Supplementary materials

Table S1: Implementation Strategy (18)

	Implementation Strategy				
	NPT Coherence	NPT Cognitive Participation	NPT Collective Action	NPT Reflexive Monitoring	Priming
Definition	"**sense-making work** that people do individually and collectively when they are faced with the problem of operationalizing some set of practices"	"**relational work** that people do to build and sustain a community of practice around a new technology or complex intervention."	"**operational work** that people do to enact a set of practices, whether these represent a new technology or complex healthcare intervention"	"**appraisal work** that people do to assess and understand the ways that a new set of practices affect them and others around them"	Patient exposure to alcohol messaging to implicitly encourage discussions about alcohol
Actors involved	Practice Champion GPs or nurses in practice	Primary Health Network (PHN) Practice Champion GPs or nurses in practice	Practice Champion GPs or nurses in practice	Practice Champion GPs or nurses in practice	Patients
Action	**In person consultation** Waiting room poster Practice champion discusses with colleagues and writes the names of GPs who are happy to talk about alcohol on the poster. Posters are put in waiting room.	PHN – Practice champion PHN is a point of contact and support for the practice champion. The PHN provides the printed material directly to the practice champion (in person, or post with telephone follow up)	**In person consultation** Waiting room survey Paper based, questions based on Smoking, Nutrition, Alcohol and Physical Activity (SNAP) guidelines and readiness to change	Bar graph with % of alcohol recorded sent to Practice Champion from PHN. Comparison to last measures; emailed and/or sent to Practice Champion for practice distribution and discussion	Waiting room Pamphlets Posters Consultation room "Talk to me about alcohol" sign or Waiting room poster **Telehealth adaptation**

	Resources for GPs/nurses	PHN provides % of charts with alcohol recorded to the practice champion at 3 month intervals	Within consultation resources	Barriers and facilitators discussed at team meetings or via internal messenger (led by Practice Champion)	Posters and "talk to me about alcohol" sign will be available on the practice website and virtual consultation rooms
	Written information ("How To" guide) for the tearoom (includes empathy, motivational interviewing, role for nurses). Also linked to REACH landing page and Healthpathways (a web based portal with evidence based information for assessing and managing common clinical conditions seen in primary care) Podcast with GPs with AOD expertise on how to ask patients about alcohol and how to apply brief interventions. Will be available on the REACH landing page and Healthpathways **Telehealth adaptation** Waiting room poster will be uploaded to practice website and virtual	**Within practice** Practice champion uses the poster with written names to start discussions. Feedback on % of charts with alcohol history is used to stimulate discussion within the team (team meetings, or via internal messages)	- Brief intervention (BI) flowchart based on SNAP (adapted from NHS Scotland flowchart) - Alcohol and dose related risk of cancers charts - Infographic of standard drinks. Laminated and also linked to REACH landing page and Healthpathways Pamphlets in plain English and translated (health harms, online supports, behavioural supports) Printed and also linked to REACH landing page and Healthpathways **Telehealth adaptation** Waiting room survey will be uploaded to practice website and sent by SMS to patients prior to appointment (where possible) Pamphlets will be sent to patients via SMS following consultation.		Pamphlets will be sent to patients via SMS following the consultation

	waiting rooms (where applicable)				
When the action happens	Posters distributed at the start of the intervention

Resources for GPs or practice nurses available at the start and throughout | PHN to engage the Practice Champion at the start of the intervention

PHN to provide feedback every 3 months

Poster discussion at the start of the intervention

Team discussions encouraged to happen every 3 months | All resources provided at the start of the intervention and available throughout | PHN to provide feedback every 3 months

Team discussions encouraged to happen every 3 months | All resources provided at the start of the intervention and available throughout |
| **Target (mechanism?) triggered by the action** | Encourage discussion between GPs/practice nurses about alcohol BIs to improve understanding

Increase GPs/practice nurses' knowledge about BIs

Increase GPs/practice nurses' self-efficacy for alcohol BIs | Relationship building between the PHN and practice via the Practice Champion

Encourage conversations and community building between GPs, practice nurses and staff in the practice | Resources support and trigger alcohol BIs within consultations
*SMS/email direct send to patient
*links within MD and BP
*can telehealth screen share for the risk table? | GPs/nurses reflect on how they provide BIs

GPs/nurses learn from each other about strategies for alcohol BIs in consultations

GPs/nurses learn from each other about referral pathways | "Primes" the patient and increases awareness that GPs can talk to you about alcohol
Options:
*SMS from appointment booking systems
*Practice website links and image
*telehealth "waiting room" |

