FINAL RESEARCH REPORT

Foundation for Alcohol Research and Education

RESEARCH WITH HEALTH PROFESSIONALS TO INFORM THE FASD - NATIONAL AWARENESS CAMPAIGN FOR PREGNANCY AND BREASTFEEDING WOMEN

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HEARTWARD

STRATEGIC

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Executive summary

The Foundation for Alcohol Research and Education commissioned Heartward Strategic to conduct research to inform the development of the *FASD – National awareness campaign for pregnancy and breastfeeding women*. This report presents the findings of a rapid evidence review and in-depth interviews conducted with 36 health professionals who see pregnant women (predominantly GPs, but also nurses and allied health practitioners), and outlines the implications for communicating with health professionals.

The table below summarises current health professional behaviours revealed by this research, as well as the current barriers to desired behaviour. The evidence drawn upon in reaching each finding is indicated in the columns to the right. Immediately apparent is the large degree of consistency between the findings of the rapid evidence review and the primary research interviews.

Table 1. Summary of current behaviours and barriers to effective health professional intervention on alcohol

	EVIDENCE REVIEW	INTERVIEWS
BEHAVIOURS		
Conversations about alcohol do not occur consistently or according to clinical care guidelines	✓	✓
This is despite alcohol being considered a priority issue in pregnancy		✓
Likelihood of alcohol being raised and depth of coverage varies by HP role, but also according to relationship with and assumptions about woman	✓	✓
Midwives may more commonly engage with pregnant women on the topic than HPs in other roles	✓	
Only a minority use validated tools to assess consumption, with many using no tool or simply asking a yes/no question	✓	✓
Conversations rarely progress further than asking about consumption and HPs fail to provide education and advice to women consistent with guidelines; limited positive reinforcement of abstinence when reported	✓	✓
Even when alcohol consumption is disclosed, some HPs fail to provide further information or interventions that are indicated	✓	
Alcohol in pregnancy is rarely discussed pre-pregnancy or postnatally	✓	✓
Topic rarely raised with anyone other than the pregnant woman herself		✓
Abstinence is mostly recommended where advice is provided, but some HPs are providing tacit permission to drink and mixed messages	✓	✓
Few have sought or received training in recent years or use resources	✓	✓
CAPABILITY BARRIERS		
Knowledge and skills needed to intervene with patients		
Lack of knowledge of incidence of drinking and extent it affects patient cohort		✓
Lack of knowledge of risks of alcohol consumption during pregnancy and breastfeeding, including poor knowledge or risks beyond FAS (not FASD)	✓	✓

Lack of awareness of recommended guidelines	✓	✓
Lack of knowledge of available resources to help facilitate intervention, including referral pathways, or even what actions to take at all	✓	✓
Lack of skills, including in assessment & motivational interviewing	✓	✓
OPPORTUNITY BARRIERS		
Professional identity and perceptions of the healthcare professional role		
Belief that addressing issue is outside of own professional remit (from interviews, this was mainly pharmacists, sonographers, pathology collectors)	✓	✓
Lack of consensus about their role in relation to issue, relative to other HPs	✓	
Lack of enjoyment in delivering behaviour change interventions	✓	
Fear of damaging the relationship with patients	✓	✓
Social and cultural role of alcohol, including how it relates to health professionals' own attitudes and behaviours regarding alcohol consumption		
HP engagement, and/or that of their loved ones, in alcohol consumption and alcohol consumption in pregnancy/breastfeeding	✓	✓
Normalised social acceptance of alcohol consumption, barrier to conversations and contributes to reluctance to recommend abstinence	✓	✓
Social pressure for patients to underreport alcohol consumption in pregnancy	✓	
Social acceptability of drinking during pregnancy not clear cut given permissiveness for occasional social drinking		✓
Cues from environment are such that HPs deduce FASD is a niche issue and women likely already know		
Health professionals are not seeing consequences of alcohol in pregnancy		✓
Information about pregnancy seen as ubiquitous, easy to source and already known by patients		✓
Perceived lack of time		
Short or time limited consultations	✓	✓
HPs eager to fit with patients' agenda within this limited timeframe	✓	✓
Lack of personal and structural/system prioritisation of issue		
Low priority given to behaviour change by HP or their organisation	✓	
Less vigilance for alcohol consumption than smoking		✓
Tendency to focus on disease management and presenting symptoms only	✓	
Lack of cues, protocols and systems to embed consistent best practice	✓	✓
Perceived limited circumstances in which to discuss outside of pregnancy		✓
Beliefs about resources and support needed		
Perceived lack of support to engage in intervention	✓	

