Closing the evidence to practice gap for alcohol identification and brief advice in healthcare

The journey so far & the challenge ahead

Dr Amy O'Donnell
Faculty Fellow
Institute of Health & Society

From Newcastle. For the world.

Overview

- Definition and effectiveness
- Barriers to delivery
- IBA implementation research
- Opportunities going forward

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Alcohol identification and brief advice

Definition, impact and status quo

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What do we mean by 'identification and brief advice' for alcohol?

How much is too much?
Simple Structured Advice

sbi

UNITS

Pint of Regular Beer/Lager/Cider | Alcopop or Can of Lager | Glass of Wine (175ml) | Single Measure of Spirits | Bottle of Wine

Are you at risk from drinking alcohol?

Risk	AUDIT Score	Men	Women	Common Effects
SENSIBLE	0 - 7	21 units or fewer per week or up to 4 units per day	14 units or fewer per week or up to 3 units per day	• Increased relaxation • Reduced risk of heart disease • Sociability
HAZARDOUS	8 - 15	22 - 49 units per week or regular drinking of more than 4 units per day	15 - 35 units per week or regular drinking of more than 3 units per day	• Less energy • Depression/Stress • Insomnia • Impotence • Risk of injury • High blood pressure
HARMFUL	16 - 19	50 + units per week	36 + units per week	• All of the above and... • Memory loss • Increased risk of liver disease • Increased risk of cancer • Possible alcohol dependence

- At an AUDIT score of 20+ do an assessment for alcohol dependence and consider referring.
- Binge drinking is considered to be drinking twice the daily limit in one sitting (8 units for men, 6 units for women).
- There are times when you will be at risk even after two or three drinks. For example, when exercising, operating heavy machinery, driving or if you are on certain medication.
- If you are pregnant it is recommended that you completely abstain from drinking alcohol.
- As well as keeping to weekly and daily limits it is recommended that 2 days of the week should be alcohol-free.

How do you feel?

Your screening score suggests you might be at risk of problems in the future. **What do you think?**

You appear to be drinking at a rate that increases your risk of harm. **What do you think?**

The evidence base

- 30 years+ of high quality research:
  - *70+ RCTs conducted in primary health care alone*
- Consistent message:
  - *IBA is effective at reducing the quantity, frequency and intensity of drinking*

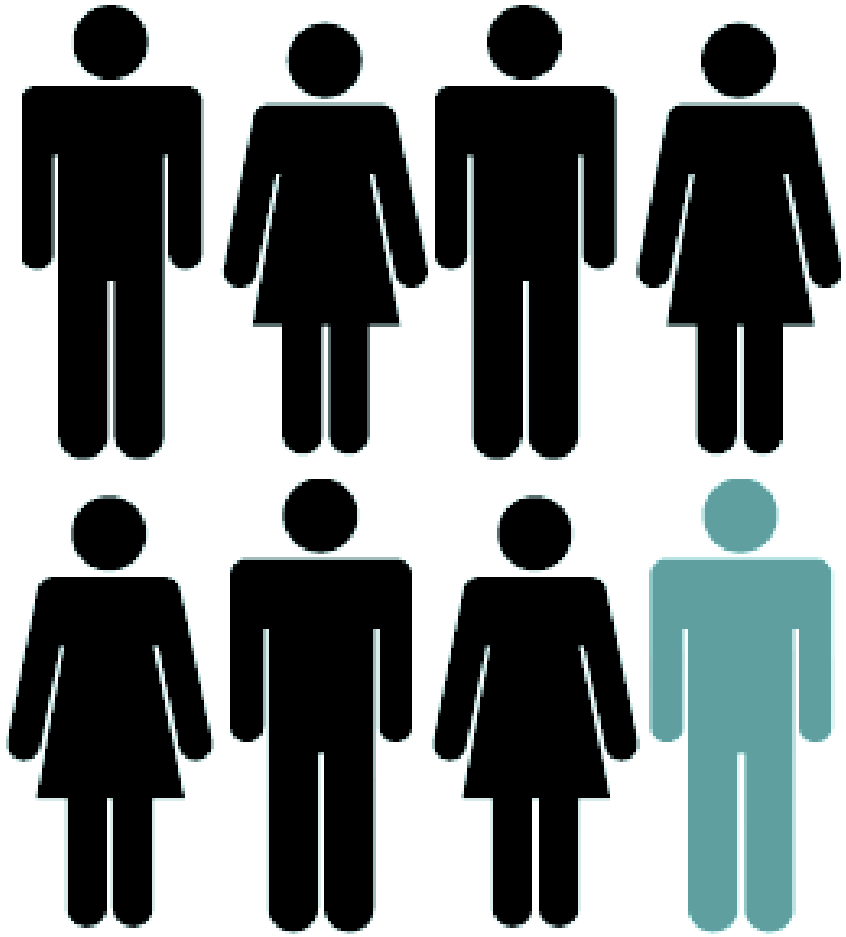
Impact on alcohol consumption

- For every eight people who receive simple alcohol advice, one will reduce their drinking to within lower-risk levels

Moyer et al. 2002

- Latest Cochrane Review showed that IBA reduced the quantity of alcohol drunk by average 20g per week.

Kaner et al. 2018



Wider health impacts of IBA

Other positive outcomes include:

- Reduction in alcohol-related problems;
- Reduced health-care utilization;
- Improved mortality outcomes.

"A reduction from 50 units per week to 42 units per week will reduce the relative risk of alcohol-related conditions by some 14%, the attributable fractions by some 12%, and the absolute risk of lifetime alcohol-related death by some 20%"

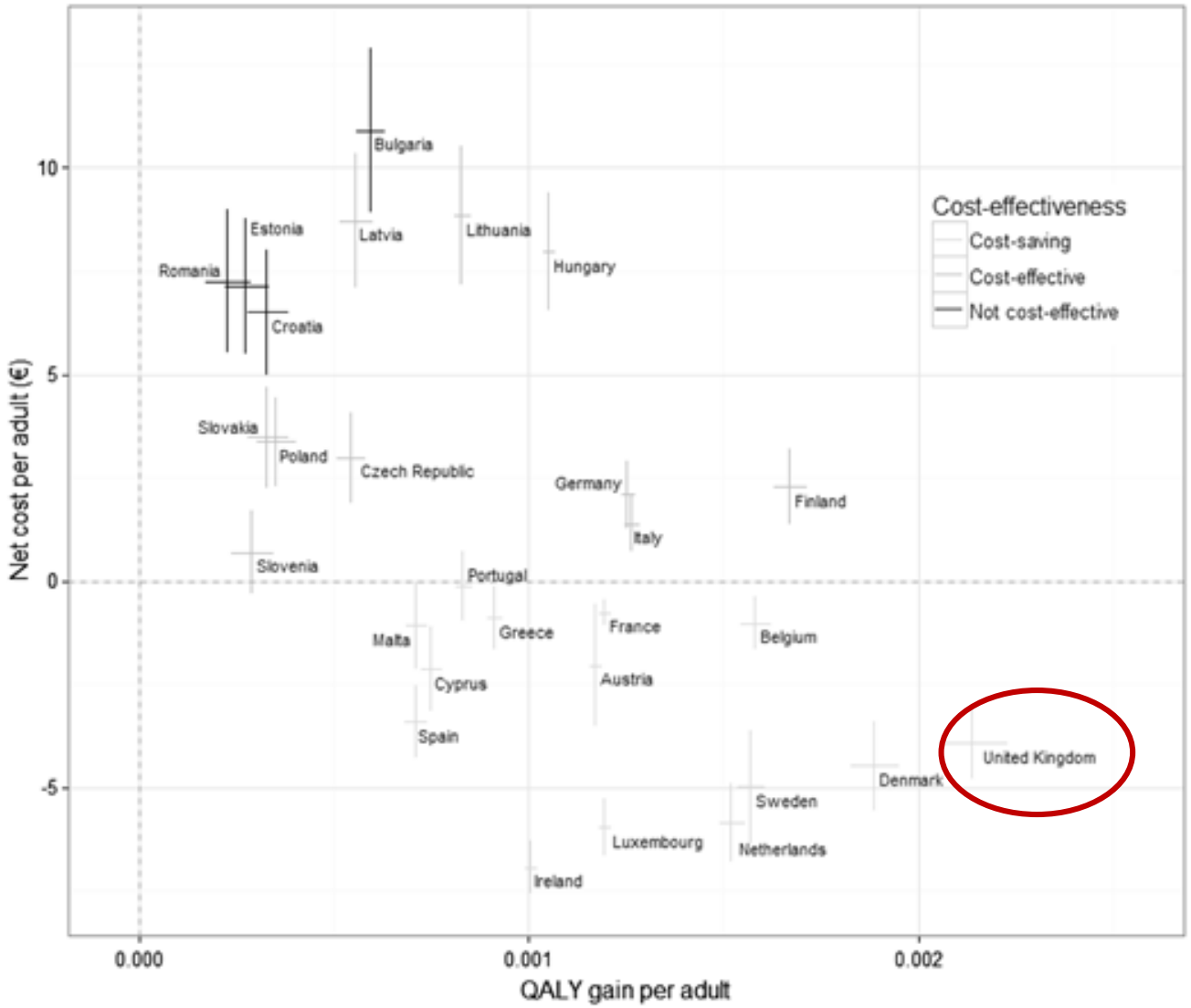
Anderson 2008

Cost-effectiveness of IBA

- Screening everyone when they register with a new GP is highly cost-effective (ICER = £6,900)
- Screening everyone at their next consultation is even better (ICER = £1,175)

Purshouse et al 2012

Closing the evidence to practice gap for alcohol IBA in healthcare



Source: Angus C et al. Estimating the cost-effectiveness of brief interventions for heavy drinking in primary health care across Europe (2016)

Meanwhile in the real world…

Barriers to implementing IBA in healthcare

Views from both sides of the consultation table

Messages from previous research

- GPs unconvinced that patients will take such advice to change their drinking behaviour (Aira et al 2003
- Practitioners view alcohol as a 'delicate' subject (Moriaty et al 2012)
- Confusion about appropriate advice for lower risk drinking (Hutchings et al 2006)
- Lack of training / intervention materials (Aalto et al 2001)
- Inadequate financial incentives (Johnson et al 2010)
- Lack of specialist alcohol services (Kaner et al 1999)
- Time pressures (Beich et al 2002)

Using implementation theory to explore barriers to IBA

- Semi-structured qualitative interviews with GPs and patients across North East England.
- Interviews explored views on and experiences of IBA in routine primary health care
- Analysis informed by Normalisation Process Theory.

