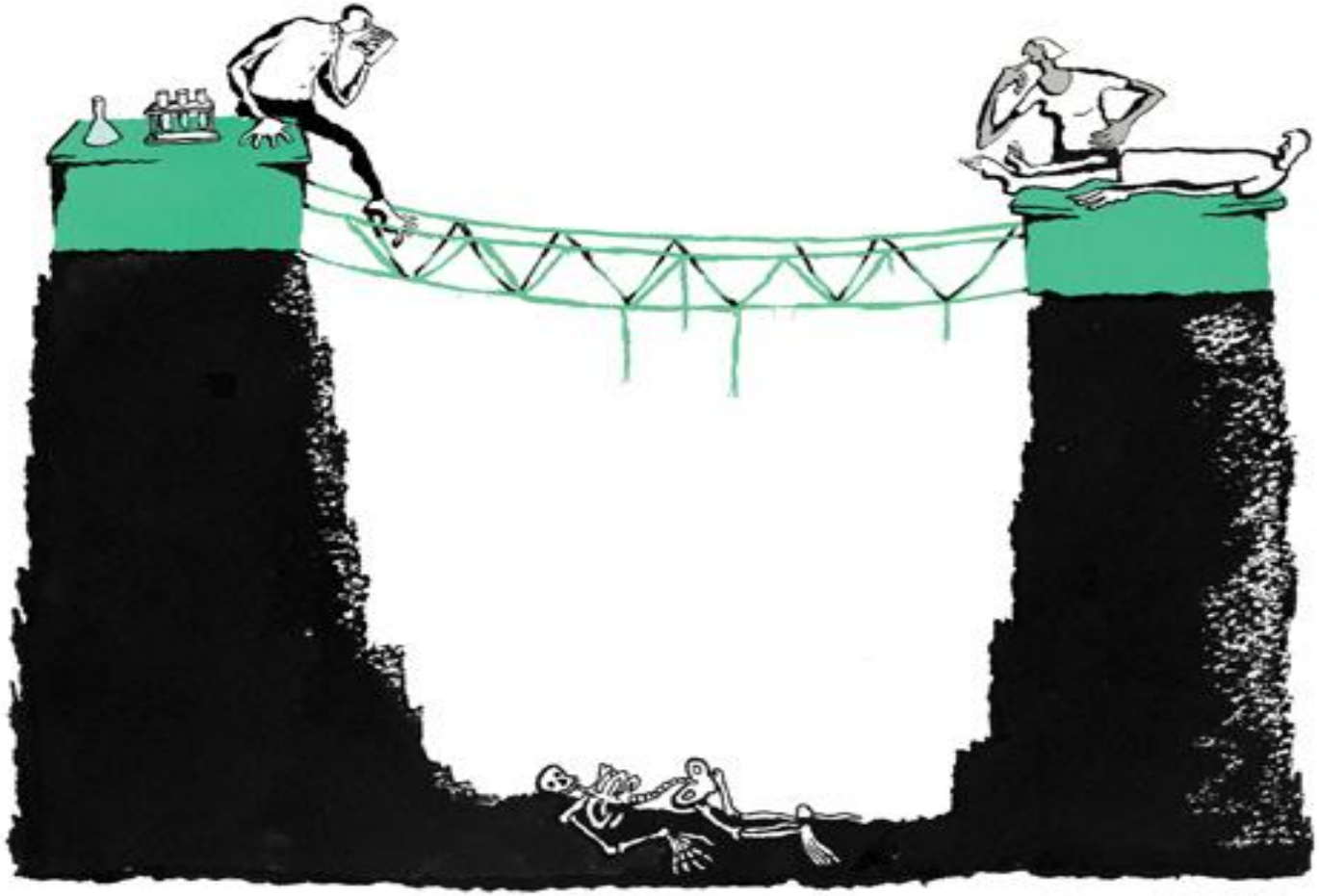
Do small effects matter?

- A reduction from 50 to 42 units/week reduces the relative risk of alcohol-related conditions by 14% and the absolute risk of lifetime alcohol-related death by 20% (Anderson 2008)

- Fine for public health practitioners interested in population effects – but less so for primary care practitioners who deal with individual patients
  - Wide range of drinking behaviours
  - Wide range of comorbidities and co-occurring conditions
  - Wide range of presenting ‘demands’ from patients
  - Wide range of policy requirements – priorities for attention

What happens in practice

The implementation story



Low levels of routine delivery

- 1 in 20 risky drinkers in primary care are screened or offered brief advice.
- Heavy reliance on recording consumption (Khadjesari et al, 2013)
- Not much follow through
- Where BI is delivered, quality of content is unclear.