Lack of or limited availability of tools and resources including alcohol and pregnancy-specific resources and educational materials to give to patients	✓	✓
Lack of specific training on alcohol and pregnancy/breastfeeding and FASD	✓	✓
MOTIVATION BARRIERS		
Attitudes towards and beliefs about patients and perceptions of patient risk		
Perceptions of level of patient risk and need for intervention overall	✓	✓
Biases towards certain types of patients based on perceptions of patient risk	✓	✓
Negative assumptions about patients based on observable factors	✓	✓
Sensitivities around alcohol consumed prior to woman knowing she is pregnant, lead some to avoid fully communicating risks		✓
Beliefs about the need to intervene, ability to do so and likely success		
Alcohol seen as less pressing issue than others, and therefore de-prioritised, including because of reliance on own experience		✓
Attitudes towards the guidelines and belief in insufficient evidence supporting abstinence message	✓	✓
Lack of confidence in ability to deliver desired outcomes	✓	✓
Doubts about perceived benefits of intervening overall and in case of specific patients (in interviews, this was limited to patients with multiple challenges)	✓	✓
Number of different HPs involved reduces the sense of ownership		✓
View that education is job of health departments and mass media campaigns		✓
Perceptions of patient motivation		
Perceptions of how motivated patients are to change	✓	
General pessimism about patients' will and abilities to change their behaviour	✓	

As is evident above, the primary research interviews have expanded understanding by uncovering:

- a mismatch between health professionals' perceptions of alcohol as an important issue in pregnancy and its lack of salience in patient consultations;
- the absence of training of health professionals in alcohol and pregnancy and lack of current knowledge including of recent changes to guidelines;
- a lack of knowledge of the incidence of drinking or the extent to which it affects health professionals' own patient cohort where assumptions are heavily relied upon;
- that the social acceptability of drinking during pregnancy is not clear cut, given health professionals offer tacit approval or confused signals regarding occasional social drinking;
- cues from the environment suggest to health professionals that FASD is a niche issue and that women likely already know what to do given the ubiquity of information about pregnancy;
- smoking attracts greater vigilance in health professional consultations than does alcohol consumption;

- health professionals perceive limited circumstances in which they could comfortably discuss alcohol and pregnancy outside of pregnancy specific consultations;
- in an effort to be sensitive to women who consumed alcohol prior to knowing they are pregnant, some health professionals avoid fully communicating risks;
- alcohol is seen as a less pressing (though not less important) issue than others, including because of health professional reliance on own experience;
- the number of different health professionals involved in care of pregnant women reduces the sense of ownership over communications with them about alcohol; and
- the perception among health professionals that education is to some extent the job of health departments and mass media campaigns.

A summary of the implications of all findings for the health professionals campaign stream follows.

Women expect healthcare professionals to provide guidance, information and advice and can be powerfully influenced by this, so health professional inaction on this issue is a lost opportunity. Given alcohol appears to have lower salience (and priority) than nutrition and smoking, we need to be aware that patients are impacted both by what *is* said by health professionals as well as what *is not* said about alcohol and pregnancy.

The range of health professionals involved dilutes a sense of ownership of patient care and can mean patients receive mixed messages about alcohol and pregnancy. Messages need to be consistent across healthcare professionals and change will require a multidirectional communications approach.