Why Normalisation Process Theory?

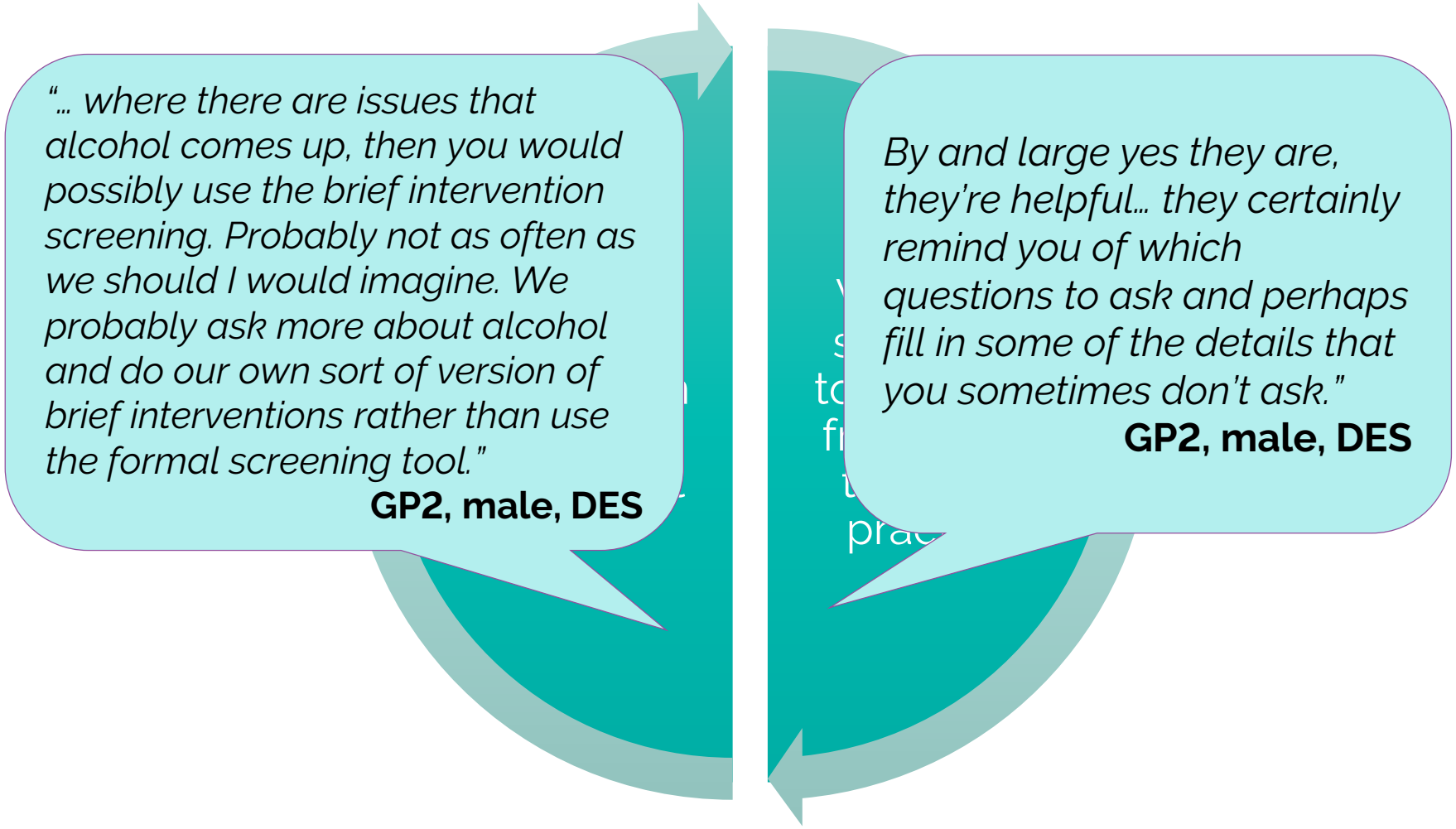
1. **Coherence** - making sense of the intervention;
2. **Cognitive participation** - investing in the intervention;
3. **Collective action** - the practical work of implementation;
4. **Reflexive monitoring** - modifying and embedding the intervention

Normalization Process Theory (NPT) is a robust theory of implementation that helps provide awareness of the work involved in embedding and sustaining practices associated with an intervention. NPT focusses on the social processes and work that people do, individually and collectively, to make an intervention work.

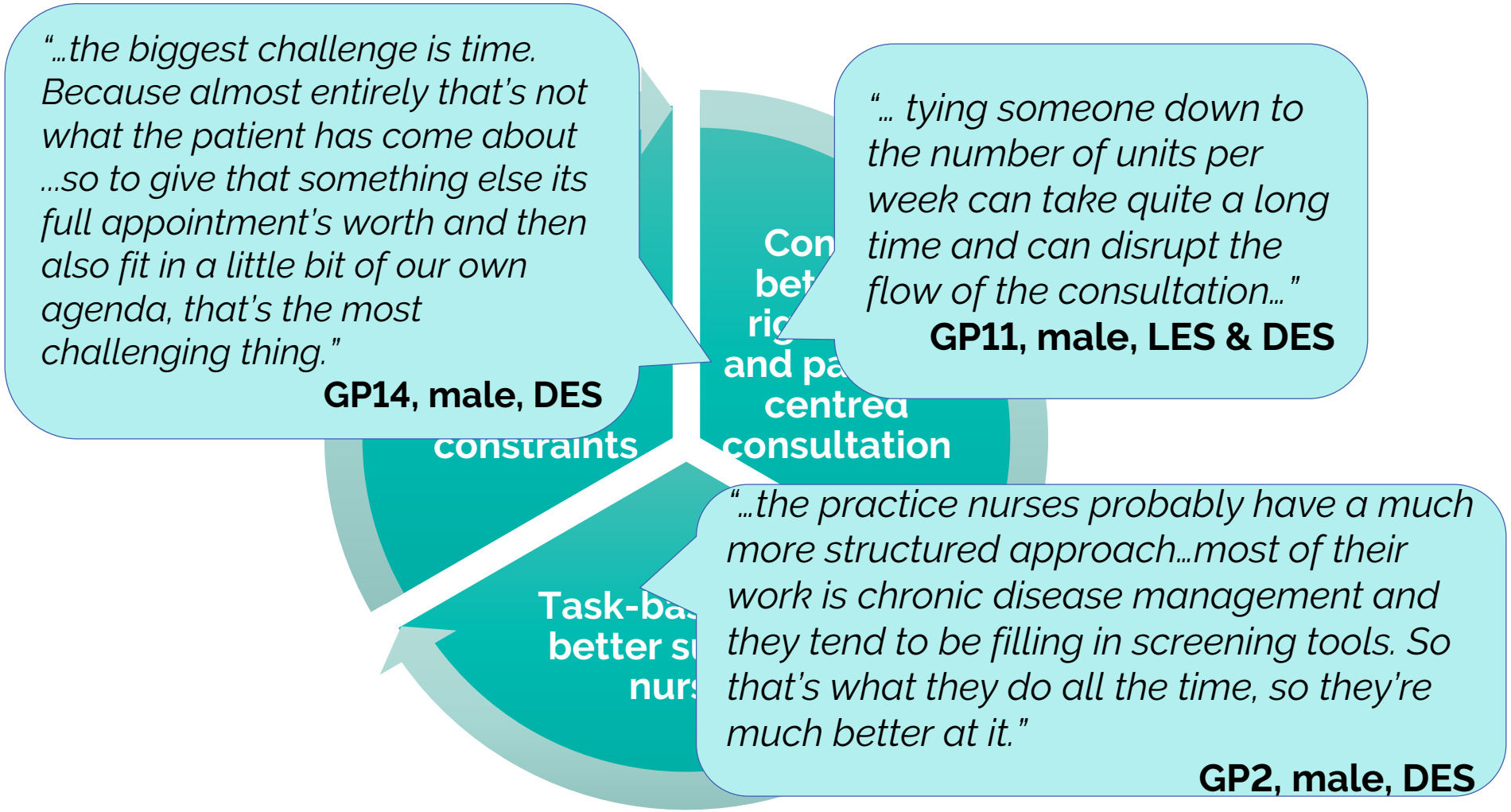
GP interviews: Participants characteristics