Outcome affected	Increase practitioner uptake of alcohol brief interventions in general practice

Table S2: REACH Implementation trial (Phase 2) timeline

Phase 2 - Implementation trial	
- Recruit six general practices and practitioners	December –June 2020
- Baseline data collection from practices	August 2020
- Commence the new approach in practices	August 2020
- Data collection at 3, 6, 9 and 12 months	November; February, May, August 2021
- Feedback results of the quantitative data to practices	November; February, May, August 2021
- Recruit 140 patients to measure change over time	December-January 2021
- SMS/Online survey of 140 patients about their alcohol use	January, April, July, October 2021
- Qualitative interviews with low-income patients and practitioners	December – March 2021
- Data synthesis	October – December 2021
- Refinement of approach according to the data	December 2021

Practice staff interview guide

The REACH Project team designed a brief intervention resource pack for general practice to help GPs and nurses talk to their patients about alcohol. Your practice is taking part in the REACH Project. Today, I want to talk to you about your experiences with the project.

We will use this trial to improve the resources and processes of REACH.

OPENING
Could you tell me about your role at the practice and how you came to be involved in the REACH Project?
Were you chosen to do this interview or you put your hand up? What made you decide to be part of the interview process?

TRANSITION
If you had to tell someone else about REACH, how might you describe it to them?
Were you able to use any of the REACH resources?
I'd really like to hear about your experience(s) of using the resource pack to more easily offer alcohol brief interventions to patients – can you tell me about how things went for you?
Did you use the GoShare feature? Why or why not?
(Ask about pandemic and telehealth)

KEY QUESTIONS
Inner setting – Structural characteristics
1. How did the set up of your practice affect your/the practice's ability to be involved in the REACH Project?
   (Ask about practice age, size, location, physical layout, composition in terms of staff type, numbers and interactions, patient characteristics, pandemic and telehealth)

Process – Opinion leaders
2. Was there someone in the practice who led the project? (e.g. formal leader? Champion? Informal leader?) How did they communicate with the rest of the team?

Intervention characteristics – Adaptability
3. Can you describe your patient population for me?
   a. Is there anything about the patient group that is particularly relevant for REACH? E.g Is there anything about your patient population that made REACH easier or more difficult to implement? (e.g. prevalence of alcohol issues; access to telehealth; language barriers; age etc)
   b. Did you have to adapt REACH to be more useful for any patients? Can you tell me more about this?
   c. What aspects of the practice set up made it easier to implement the resource pack?
   d. Were there any aspects of the practice that made it more difficult? Were you/the practice able to work around these difficulties?

Inner setting – Networks and communications
4. Can you describe how staff at the practice share information and work together?
   (Ask about staff meetings, methods for sharing information)
   Was this different or the same for REACH?

Process – reflecting and evaluating

5. Did the practice team have any opportunities to reflect on REACH? Or discuss how it was going?

Inner setting – Implementation climate
6. How does the practice typically make changes to processes and clinical management? (either for this project or previous projects) Was there anything different about how REACH was implemented?
7. I imagine that the pandemic really changed things for your practice – do you think the practice was still able to make REACH a priority? Why/why not? How was this different or similar to other prevention priorities in the practice?

Inner setting – Tension for change
8. To what extent did the REACH Project meet your practice's needs and expectations?

Inner setting – Compatibility
9. How well does the REACH Project resources fit with existing processes at the practice? And within your consultations?
10. Can you describe how the resources have be integrated into existing practice processes?
11. Did REACH affect existing programs and processes for alcohol brief interventions at the practice?

Inner setting – Goals and Feedback
12. What are the practice's goals relating to alcohol brief interventions? How does the practice monitor progress towards these goals?

Inner setting – Available resources
13. To what extent has support from the PHN helped the practice achieve their goals?
14. Did you attend the meetings with the PHN? What were they like?
15. What aspects of support were most useful? What could be improved upon?
(Ask about quarterly reports, telephone contacts)

Other
16. To what extent was the REACH Project tailored to suit increased use of telehealth consultations due to the pandemic?
17. What aspects of the REACH Project could be improved upon?

ENDING QUESTION
Is there anything we've missed that you'd like to add?
What was the most important thing that we discussed today?

DEMOGRAPHIC QUESTIONS

How old are you?
☐ 18-24 years ☐ 25-34 years ☐ 35-44 years ☐ 45-54 years
☐ 55-64 years ☐ 65-74 years ☐ 75-84 years ☐ 85 years and over
☐ Prefer not to say

What is your gender?