Health professionals by and large show interest and willingness to expand their knowledge, provide more information and increase their role, with the primary focus naturally falling to GPs (especially shared care) and midwives; with Aboriginal health workers, and maternal and child health nurses and practice nurses, also playing a role. We therefore conclude that these health professionals form the primary audience for the health professionals stream of the campaign. There is also a potential role for other health professionals who encounter pregnant women (particularly pharmacists, nutritionists/dieticians and naturopaths) to display and/or distribute campaign materials and/or consistently reinforce the message to speak with their main pregnancy healthcare professional. Though this may not be seen as a core part of their role, these allied health professionals impact overall communication about alcohol, reinforcing the need for consistency of message.

Opportunities exist at several points across all stages of pregnancy to assist in reducing the incidence of alcohol exposed pregnancies, with the greatest importance being at the pre-conception planning stage and in early pregnancy. Encouraging pre-conception communications will be important to minimise alcohol exposure prior to women becoming aware that they are pregnant, given moderate rates of unplanned pregnancies in Australia and this research also suggests some women actively planning pregnancy also continue to drink prior to confirmation of pregnancy. Alcohol consumption in early pregnancy prior to confirmation of pregnancy could be addressed through communications at the point of sale of pregnancy testing kits. This research also suggests that health professionals need to improve the consistency and depth of communications with women in the first consultations when pregnancy is confirmed and to revisit the topic throughout pregnancy.

In order to maximise the effectiveness of the health professionals campaign stream, we recommend a focus on increasing both the *capability* of HPs to engage on this issue, while also addressing their perceived *opportunity* to do so. In turn, this will increase motivation and improve behavioural outcomes. In particular, the campaign needs to focus on addressing that:

- Health professionals need to have skills, confidence in and believe that there are ways to effectively and sensitively discuss alcohol with all patients who are pregnant and planning pregnancy, and even with women outside of these life stages.

- When health professionals discuss alcohol with their patients, they need to do so universally and consistently, in alignment with the guidelines and the overall general public campaign. This should be done through increasing their knowledge of clinical care guidelines and alcohol guidelines, and ensuring they recognise that alcohol consumption can be under-reported and can change;
- Health professionals need to understand and consider credible the risks of alcohol consumption in pregnancy, believe in the urgency and importance of communicating on this topic as early as possible and consider the issue as relevant to *all women*. This can be achieved through addressing knowledge deficits, and reducing reliance on personal experiences, beliefs, assumptions, biases and other non-clinical frames to guide clinical decisions.
- Importantly, all health professionals encountering women who are pregnant or planning pregnancy need to be aware that they have an important role to play in delivering a consistent message about alcohol consumption.

Research context and objectives

The Foundation for Alcohol Research and Education is a not-for-profit organisation that has been working for over 20 years to create healthy and safe communities by preventing and reducing alcohol-fuelled harm. A key area of focus for FARE is preventing and reducing harms due to alcohol consumption during pregnancy and breastfeeding, given that the new NHMRC guidelines released in December 2020 state that – "To prevent harm from alcohol to their unborn child, women who are pregnant or planning a pregnancy should not drink alcohol. For women who are breastfeeding, not drinking alcohol is safest for their babies"[1].

Alcohol and pregnancy

The evidence is unequivocal that drinking alcohol during pregnancy can cause harm to the unborn child[2]. Alcohol consumption during pregnancy is associated with an increased risk of miscarriage, lower birth weight, stillbirth and premature birth, and Fetal Alcohol Spectrum Disorders (FASD). FASD is the term given to the range of physical, developmental and/or neuro-behavioural conditions, resulting from prenatal alcohol exposure. This may include poor language and communication skills, poor memory, short attention span, motor co-ordination problems and social and behavioural problems. The problems associated with FASD are lifelong and can have profound consequences for individuals. However, early recognition, diagnosis and therapy can improve conditions. FASD is also completely preventable if pregnant women abstain from consuming alcohol.