Sampling Criteria	Sub-Criteria	N (14)
Gender	Male	7
	Female	7
Experience in practice	>5 years	4
	5–15 years	3
	>15 years	7
Employment status	Partner	7
	Salaried GP	6
	Registrar	1
Location	North of region	7
	South of region	7
Financial incentive status	No incentive scheme	3
	National incentive scheme only (DES)	4
	National & Local incentive scheme (DES & LES)	7

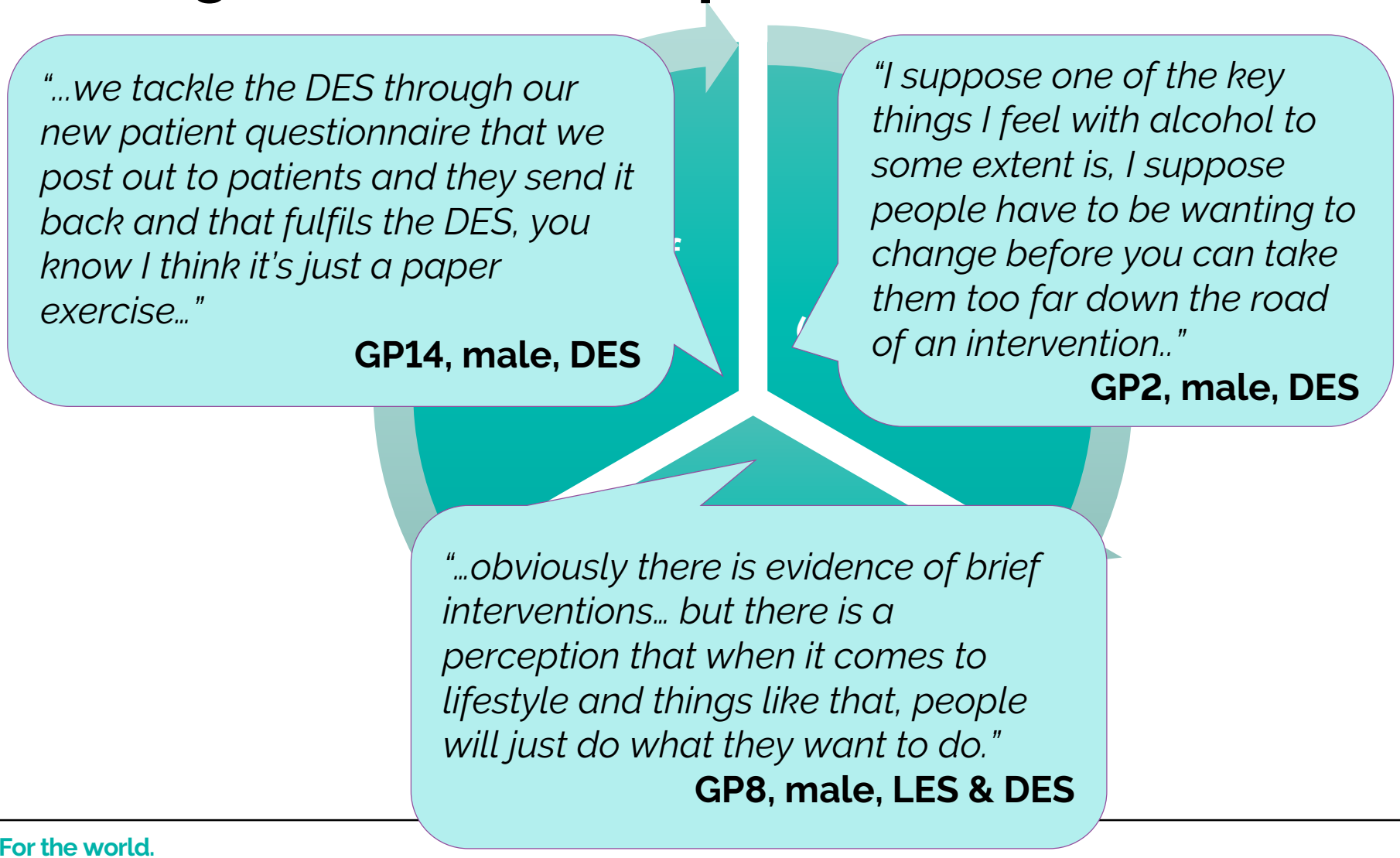
Making sense of IBA



Investing in IBA



Implementing IBA in routine practice



Evaluating, modifying and embedding change

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Patient interviews: participant characteristics

ID	Gender	Age	Relationship	Children	Profession	SES	Yrs Reg.
P1	Male	71	Married	2	Mechanical Engineer	5	40+
P2	Male	62	Married	1	Postman	6	40+
P3	Female	63	Divorced	2	Hospital domestic	7	0 (new)
P4	Female	52	Married	2	Support worker	6	30+
P5	Male	75	Married	2	University Tutor	1.2	0 (new)
P6	Female	48	Divorced	0	Counsellor	2	10
P7	Male	55	Married	2	Youth Worker	2	1.5
P8	Male	52	Single	0	Former Anglican Priest	1.2	0 (new)
P9	Male	52	Single	0	Former Carer	8	2
P10	Male	53	Single	0	Long term incapacity benefit	8	11
P11	Female	65	Partner	2	Retired (former carer)	6	30+
P12	Male	26	Single	2	Retail Manager	2	0 (new)
P13	Male	56	Married	3	Coach Driver	7	0 (new)
P14	Female	25	Partner	1	Restaurant Manager	4	0 (new)
P15	Female	55	Partner	2	Charity Support Manager	2	0 (new)
P16	Male	49	Partner	2	Electrician	5	0 (new)
P17	Female	62	Partner	1	Former Bank Executive	2	0 (new)
P18	Male	44	Married	3	Former Bouncer	5	18+
P19	Female	51	Married	0	Healthcare Professional	1.1	8+
P20	Female	49	Married	2	Teaching Assistant	3	12
P21	Male	51	Partner	2	Architect	1.2	0 (new)
P22	Female	68	Single	2	Secretary	3	0 (new)

NHS National Institute for Health Research

Understanding of alcohol-related risk and harm

"You know, if you're drinking a lot to the point where it's kind of affecting you, or you're becoming dependent on it, then I think that you've got a problem. I'd probably be a little bit less concerned about the actual amount, if you see what I mean."

P8, Male, 52 years old

'"Risky drinking' would be drinking too much so that you haven't got control of yourself or the situation and are putting yourself at risk…Say you are out in Newcastle in a bar, you have too much or more than you should and you haven't really got control over what's happening to you or you have lost control and you are with other people in a public place."

P19, Female, 51 years old

Engaging with alcohol IBA

"I've had it at previous doctors as well, it's just like a questionnaire…they're just trying to find out about yourself and health generally, they just ask questions like do you drink, do you smoke, you know, along that sort of line."

P16, Male, 49 years

"It's for your own benefit. Basically they're trying to keep you well."

P1, Male, 71 years

"I suppose if I did drink excessively, it might be something I'd be embarrassed about, talking about how much you drink, "I drink a lot every night." Yes, I suppose I could see why that would be something that would make you uncomfortable."

P14, Female, 25 years

Managing lower risk drinking in day-to-day life

"Unless there is some special event, and such a special event would almost certainly be having friends around for dinner…That's a special event and I will usually drink more alcohol on that occasion. Otherwise, I do actually have a strict routine, and I very rarely go over it."

P5, male, 75 years

"I would rather spend £50 on my daughter, than £50 on drink. You've a priority of things. It's simple as that. That's what you do in life, your priorities are family things."

P2, Male, 62 years

"I'd lost my mum in 2004. And then, on the day that my mum's funeral was, I discovered that my bookkeeper…had stolen £250,000 from one of the businesses…to find that my bookkeeper had stolen all this money. Really, my alcohol intake had escalated from that point."

P6, Female, 48 years

Impact of alcohol advice on patients' drinking

"They go on about people having diabetes, having heart problems, and your blood pressure, and all of these things seem to be now very important as you get older. I think if people can either take the information and use it or just ignore it."

P11, Female, 65 years

"It might just open a door, a little chink of light to the one filling in the form, or to the doctor, just a signal that there's something happening."

P21, Male, 51 years

"You don't have the support from a doctor, you have the advice."