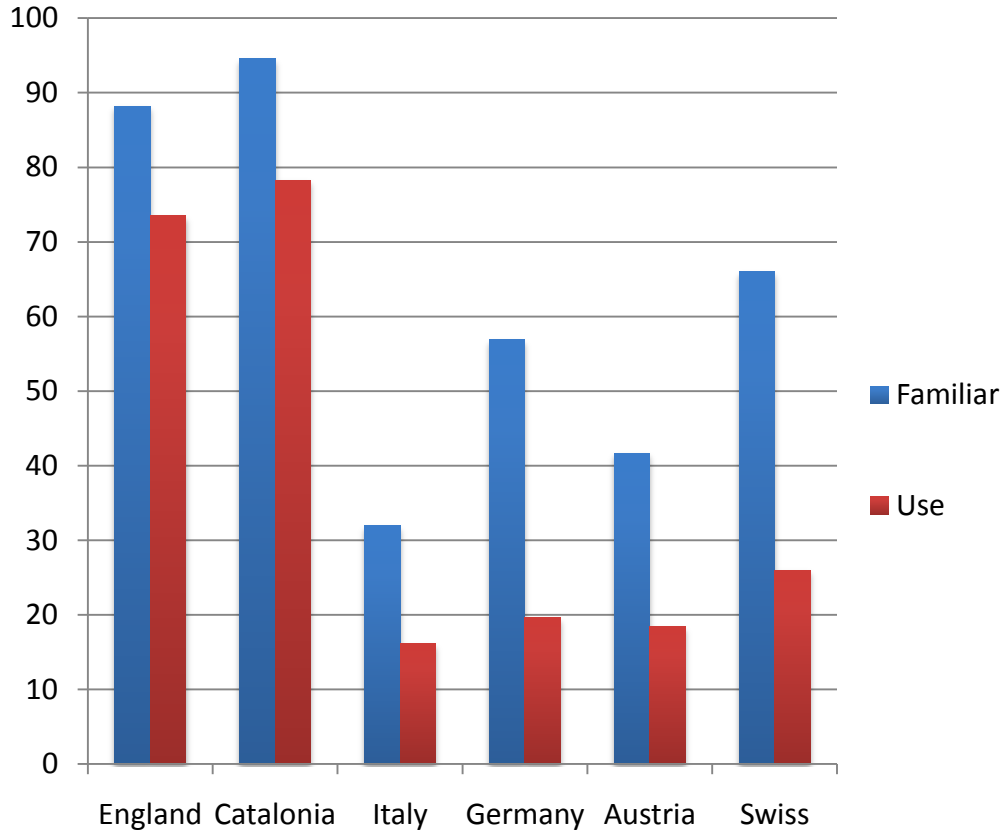


Fig 2: Are GPs familiar with and use standardised alcohol screening tools? (www.amphoraproject.net)

European survey of barriers

Reason	N of responses	Percent of cases
Time constraints	209	70.6
Risk of upsetting patients	147	49.7
Lack of financial incentives	87	29.4
Lack of services to refer to	67	22.6
Lack of training	60	20.3

Table 2: Main barriers to alcohol screening in primary care (www.amphoraproject.net)

What's the patient view?

The Alcohol Toolkit Study

Jamie Brown, Emma Beard, Robert West, Alan Brennan, Colin Drummond, Matthew Hickman, John Holmes, Eileen Kaner, Karen Lock, Susan Michie

Last updated: 11th Sept 2016

www.alcoholinengland.info
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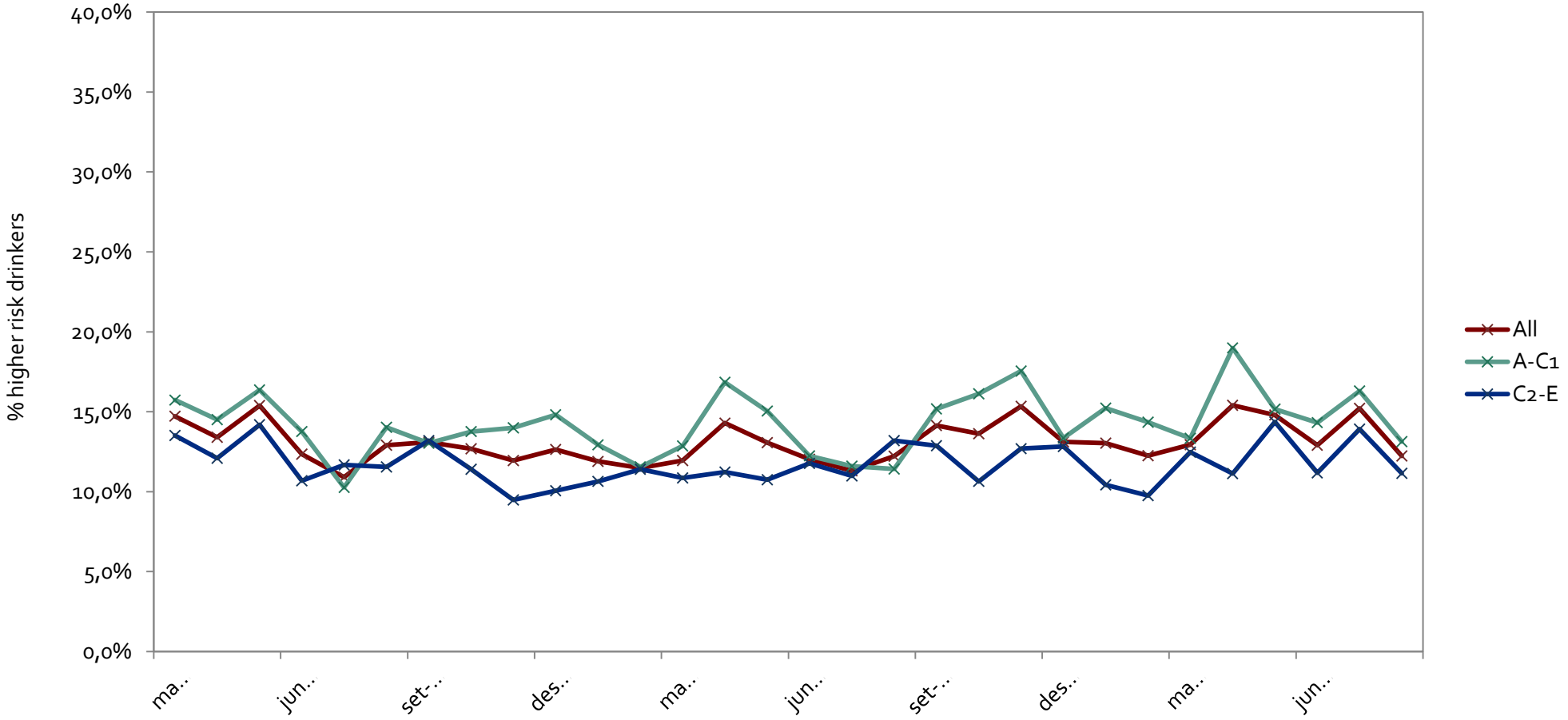
NHS National Institute for Health Research
SA
UCL