Despite widespread awareness that there are potential risks of harm to unborn babies from maternal alcohol consumption during pregnancy, approximately one in three Australian women reportedly consumed some amount of alcohol during pregnancy in 2016[3].

The role of health professionals

Health professionals, including general practitioners, nurses and allied health practitioners, are considered to play an important role in increasing awareness and avoidance of the risks associated with alcohol consumption during pregnancy and breastfeeding by Australians. Current health practitioner practices, and the beliefs, attitudes and knowledge that drive their behaviours in relation to alcohol and pregnancy and breastfeeding women, are not well understood.

Alcohol, pregnancy and breastfeeding awareness campaign

The Foundation for Alcohol Research and Education (FARE) has received $25 million in funding from the Australian Government Department of Health to develop and implement the *FASD – National awareness campaign for pregnancy and breastfeeding women* from July 2020 – June 2023.

The Campaign aims to:

- increase Australians' awareness of the risks associated with alcohol consumption during pregnancy and while breastfeeding, including Fetal Alcohol Spectrum Disorder (FASD);
- increase the proportion of Australians who are aware that alcohol should not be consumed during pregnancy and it is safest not to drink alcohol when breastfeeding; and

[1] https://www.nhmrc.gov.au/health-advice/alcohol#

[2] Cochrane Australia and SAHMRI (2018) Report for systematic reviews of the association between different levels and patterns of maternal alcohol consumption during pregnancy and while breastfeeding and selected health outcomes for fetuses and children (up to age five). Accessed at: https://www.nhmrc.gov.au/file/14978/download?token=R9fVAOlN 7/09/2020

[3] Australian Institute of Health and Welfare (2020) Australia's Children. Cat. no. CWS 69. Canberra: AIHW accessed at: https://www.aihw.gov.au/getmedia/6af928d6-692e-4449-b915-cf2ca946982f/aihw-cws-69-print-report.pdf.aspx?inline=true 7/09/2020

- increase the proportion of Australian women who intend to not drink any alcohol during pregnancy and when breastfeeding.

The campaign will feature four streams focusing on different audiences: the Australian general public, health professionals, women at higher risk of having alcohol exposed pregnancies and Aboriginal and Torres Strait Islander peoples.

FARE's design and delivery of the National Program is being guided by an expert Steering Committee.

RESEARCH OBJECTIVES

Work is already underway in developing campaign approaches for the National Program's General Public stream. FARE commissioned Heartward Strategic to conduct research to inform the development of the Health Professionals stream, in particular generating insight on:

- ***What is happening now and why?*** - the practice behaviours of health professionals related to alcohol and pregnancy and the beliefs, attitudes, knowledge that underpin them;
- ***What relative position and priority does the issue occupy?*** - how health professionals' approach to this issue stands in relation and priority to other issues in pregnancy and/or other lifestyle risk factors for chronic disease such as smoking and nutrition; and
- ***How willing are health professionals to maintain and increase their role?*** - health professional motivation to engage with the topic, to increase skills and knowledge and to consider it their role to provide preventative health information on alcohol and pregnancy to women under their care.

Overall, the research described in this report sought to deliver FARE with a clear understanding of ways in which health professionals can be motivated to better address the topic of alcohol consumption with pregnant and breastfeeding women.

The specific research questions sought to be answered by the research were as follows:

1. What does a typical interaction or scenario where alcohol consumption and pregnancy is discussed look like? What is current practice, screening process, barriers and enablers to these conversations, what advice is provided?
2. What are the assumptions and beliefs of health professionals about FASD and relative risks of this as an outcome of alcohol consumption during pregnancy?
3. What is health professional's understanding of the risks associated with alcohol and pregnancy? How informed do they feel about the issue? What would motivate them to change their practice or views?
4. Do health professionals see alcohol consumption and FASD as an issue of relative importance comparative to Smoking/Nutrition/Physical Activity during pregnancy?
5. What is the rationale for health professionals giving messages/advice such as 'the occasional drink shouldn't matter too much'?
6. How different health professions define their role in relation to information provision around alcohol and pregnancy, to women as well as to supporting partners?
7. What do GPs access – for information, support on the topic? What other support, advice do they require? Would they use training, websites or other support if it was available to them?