P12, Male, 26 years

Emerging messages

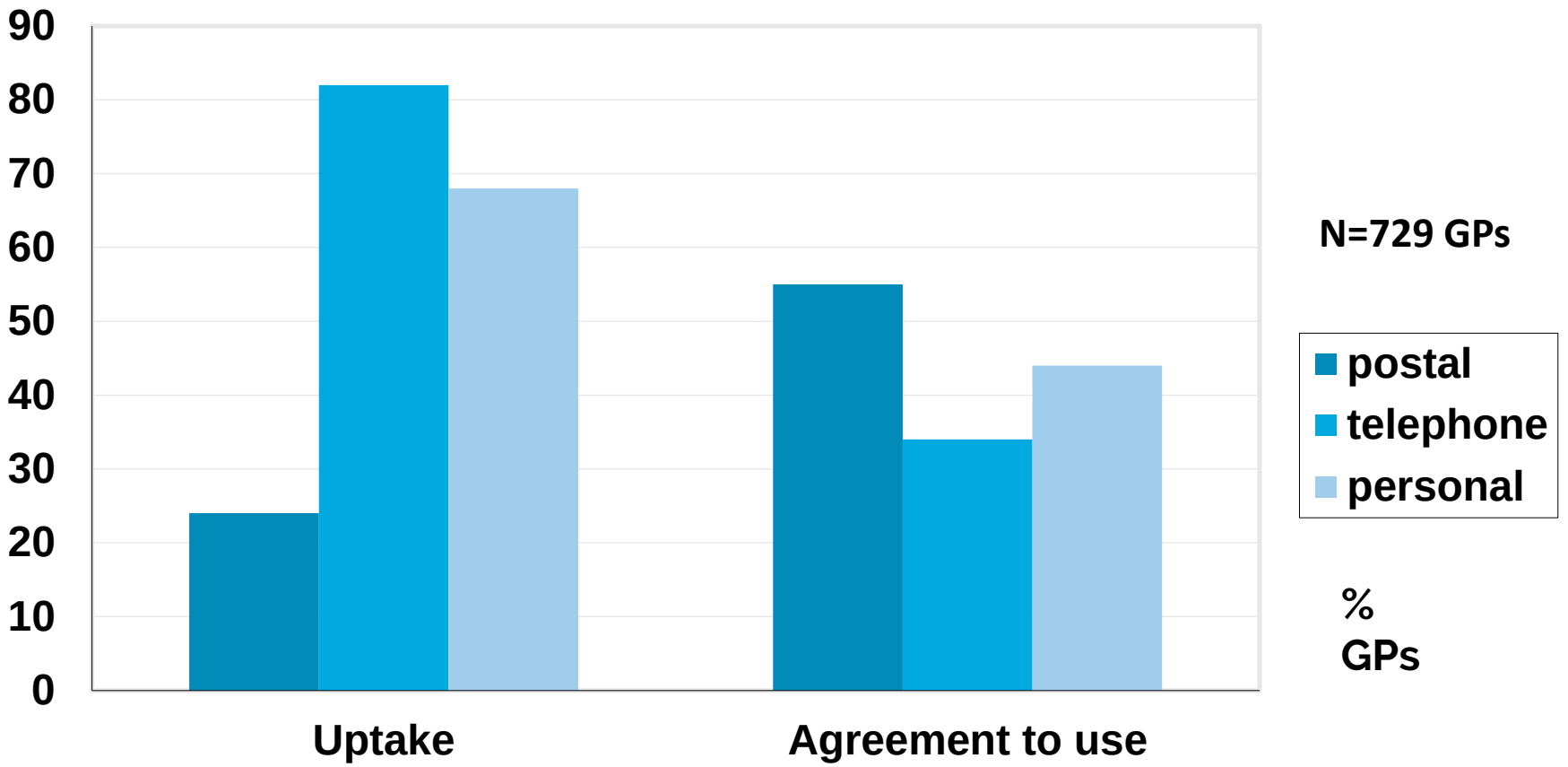
- Support (in principle) for IBA from GPs and patients:
  - Slightly less straightforward for heavier drinkers
  - Slightly less convinced whether IBA works in practice

- More work is needed to:
  - Improve public understanding of long-term risks of heavy drinking
  - Promote value / effectiveness of IBA in primary health care