Toolkit methods

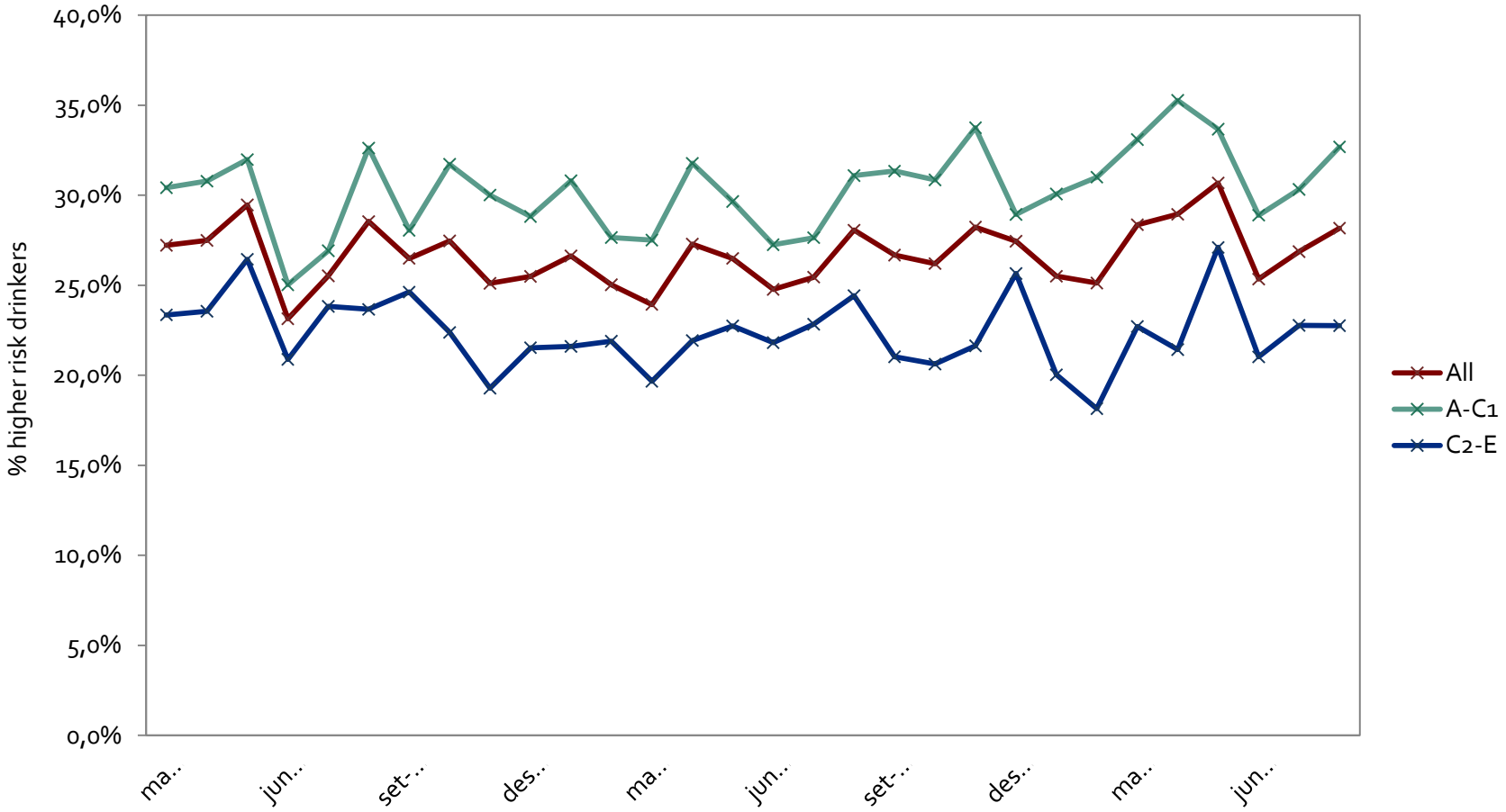
- Data collected during monthly household survey
- Each month involves a new representative sample of ~ 1700 respondents
- Began in March 2014
- Methods described in open access: Beard, et al., 2015. *'Protocol for a national monthly survey of alcohol use in England with 6-month follow-up: 'The Alcohol Toolkit Study'*. BMC Public Health 15:230 – http://www.biomedcentral.com/1471-2458/15/230
- For more info – including questionnaire - see www.alcoholinengland.info

Prevalence of excessive drinking (AUDIT 8+)