☐ Woman ☐ Man ☐ Non-binary/ third gender

☐ Prefer to self-describe _____

☐ Prefer not to say

What is your role at the practice?

☐ GP ☐ Practice nurse ☐ Practice manager

☐ Administrative/reception

☐ Other, please specify _____

☐ Prefer not to say

How long have you worked at this practice? (years/months)

☐ Less than 1 year ☐ 1-5 years ☐ 6-10 years

☐ More than 10 years

☐ Other, please specify _____

☐ Prefer not to say

Could you tell me about your professional background/training?

Could you tell me about your experience in areas of health promotion and alcohol/other drugs

PHN Staff interview guide

The REACH Project team designed a brief intervention resource pack for general practice to help GPs and nurses talk to their patients about alcohol. Staff at the North Western Primary Health Network helped with recruiting practices and with supporting practices to use the resources. Today, I want to talk to you about your experiences with the project.

We will use this trial to improve the resources and processes of REACH.

OPENING
Could you tell how you came to be involved in the REACH Project?

Can you describe the REACH project as you understand it?

TRANSITION
I'd really like to hear about your experience(s) of recruiting practices and working with the practice to help them understand and use the resource pack so that GPs and nurses could more easily talk to their patients about alcohol.

Can you describe your experiences of recruiting practices?
- Was there anything that made it easier?
- Was there anything that made it more difficult?
- Did you have a pre-existing relationship with the practices or staff?

Can you describe your experiences of interacting with the practices, including GPs, nurses and other staff to implement the REACH Project?
- What are their perceptions of the intervention?
- What barriers did they face when participating in the intervention?

KEY QUESTIONS

1. How well do you think the REACH project met the needs of the practices and the GPs/nurses involved in the project?
   (Ask for specific examples, prompt if needed, e.g. greater ease of talking to patients about alcohol, confidence in management and referral)
   (Ask about pandemic and telehealth)

2. Can you tell me about any other organisations that have trialled brief interventions for alcohol in general practice? Are there similar programs within the PHN itself?

3. What kind policies, regulations or guidelines do you feel influenced the PHN's decision to become involved in the REACH Project?
   <Ask at local, state and national levels separately>

ENDING QUESTION

Is there anything we've missed that you'd like to add?
What was the most important thing that we discussed today?

DEMOGRAPHIC QUESTIONS

How old are you?

☐ 18-24 years ☐ 25-34 years ☐ 35-44 years ☐ 45-54 years

☐ 55-64 years ☐ 65-74 years ☐ 75-84 years ☐ 85 years and over

☐ Prefer not to say

What is your gender?

☐ Woman ☐ Man ☐ Non-binary/ third gender

☐ Prefer to self-describe _____

☐ Prefer not to say

Could you tell me about your professional background/training?

Could you tell me about your current role at the PHN?

How long have you worked at the PHN? (years/months)

☐ Less than 1 year ☐ 1-5 years ☐ 6-10 years

☐ More than 10 years

☐ Other, please specify _____

☐ Prefer not to say

Could you tell me about your experience in areas of health promotion and alcohol/other drugs

Patient interview guide

Our project is about GPs and nurses talking with their patients about alcohol. We have been trialling some resources in the general practices and we want to ask you about your experience.

The results from this study will be used to improve the resources.

OPENING
Can you tell me a little bit about yourself and why you were interested in doing an interview with me today?

TRANSITION
What are your thoughts on doctors and nurses asking their patients about their drinking?

KEY QUESTIONS
1. I'd really like to hear about what it was like for you to talk to a doctor or nurse at <<insert name of practice>> about drinking – can you tell me about how things went for you? (Remind participant that you're not asking about their alcohol use)

    What aspects of the discussion went well? How might other aspects be improved upon? <To expand discussion consider asking about what surprised the participant>

2. Did the doctor or nurse use any resources when talking to you about drinking? (pamphlets, risk diagrams)

    What did you think of them? Is there any way in which they could be improved?

3. Can you tell me whether you've noticed any alcohol related resources in the practice waiting room or on their website? (posters, surveys)

    What did you think of them? Is there any way in which they could be improved?

4. Have you spoken to any doctor or nurse about your drinking before this time? How was your most recent discussion different from those others (if at all).

ENDING QUESTION
Is there anything we've missed that you'd like to add?
What was the most important thing that we discussed today?