Tackling the evidence-to-practice gap

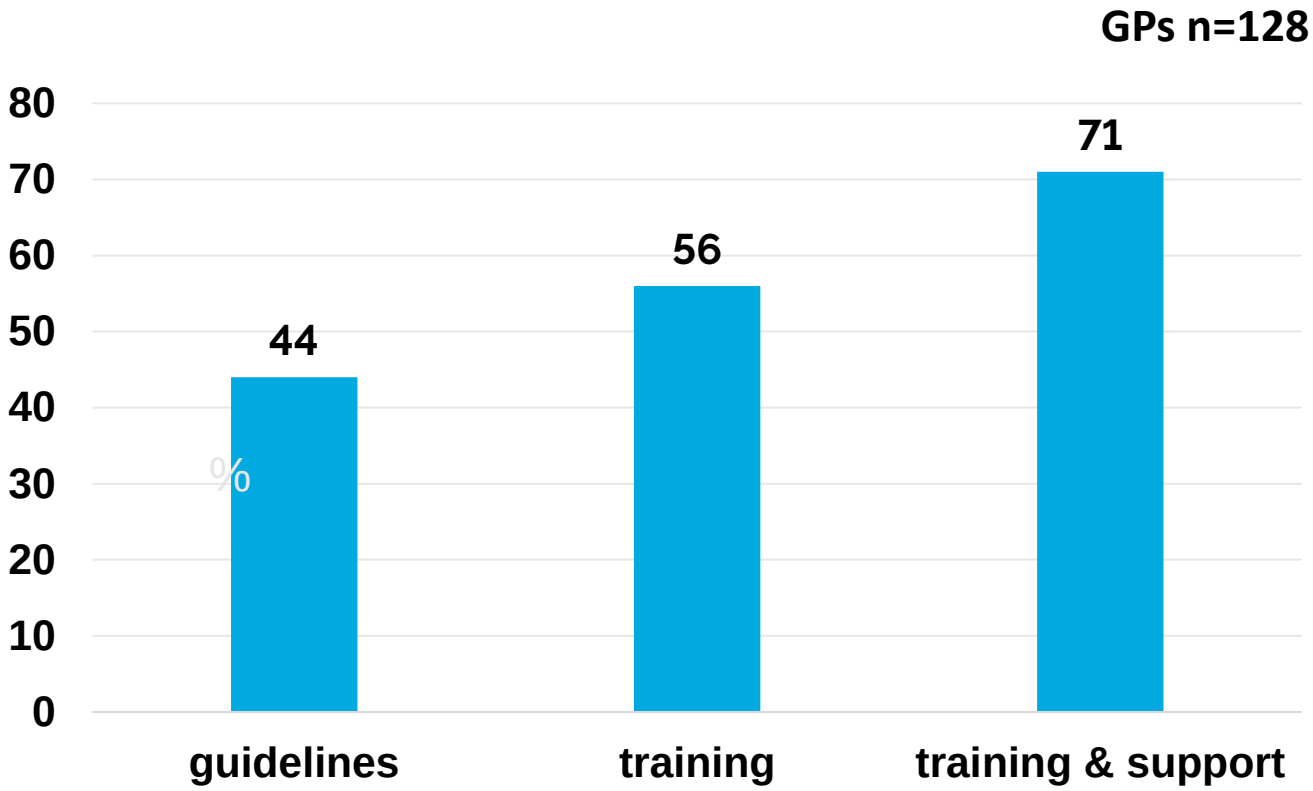
Lessons from previous research

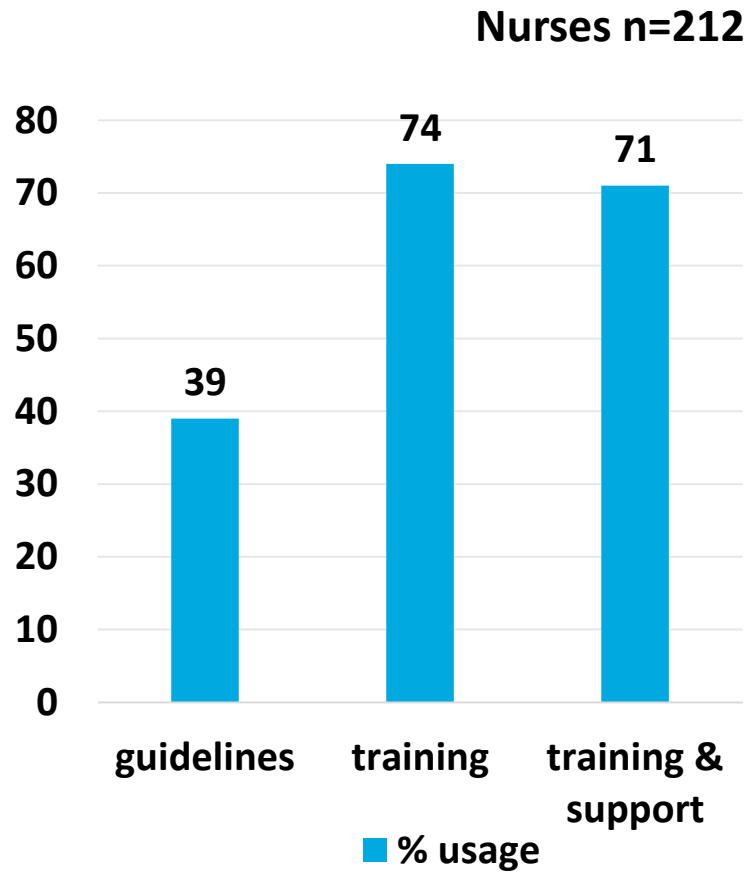
Dissemination: social marketing



Lock et al. 1999 BJGP; Lock & Kaner 2000 J Eval Clin Prac

Implementation: training and support





Kaner et al. 1999 BJGP; 2003 Patient Education & Counselling

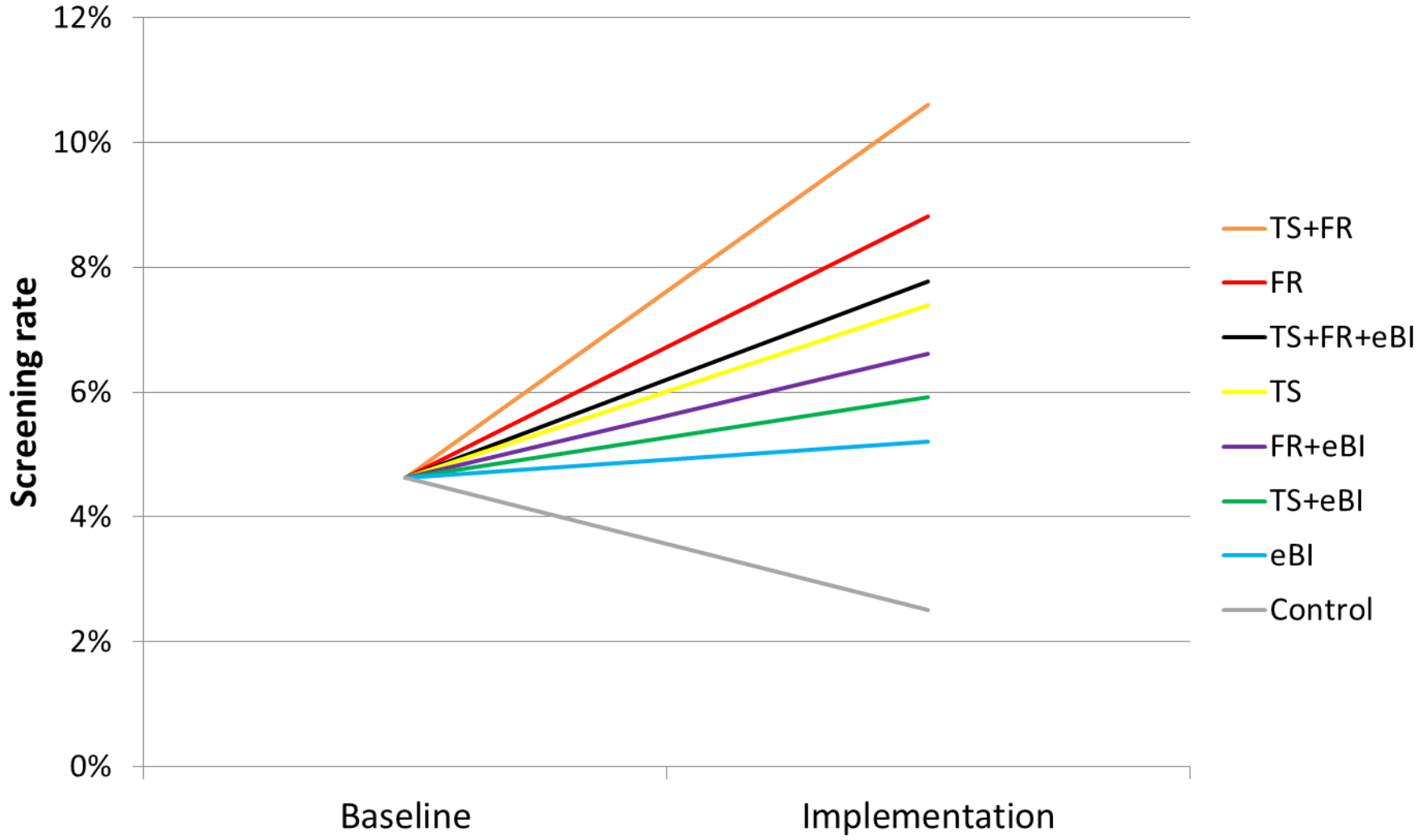
Multiple strategies: European ODHIN trial

- Cluster-randomised controlled trial in 120 primary care practices across 5 countries (incl. England)
- Practices randomised to either control, training and support (TS), financial reimbursement (FR), or patient referral to eBI tool (alone and in combination)
- Compared impact on screening, screen positive and intervention delivery rates at baseline, implementation and follow-up

Baseline IBA delivery

Country	Screening rate	Screen positive rate	Brief Intervention rate
Catalonia	6.8%	5.0%	48.3%
England	4.6%	48.9%	85.9%
Netherlands	5.3%	44.4%	70.4%
Poland	2.0%	41.2%	95.8%
Sweden	10.6%	29.4%	74.0%

Effectiveness results (1)



Effectiveness results (2)

- Screening rates showed greatest changes as a result of intervention – increased for all strategies
- Screen positive rates decreased slightly for almost all strategies, suggesting additional screens may be being delivered to 'wrong' patients
- Intervention delivery rates increased for all strategies, with largest increase in TS+FR group
- Overall TS+FR clearly the most effective strategy, followed by FR alone

ADDICTION
SSA
RESEARCH REPORT
doi:10.1111/add.13476

Improving the delivery of brief interventions for heavy drinking in primary health care: outcome results of the Optimizing Delivery of Health Care Intervention (ODHIN) five-country cluster randomized factorial trial

Peter Anderson[1,2], Preben Bendtsen[3], Fredrik Spak[4], Jillian Reynolds[5], Colin Drummond[6,7], Lidia Segura[8], Myrna N. Keurhorst[9], Jorge Palacio-Vieira[8], Marcin Wojnar[10], Kathryn Parkinson[1], Joan Colom[8], Karolina Kłoda[11], Paolo Deluca[6], Begoña Baena[8], Dorothy Newbury-Birch[1], Paul Wallace[12], Maud Heinen[9], Amy Wolstenholme[6], Ben van Steenkiste[2], Artur Mierzecki[11], Katarzyna Okulicz-Kozaryn[13], Gaby Ronda[2], Eileen Kaner[1], Miranda G. H. Laurant[9,14], Simon Coulton[15] & Toni Gual[5]

Institute of Health and Society, Newcastle University, Newcastle, UK,[1] Department of Family Medicine, Maastricht University, Maastricht, the Netherlands,[2] Department of Medical Specialist and Department of Medicine and Health, Linköping University, Motala, Sweden,[3] Department of Social Medicine, University of Gothenburg, Gothenburg, Sweden,[4] Institut Clínic de Neurosciences, Hospital Clínic de Barcelona, Barcelona, Spain,[5] National Addiction Centre, Institute of Psychiatry, King's College London, London, UK,[6] National Institute for Health Research Biomedical Research Centre for Mental Health, South London and Maudsley NHS Foundation Trust, London, UK,[7] Program on Substance Abuse, Public Health Agency, Government of Catalonia, Barcelona, Spain,[8] Radboud University Medical Center, Radboud Institute for Health Sciences, Scientific Institute for Quality of Healthcare (IQ healthcare), Nijmegen, the Netherlands,[9] Department of Psychiatry, Medical University of Warsaw, Warsaw, Poland,[10] Independent Laboratory of Family Physician Education, Pomeranian Medical University, Szczecin, Poland,[11] Research Department of Primary Care and Population Health, University College London, London, UK,[12] State Agency for Prevention of Alcohol-Related Problems, Warsaw, Poland,[13] HAN University of Applied Sciences, Faculty of Health and Social Studies, Nijmegen, the Netherlands[14] and Centre for Health Service Studies, University of Kent, Canterbury, UK[15]

ABSTRACT

Aim To test if training and support, financial reimbursement and option of referring screen-positive patients to an internet-based method of giving advice (eBI) can increase primary health-care providers' delivery of Alcohol Use Disorders Identification Test (AUDIT)-C-based screening and advice to heavy drinkers. **Design** Cluster randomized factorial trial with 12-week implementation and measurement period. **Setting** Primary health-care units (PHCU) in different locations throughout Catalonia, England, the Netherlands, Poland and Sweden. **Participants** A total of 120 PHCU, 24 in each of Catalonia, England, the Netherlands, Poland and Sweden. **Interventions** PHCUs were randomized to one of eight groups: care as usual, training and support (TS), financial reimbursement (FR) and eBI; paired combinations of TS, FR and eBI, and all of FR, TS and eBI. **Measurements** The primary outcome measure was the proportion of eligible adult (age 18 + years) patients screened during a 12-week implementation period. Secondary outcome measures were proportion of screen-positive patients advised; and proportion of consulting adult patients given an intervention (screening and advice to screen-positives) during the same 12-week implementation period. **Findings** During a 4-week baseline measurement period, the proportion of consulting adult patients who were screened for their alcohol consumption was 0.059 per PHCU (95% CI 0.034 to 0.084). Based on the factorial design, the ratio of the logged proportion screened during the 12-week implementation period was 1.48 (95% CI = 1.13–1.95) in PHCU that received TS versus PHCU that did not receive TS; for FR, the ratio was 2.00 (95% CI = 1.56–2.56). The option of referral to eBI did not lead to a higher proportion of patients screened. The ratio for TS plus FR was 2.34 (95% CI = 1.77–3.10), and the ratio for TS plus FR plus eBI was1.68 (95% CI = 1.11–2.53). **Conclusions** Providing primary health-care units with training, support and financial reimbursement for delivering Alcohol Use Disorders Identification Test-C-based screening and advice to heavy drinkers increases screening for alcohol consumption. Providing primary health-care units with the option of referring screen-positive patients to an internet-based method of giving advice does not appear to increase screening for alcohol consumption.

Keywords Brief interventions, financial reimbursement, heavy drinking, implementation, ODHIN, primary health care, training and support.