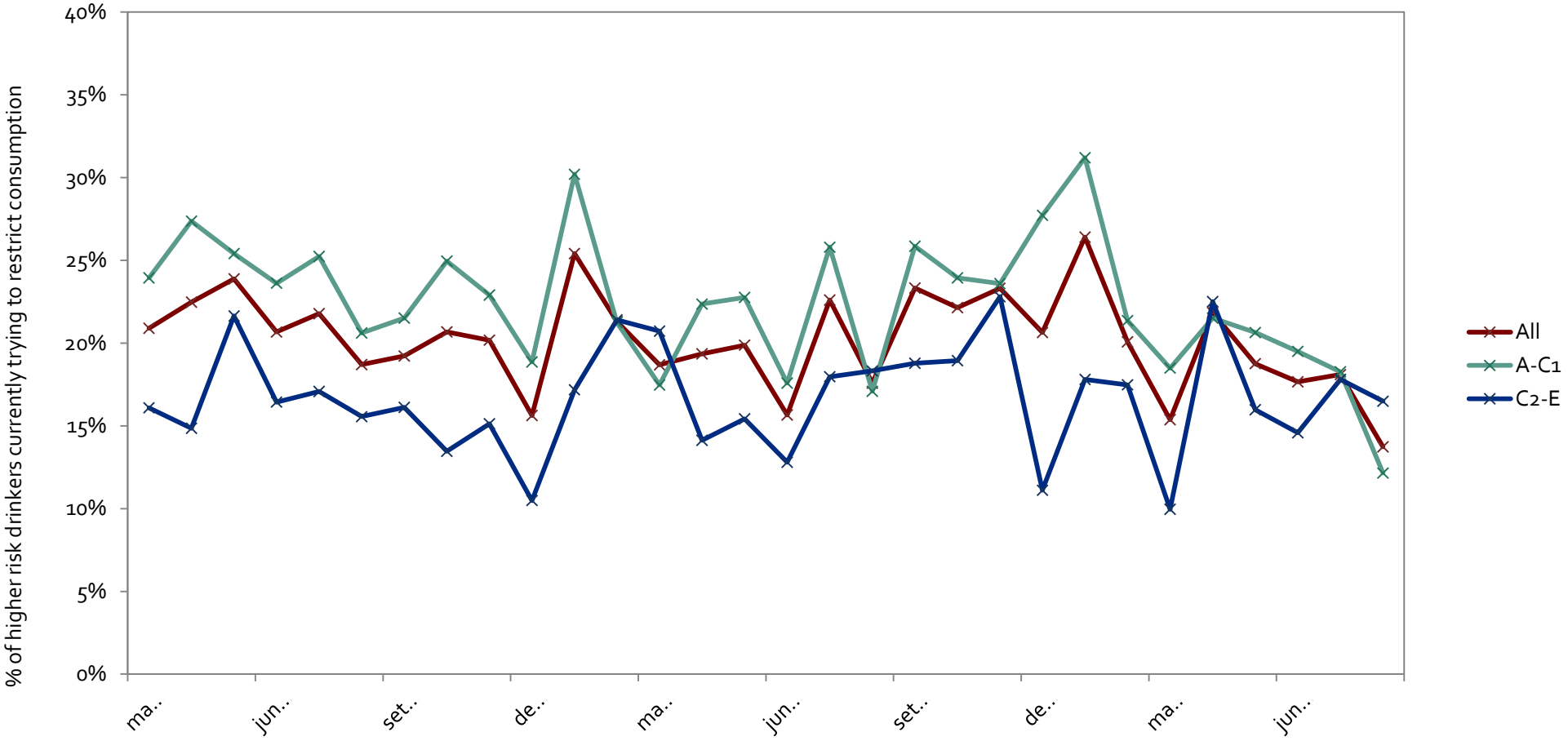
Higher risk (hazardous) drinking defined as those scoring >7 AUDIT
A-C1: Professional to clerical occupation C2-E: Manual occupation

Prevalence of excessive drinking (AUDIT-C >4)



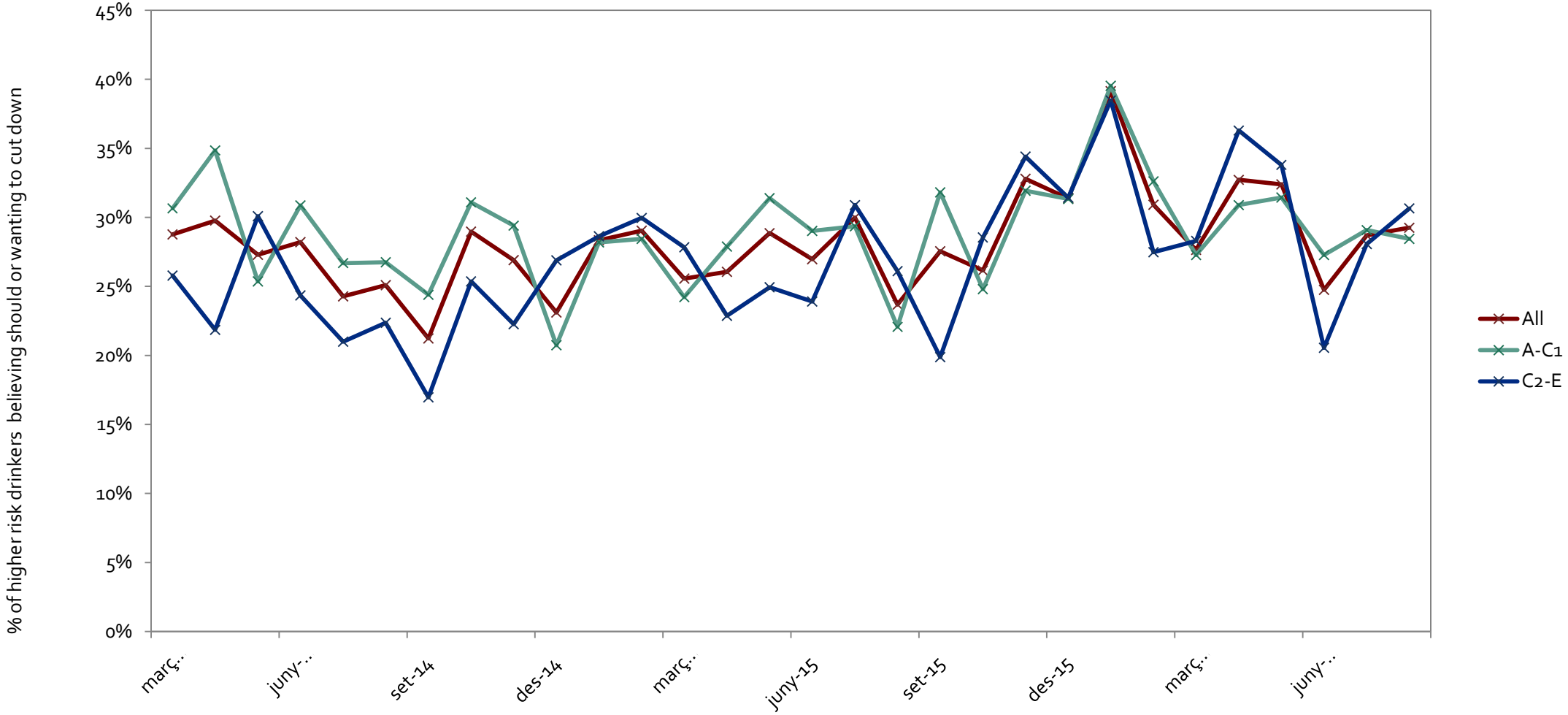
A-C1: Professional to clerical occupation C2-E: Manual occupation