Methodologies

The research comprised a rapid evidence review and primary qualitative research. Each component of research is described below.

RAPID EVIDENCE REVIEW

The first part of the project was a desktop review of literature to identify health professionals' current behaviours/practice, knowledge and attitudes related to alcohol and pregnancy, as reported in the literature.

The following literature was compiled and analysed for this review:

- Peer-reviewed meta analyses and systematic reviews
- Peer reviewed individual studies; and
- Grey literature, such as reports released publicly by government and non-government organisations on issues of relevance to the research questions.

The collection and review of articles which had a bearing on areas of interest was conducted in three steps:

- collection of client-provided references identified from their own internal literature searches;
- database searches using relevant search terms ('FASD'; 'alcohol' AND 'pregnancy', 'pregnant women', 'planning a pregnancy', 'actively trying to conceive' AND 'health professionals', 'doctors', 'GPs', 'Nurses', 'Midwives', 'Health Practitioners' [and synonyms of these] AND 'practice', 'knowledge', 'attitudes' 'behaviours', 'advice', 'guidelines', 'information', 'intervention'); and
- secondary sourcing (publications obtained from the reference lists of publications/documents obtained during the database searches or provided by stakeholders). In some cases, it was discovered that the papers sourced through the above methods were not the source article for particular established links. In these cases, source articles referenced in these papers were located.

All reviewed articles were published in English and the review focused primarily on literature published within the last ten years, though key references from outside this range were included, for example studies cited repeatedly in the literature.

The details of articles obtained from these methods were transferred from the databases to an Microsoft Excel spreadsheet database and each article was reviewed and summarised. The literature presenting the strongest evidence and with the greatest bearing on the research questions of interest was included and is referenced in the summary of findings included in this report. In total, 59 studies were sourced and reviewed and 38 were included in the summary of findings.

QUALITATIVE INTERVIEWS WITH HEALTH PROFESSIONALS

A series of **n=36** individual, in-depth interviews were conducted with health professionals based across Australia who are likely to see pregnant women (and also women of child-bearing age, more broadly). An initial 10 health professionals were recruited and interviewed before preliminary, top line data analysis was conducted and FARE debriefed on interim findings. This allowed minor adjustments to be made both to the recruitment specifications and lines of enquiry to optimise these for the remainder of fieldwork.

Sampling

While General Practitioners (GPs) formed the core of the sample (n=20 interviews), the sample also included nurses (n=6) and allied health practitioners (n=10). In all cases, those seeing pregnant women rarely or never were excluded. For each of the three audiences (GPs, nurses and allied health practitioners), recruitment ensured broad inclusion of health professionals:

- practising in metropolitan versus non metropolitan areas (health professionals from all Australian states and territories were included across the sample as a whole);
- who had been within their role for different durations (less than 5 years, 6-19 years, 20 years plus); and
- of both genders.

Across the sample as a whole, recruitment ensured inclusion of health professionals from culturally and linguistically diverse backgrounds, health professionals who trained oversees, and those seeing patients from socially and economically disadvantaged, culturally diverse and Aboriginal and Torres Strait Islander backgrounds.