Correspondence to: Peter Anderson, Institute of Health and Society, Newcastle University, Baddiley-Clark Building, Richardson Road, Newcastle upon Tyne NE2 4AX, UK. E-mail: peter.anderson@newcastle.ac.uk
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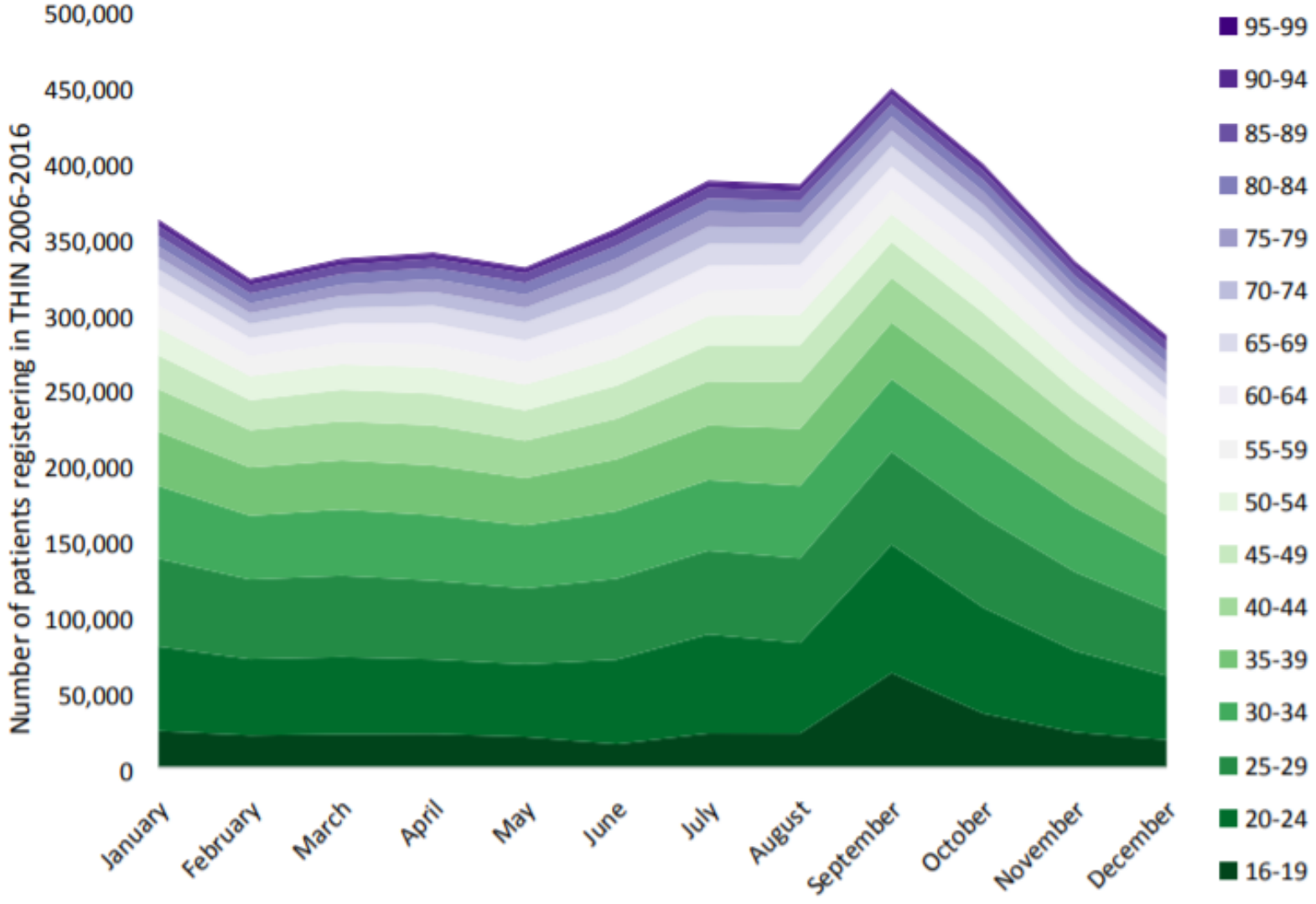
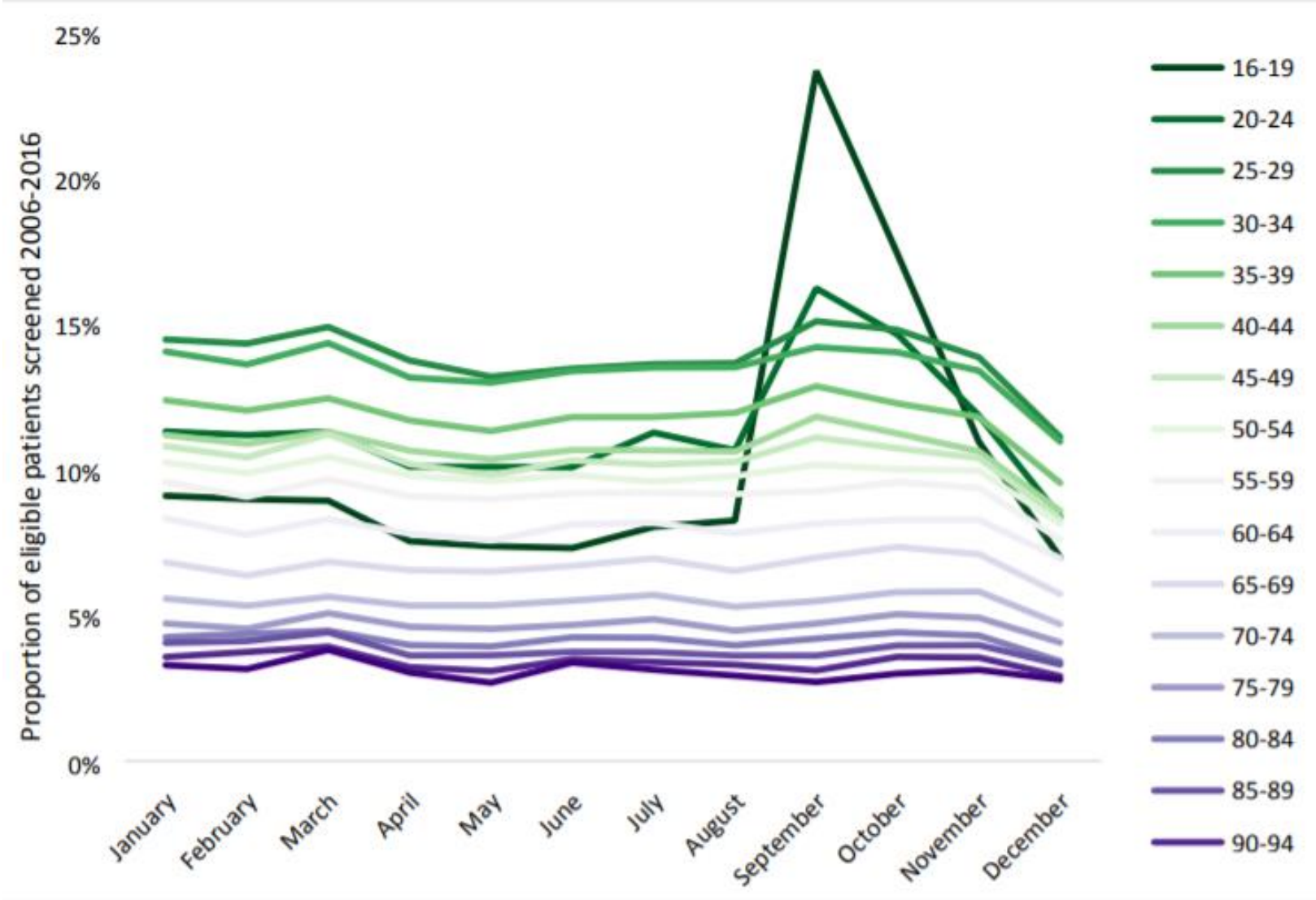
Meanwhile in the real world...