Currently trying to restrict consumption



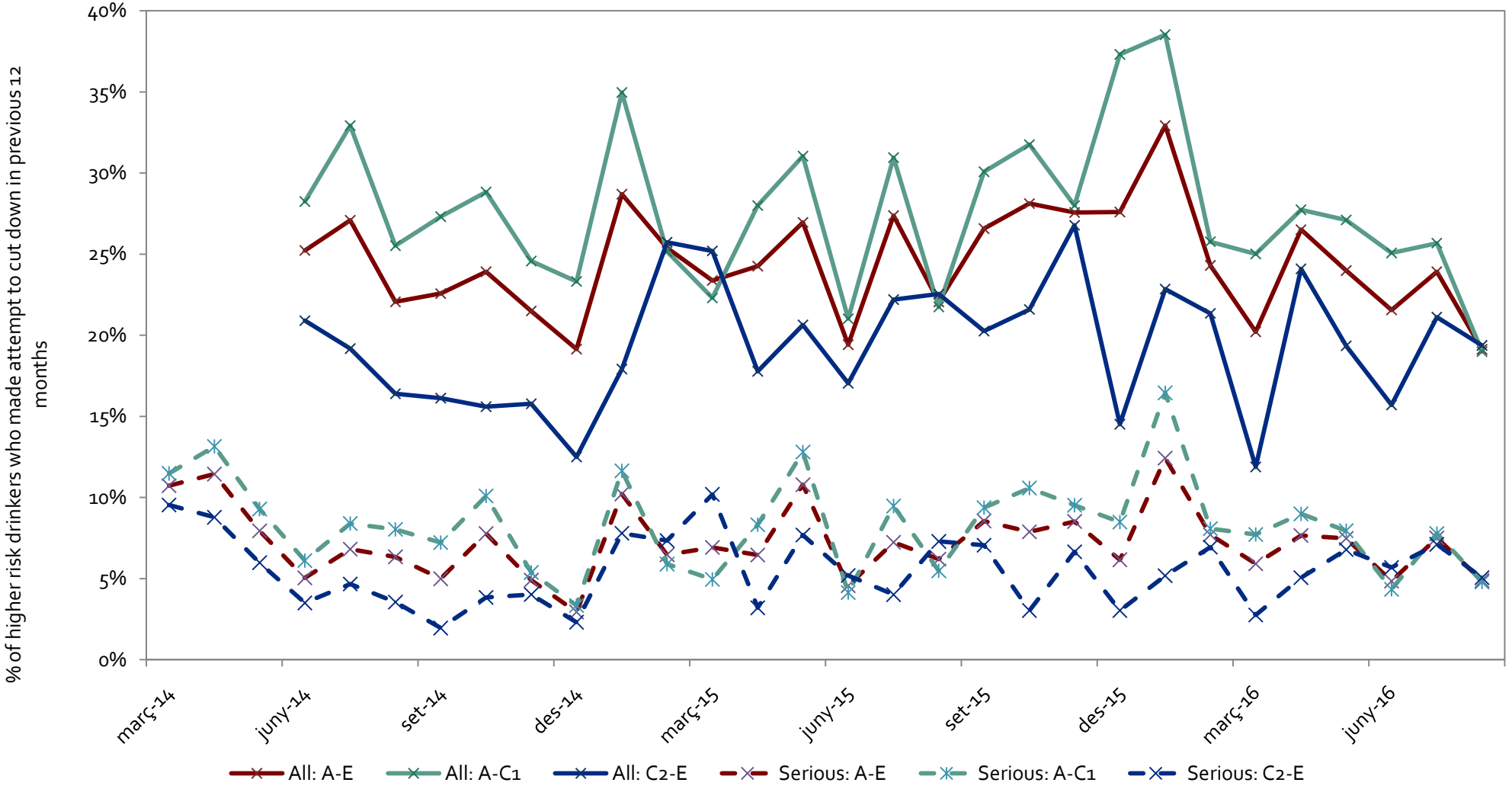
Question: Are you currently trying to restrict your alcohol consumption e.g. by drinking less, choosing lower strength alcohol or using smaller glasses?