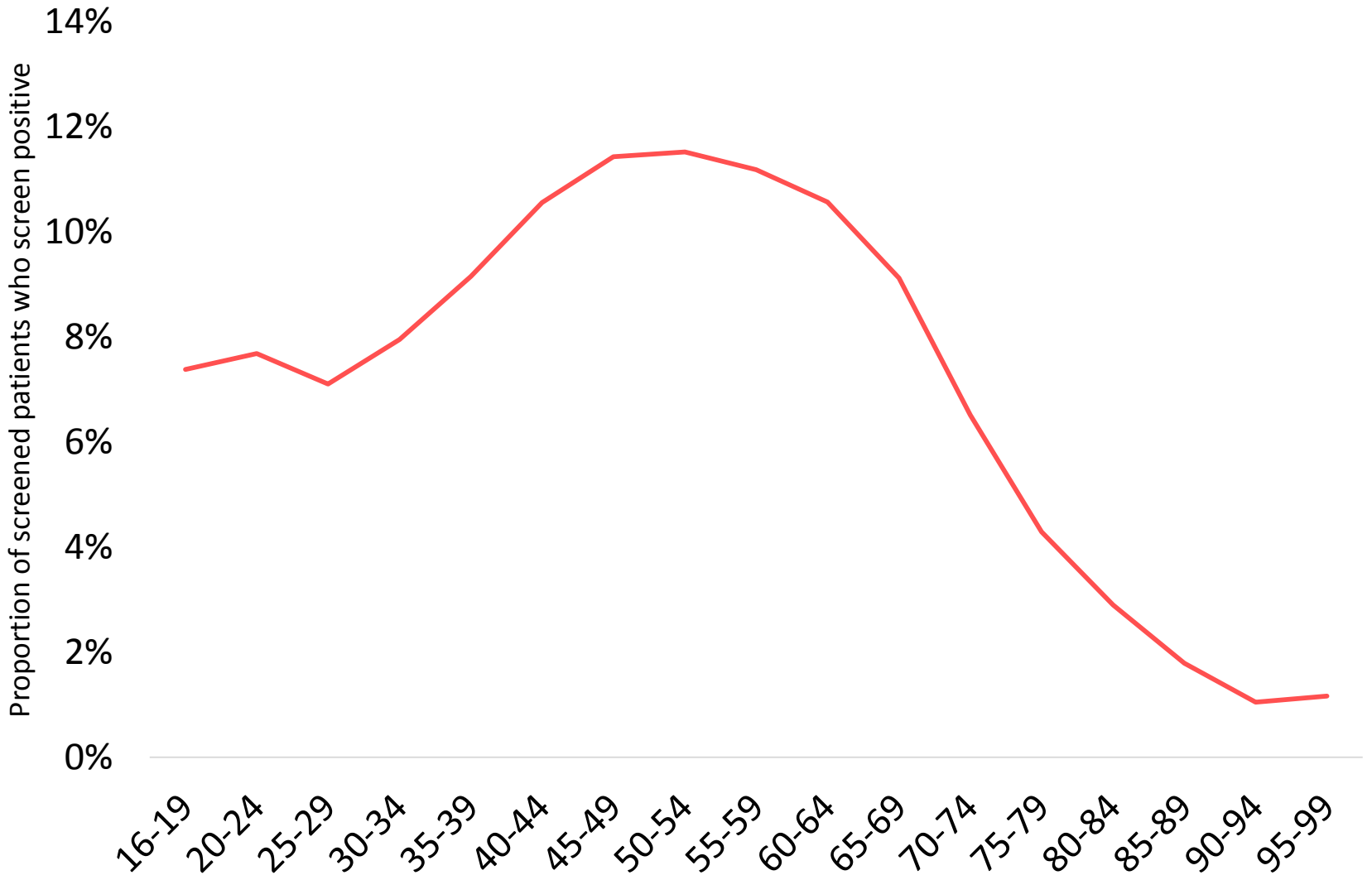
And it gets worse...



And worse...


25%
20%
15%
10%
5%
0%
Proportion of eligible patients screened 2006-2016
January
February
March
April
May
June
July
August
September
October
November
December
16-19
20-24
25-29
30-34
35-39
40-44
45-49
50-54
55-59
60-64
65-69
70-74
75-79
80-84
85-89
90-94

Because…


Proportion of screened patients who screen positive
14%
12%
10%
8%
6%
4%
2%
0%
16-19
20-24
25-29
30-34
35-39
40-44
45-49
50-54
55-59
60-64
65-69
70-74
75-79
80-84
85-89
90-94
95-99

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Still tackling the evidence to practice gap

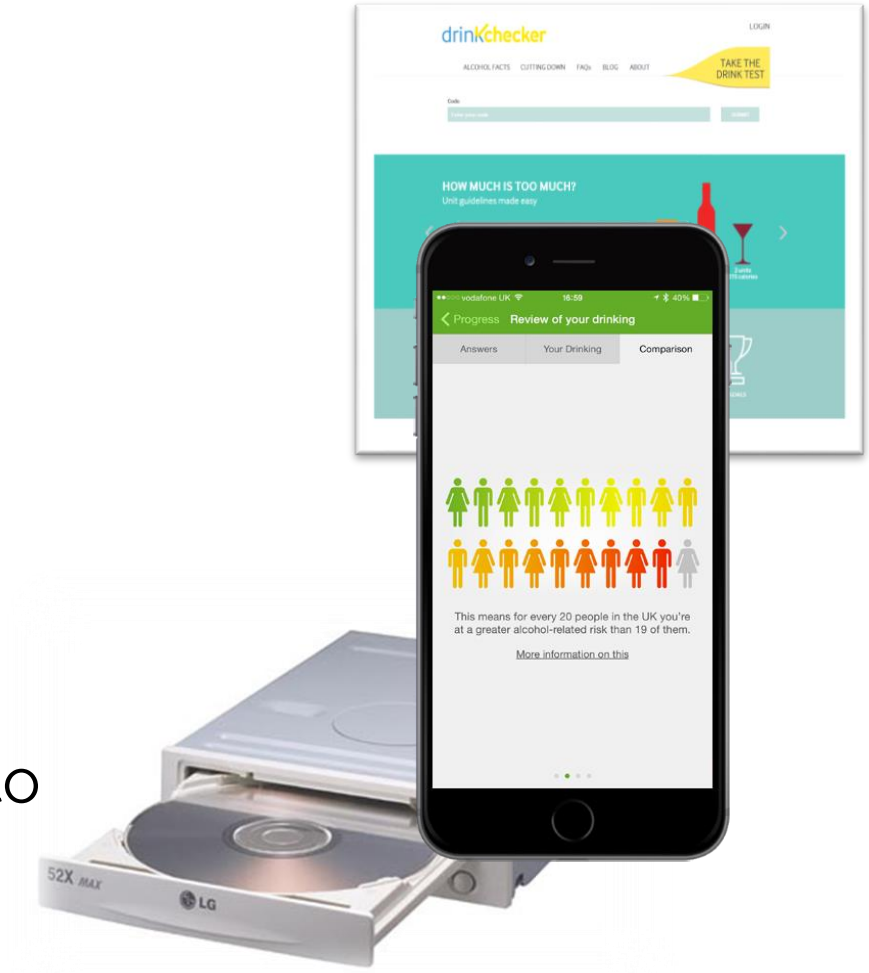
Current research and future opportunities

ncl.ac.uk

Exploiting new technology

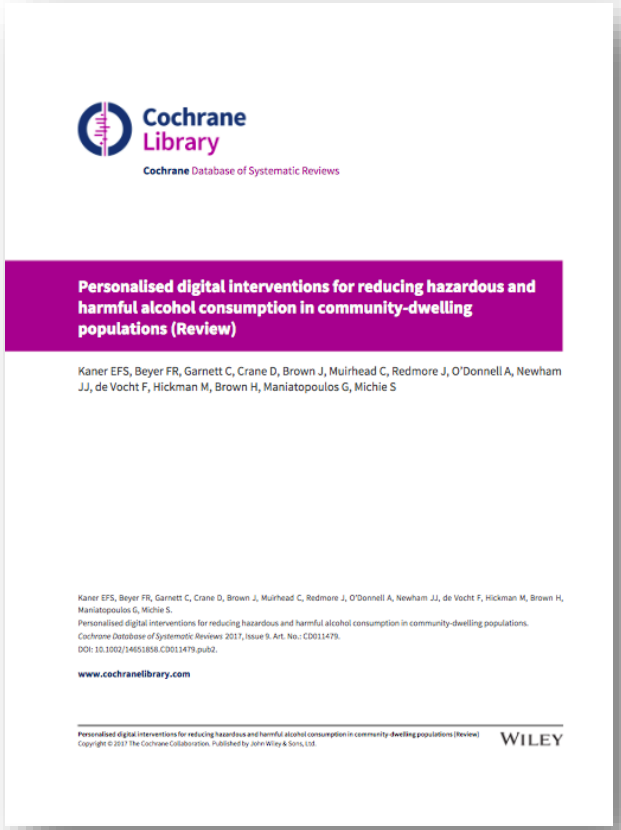
Cochrane review of digital interventions to reduce hazardous and harmful drinking@

1. Are digital interventions more effective than: i) control?; ii) face-to-face interventions?
2. What intervention components are associated with effectiveness?
3. Is use of theory in intervention development associated with effectiveness?
4. What factors make people more or less likely to engage with and sustain use of digital interventions?



Results: overview of included studies

- 3,163 records identified, 686 full-text papers evaluated
- 55 trials met the inclusion criteria; 40 trials with 19,026 participants (based on 41 comparisons of digital intervention vs control)
- 32 trials in North America, 16 in Europe, 2 in UK, 1 in Japan, 4 in Australasia
- Alcohol consumption reported for females and/or males only for 5 trials
- 35 trials considered teens, younger adults, students


Cochrane Library

Cochrane Database of Systematic Reviews

Personalised digital interventions for reducing hazardous and harmful alcohol consumption in community-dwelling populations (Review)

Kaner EFS, Beyer FR, Garnett C, Crane D, Brown J, Muirhead C, Redmore J, O'Donnell A, Newham JJ, de Vocht F, Hickman M, Brown H, Maniatopoulos G, Michie S

Kaner EFS, Beyer FR, Garnett C, Crane D, Brown J, Muirhead C, Redmore J, O'Donnell A, Newham JJ, de Vocht F, Hickman M, Brown H, Maniatopoulos G, Michie S.
Personalised digital interventions for reducing hazardous and harmful alcohol consumption in community-dwelling populations.
Cochrane Database of Systematic Reviews 2017, Issue 9. Art. No.: CD011479.
DOI: 10.1002/14651858.CD011479.pub2.

www.cochranelibrary.com

Personalised digital interventions for reducing hazardous and harmful alcohol consumption in community-dwelling populations (Review)
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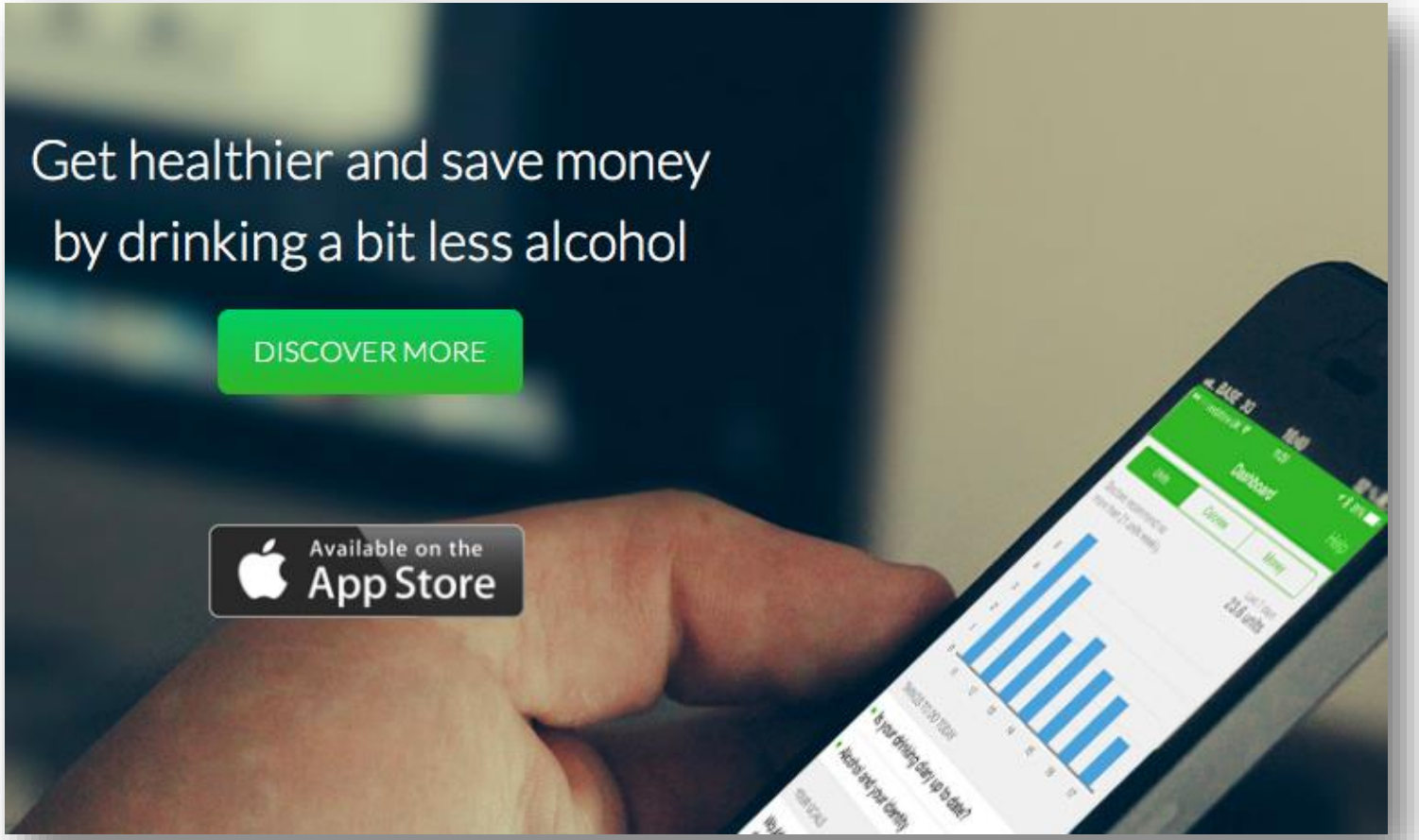
Results: impact on quantity of alcohol consumed[1]

	No. of trials	Effect size (g/week)	(95% CI)	Heterogeneity: I^2
All trials	40	-23.6	(-31.2, -16.0)	78%
Excluding those at high risk of bias*	27	-16.2	(-23.4, -9.1)	65%
Adolescents, young adults or students	26	-14.0	(-19.9, -8.1)	52%
Trials including older adults	14	-56.1	(-82.1, -30.0)	89%

[1]Difference in quantity of alcohol consumed between the digital intervention and controls, based on longest period of follow-up

Using theory to optimise impact of digital IBA



www.drinklessalcohol.com

Context is everything

SCALA

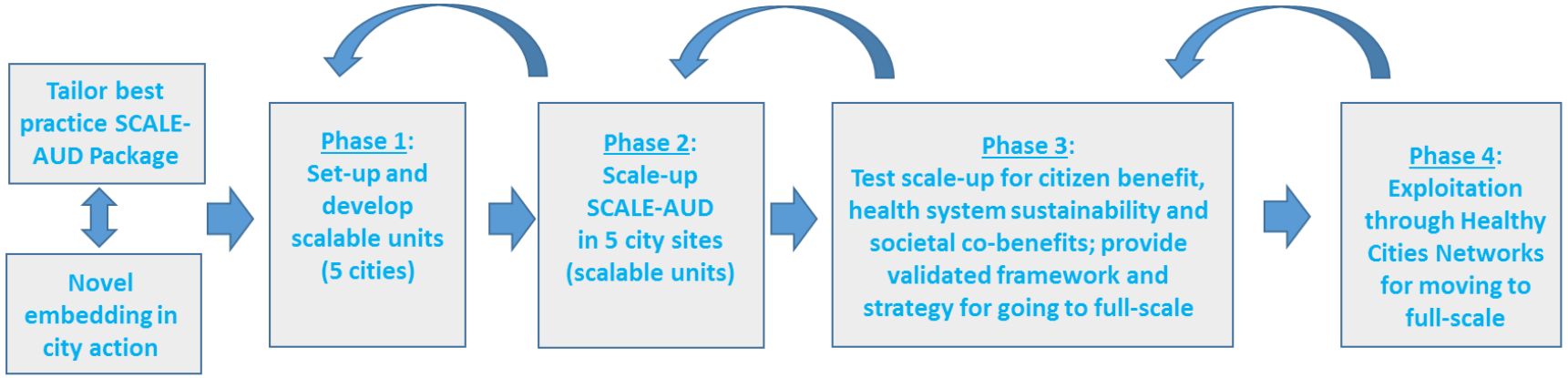
SCALE-UP OF PREVENTION AND MANAGEMENT OF ALCOHOL USE DISORDERS AND COMORBID DEPRESSION IN LATIN AMERICA

European Commission

Horizon 2020
European Union funding for Research & Innovation

https://www.scalaproject.eu/

Scaling-up IBA in Latin America



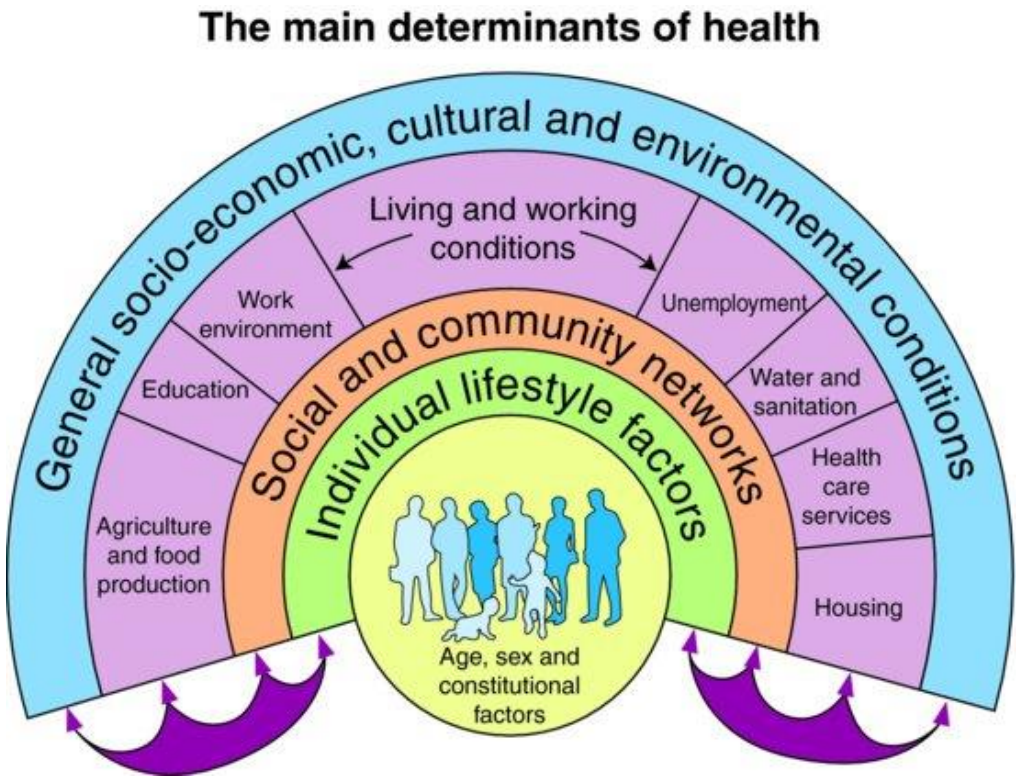
Adoption mechanisms: Leadership, communication, social networks, culture of urgency and persistence

Support systems: Learning systems, data systems, infrastructure for scale-up, human capacity for scale-up, capability for scale-up, sustainability

Concluding thoughts

- We have an effective toolkit available in IBA but:
  - Limited progress has been made towards effective implementation

- Digital IBA provides a cost-effective, highly scalable option but:
  - Sustained political (and financial) support is also essential.

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Thank you
From Newcastle. For the world.