Motivation to cut down



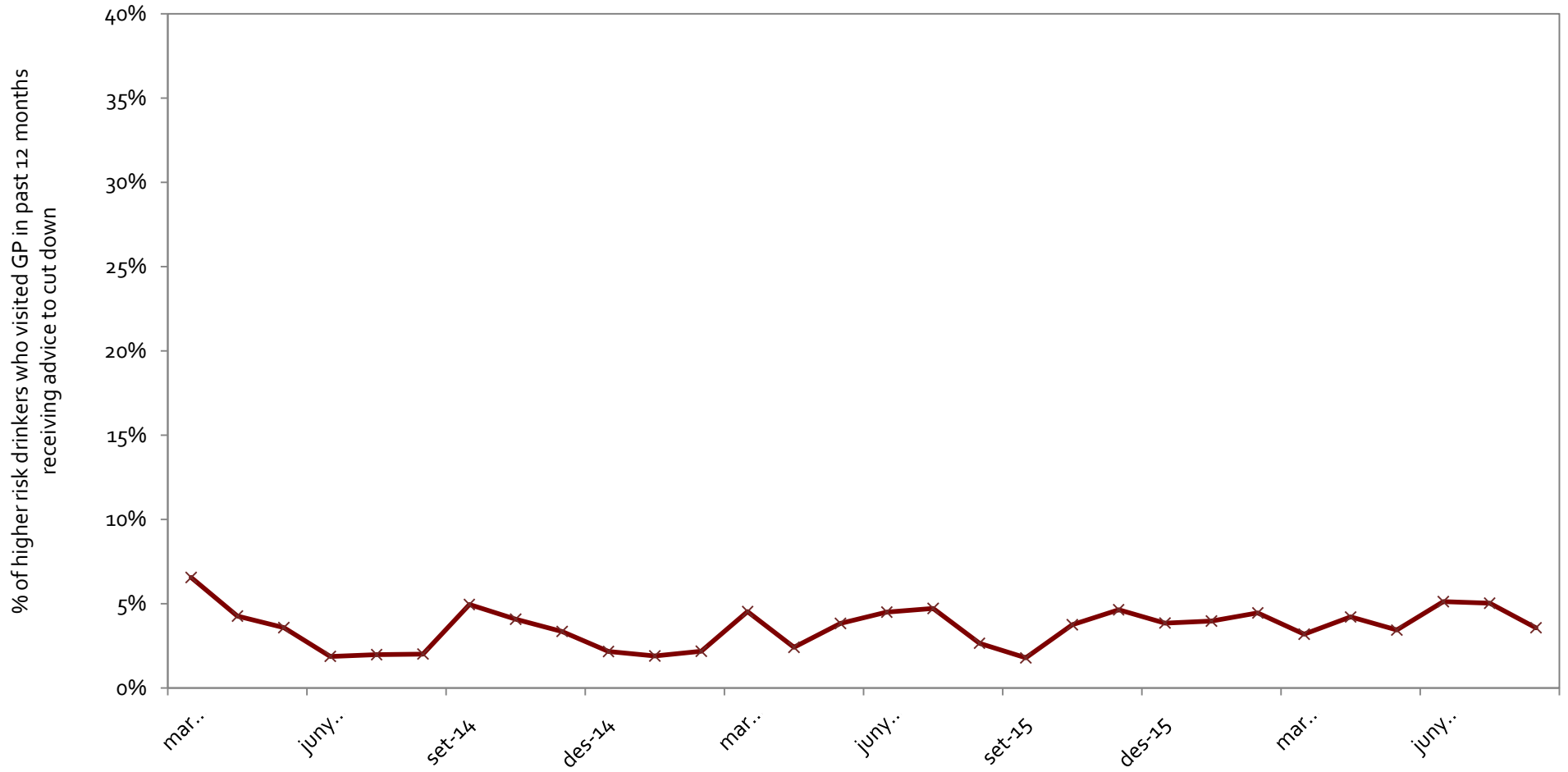
Which of the following best describes you? I REALLY want to cut down on drinking alcohol and intend to in the next month; I REALLY want to cut down on drinking alcohol and intend to in the next 3 months; I want to cut down on drinking alcohol and hope to soon; I REALLY want to cut down on drinking alcohol but I don't know when I will; I want to cut down on drinking alcohol but haven't thought about when; I think I should cut down on drinking alcohol but don't really want to; I don't want to cut down on drinking alcohol

Past-year attempts to cut down or stop



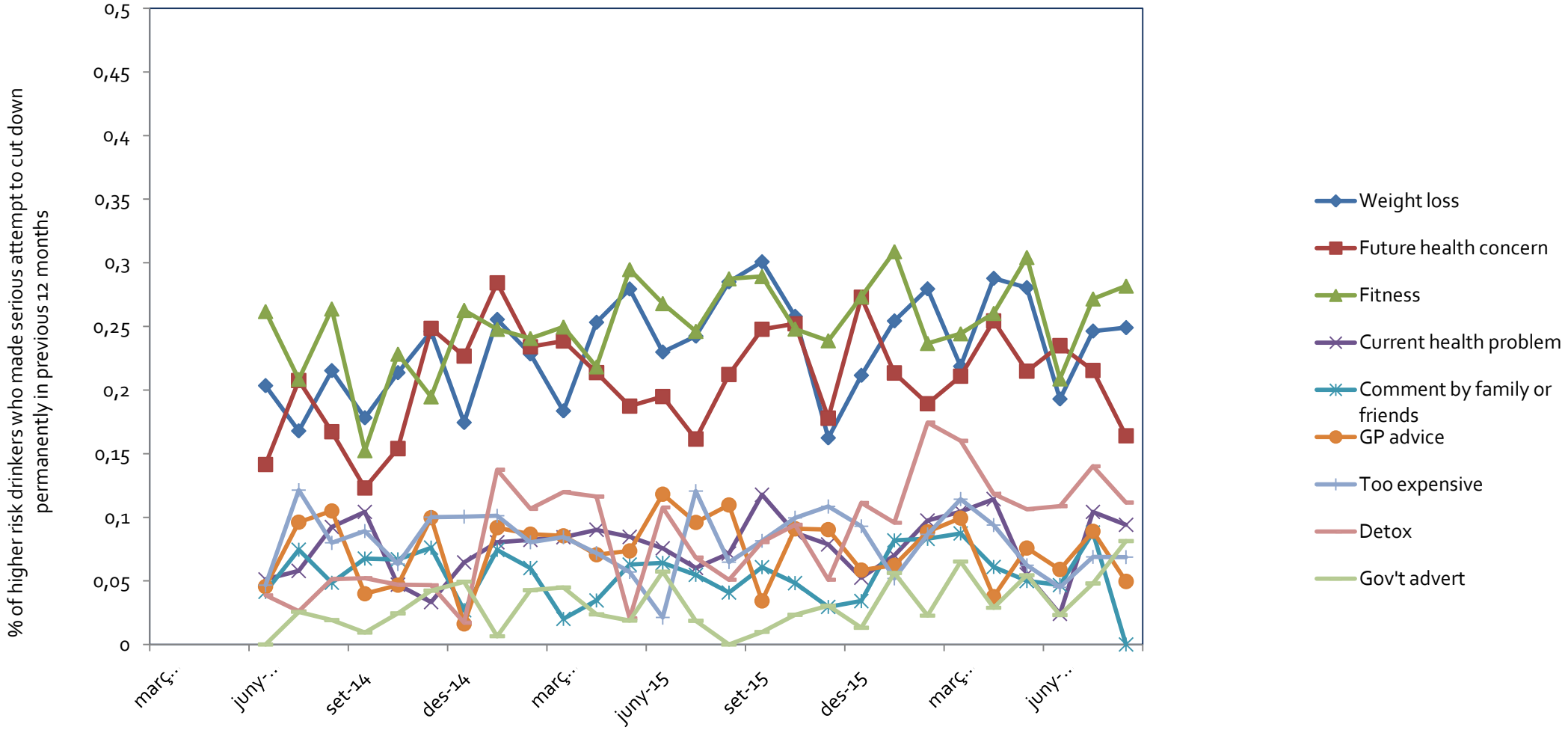
Q1: How many attempts to restrict your alcohol consumption have you made in the last 12 months (e.g. by drinking less, choosing lower strength alcohol or using smaller glasses)? Q2: During your most recent attempt to restrict your alcohol consumption, was it a serious attempt to cut down on your drinking permanently?

Reported GP/nurse advice on cutting down



Question: In the last 12 months, has a doctor or other health worker within your GP surgery discussed your drinking?

Triggers for past-year attempts



Question: Which of the following, if any, do you think contributed to you making the most recent attempt to restrict your alcohol consumption?

What is the toolkit telling us?

- Significant proportion drink heavily
- Many express a motivation to cut down
- Many try to cut down
- Few receive advice from practitioners
- Several drivers for change – weight loss, fitness

Unpacking the practitioner view – SIPS PHC

BMJ

BMJ 2013;346:e8501 doi: 10.1136/bmj.e8501 (Published 9 January 2013)

RESEARCH

Effectiveness of screening and brief alcohol intervention in primary care (SIPS trial): pragmatic cluster randomised controlled trial

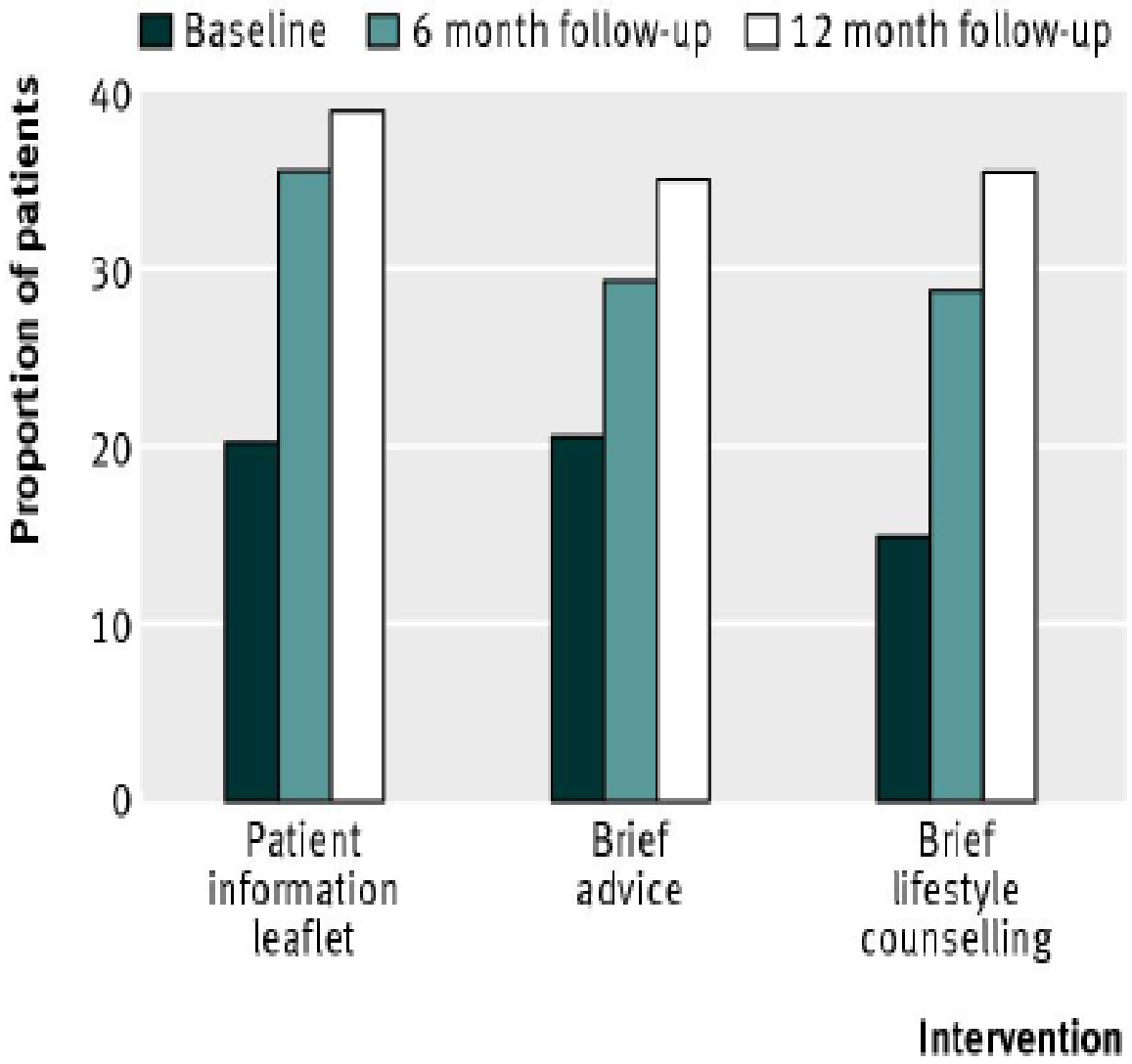
OPEN ACCESS

Eileen Kaner *professor of public health research*[1], Martin Bland *professor of health statistics*[2], Paul Cassidy *general practitioner*[3], Simon Coulton *professor of health services research*[4], Veronica Dale *trial statistician*[2], Paolo Deluca *trial manager*[5], Eilish Gilvarry *consultant psychiatrist and honorary professor of addiction psychiatry*[6], Christine Godfrey *emeritus professor of health economics*[2], Nick Heather *emeritus professor of drug and alcohol studies*[7], Judy Myles *consultant psychiatrist*[8], Dorothy Newbury-Birch *lecturer in public health*[1], Adenekan Oyefeso *honorary reader and consultant clinical psychologist*[8], Steve Parrott *health economics*[2], Katherine Perryman *PhD student*[9], Tom Phillips *clinical doctoral research fellow*[10], Jonathan Shepherd *professor of oral and maxillofacial surgery*[11], Colin Drummond *professor of addiction psychiatry*[5]

Trial design

- Screening
  - Approach: Universal vs targeted
  - Tool - M-SASQ versus FAST
- Assessment was AUDIT, EQ5D, RTC, short service use tool
- Interventions (additive); n=756 patients
  - Feedback + Patient Information Leaflet (PIL)
  - Brief Advice (BA) – 5 min of simple structured advice
  - Brief Lifestyle Counselling (BLC) – 20 min within 2 weeks
- Primary Outcome – % non risky drinkers (AUDIT), 6M
- Qualitative interviews with practitioners, 12M

Trial outcome (% non-risky drinkers)



No significant between groups – null effect trial

Can the qualitative data help illuminate what occurred in the trial and explain these findings

Interview sample

PHC	Gender	Screen approach	Tool	Condition	SBI - extent of delivery in trial
1	F	Targeted	SASQ	BA	High
2	F	Targeted	FAST	BA	High
3	F	universal	SASQ	BA	High
4	M	Targeted	SASQ	PIL	Low
5	F	Universal	SASQ	BA	Low
6	F	Targeted	FAST	PIL	Low
7	M	Universal	FAST	BLC	High
8	M	Targeted	SASQ	PIL	High
9	M	Universal	FAST	PIL	High
10	M	Universal	FAST	BA	High
11	M	Universal	FAST	BA	Low
12	M	Targeted	SASQ	BLC	Low
13	F	Universal	SASQ	BLC	High

Assessment could take a long time

I can send them out to start filling the questionnaire in, see the next patient and call them back in and then go through the questionnaire with them (GP4/PIL)

I think that whole recruitment and the length of the question…, I think everyone was a bit surprised that there was much more work than expected, it was much more time to do that. I don't think the screening tool itself was the issue, it was more before the screening. (PM1/BA)

I started off putting them next door, 'fill in that questionnaire, I'll come back in two minutes or five minutes' and you know they haven't got past question one. So what I started doing was once they were positive and they agreed this then, I went through the questionnaire with them … (GP7/BLC)

Potential for screening reactivity

Interestingly there's one chap who I'd screened and he was negative and he came back about a month later then admitted that actually he was positive. So that was interesting because if I hadn't been doing the SIPS screening I wouldn't have asked him in the first place and he might never have admitted it a month later so that's an instance of somebody who's not in the SIPS programme but you know it's got implications for him (GP8/ PIL)

As soon as you started talking about alcohol, asking questions about it you're already doing an intervention …I'm sure the nurses will be responding to the answers with (erm) approval or (erm) questioning the wisdom of it, things like that (yeah) so in a sense if anybody who is asking questions about alcohol is...is already intervening (GP10/BA)

Intervention (in)fidelity – 'controls'

The leaflet was fine but then we had to...I thought we had to...we had to go through the leaflet with the patient as well...(GP4/PIL)

I always wondered how much people like were... like whether they would actually read it, but there were instances where I'd spoken to somebody who'd screened positive - he'd been given the patient information leaflet and they would come back and they would talk about it. (GP8/PIL)

…once you start a patient I'd say, and I'm sure it was a positive patient, it could take quite easily twenty minutes of a consultation. (GP4/PIL)

Intervention fidelity – keeping to time

...especially if patients started asking you questions you found that it was going to go over five minutes. (GP8/BA)

To try and get that into five minutes is quite difficult really … I think we'd spent about ten minutes on her because we had to go down a list of other things that, maybe it's even twenty, say. (GP3/BA)

It starts as brief but as soon as something is picked up it...it lasts half an hour. (GP12/BLC)

Brief intervention was at all not brief. It was actually only [an] offer and you're opening a can of worms which then lasted into sometimes a half hour conversation. (GP 12/BLC)

The ‘care’ imperative for practitioners

They ask questions … you then you can’t ignore it… you just can’t do that (GP4/PIL)

I think once you get the answers then you need to talk to somebody and if I....if I were just wanted to do it [BA] *in five minutes I probably could but I don’t think that’s helpful* (GP5/BA)

I mean to ask the question and to get a...(erm) get an answer which obviously means that something ought to be done about it and then just not mention it I think is a bit pointless (GP10/BA).

If you’re going to expect people to open up why they’re drinking then maybe it’s one, a hundred and one reasons why they drink then you have to deal with that so it will never be brief (GP12/BLC).

Some patients were not ready to change

A couple of people who did do the study said 'but I aint going to change' (GP3/BA)

People who engaged well were people who knew they were drinking too much and wanted, just had wanted to stop anyway but people who didn't engage that well were people who knew they were drinking but didn't want to stop… (GP5/BA)

And some in the end said well you know I don't think I'll change, I'm quite happy with what I'm doing … (GP7/BLC)

But seeds may have been planted for patients – who will often return

They did sort of…they did listen and I think they did…it did make them stop and think at least…even if they disagreed it did make them think about their drinking which is a good thing at least (GP13/BLC)

Conclusions & reflections

- Over 30 years of research on SBI
  - As many systematic reviews as there are trials in other fields
- SBI consistently effective at reducing the quantity of drinking
  - But effect sizes are small (& not v convincing for some outcomes)
  - Longer input has no significant benefit over shorter input
- Very little SBI delivered in practice
  - High levels of recorded consumption but little follow through
  - Many patients try to cut down, often without the support they need
  - Practitioners find proactive SBI difficult to fit into busy practice
  - But SBI delivery led to helpful interactions with many patients

Any questions?
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