The final sample achieved is as follows:

Audience type and number	Role with pregnant women	Demographic factors
General Practitioners (n=20)	13 offering shared care to pregnant women (7 not offering shared care)	17 metropolitan areas, 3 non metropolitan 10 men, 10 women 15 practising 20 years plus, 4 practising 6-19 years, 1 practising up to 5 years 5 trained overseas 11 speaking language other than English at home
Nurses (n=6)	2 Midwives	1 metropolitan areas, 5 non metropolitan All women 1 practising 20 years plus, 4 practising 6-19 years, 1 practising up to 5 years 1 trained overseas
	2 Practice nurses	
	2 Maternal child health nurses	
Allied Health Practitioners (n=10)	2 Aboriginal Health workers	5 metropolitan areas, 5 non metropolitan 6 women, 4 men 4 practising 20 years plus, 5 practising 6-19 years, 1 practising up to 5 years 1 trained overseas 2 speaking language other than English at home
	2 Dieticians/ Registered Nutritionists	
	1 Naturopath	
	2 Sonographers	
	2 Pharmacists	
	1 Pathology collector/ Phlebotomist	

Participant recruitment and incentives

Participants for the in-depth interviews were recruited by TKW Research, an accredited supplier of recruitment and data collection services for market and social research. Participant recruitment was guided by a recruitment screening questionnaire drafted by Heartward with input from FARE. Participants were advised the research sought to understand more about practitioners' conversations with patients about preventative health.

GPs participating in the research were provided with an incentive of $180 as a thank you for their time. Nurses and allied health practitioners received $150. These are the standard rates for these types of health professionals participating in research using remote in-depth interviews and for the proposed level of time commitment.

Conduct of the interviews

The interviews were conducted by the three Heartward Principals, Anne De Silva, Bettina Spence and Christina Falsone between 30 April and 28 May. All interviews were conducted remotely via the telephone or videoconferencing (Zoom or Microsoft Teams).

An interview guide, drafted by Heartward with input from FARE, was used to ensure that topics were covered in a relatively consistent manner across interviews. Each interview ran for an average duration of approximately 45 minutes.

All interviews were audio recorded (permission for this to occur was a pre-requisite for participation) and transcripts were produced where permission was given by research participants (this occurred for 34 of the 36 interviews).

Data analysis

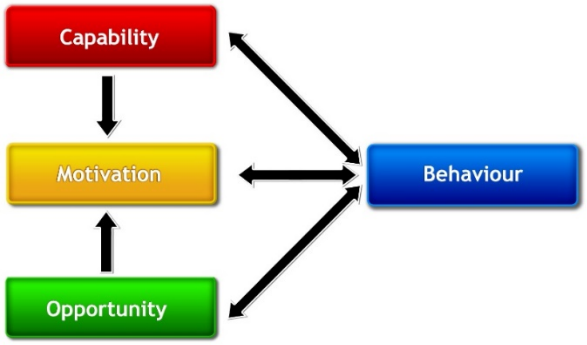
Data analysis was conducted based on: facilitator notes taken at the time and shortly after each interview (which made note of such things as non-verbal cues); review of verbatim transcripts; and a series of internal team analysis workshops, at which the team members summarised and triangulated the main themes emerging from their respective fieldwork components, tested and verified hypotheses, identified areas of commonality and difference, and drew out and prioritised tactical implications.

To help guide analysis of the data, the Heartward Strategic principals used behavioural scholar, Susan Michie, and colleagues' validated and pragmatic COM-B model and its associated Behaviour Change Wheel (BCW). COM-B and BCW have been developed specifically for developing and evaluating behaviour change interventions in the health context. They provide a systematic method for developing an understanding of the nature of the behaviour to be changed, and an appropriate system for making use of this understanding to develop effective interventions, including communications approaches and messaging.

The model identifies three categories of behavioural influencers – Capability, Opportunity and Motivation – which each have two dimensions, resulting in six high level factors: physical and psychological capability, social and physical opportunity, and reflective and automatic motivation. Most of the main factors identified in the literature as being associated with behaviour change fall into one of these six categories:

- **Capability** considers both physical and psychological aspects that pertain to an individual. To be capable of the desired behaviour, people must have the knowledge and mental capacity to act (psychological capability), and they must have the physical skill and ability to act (physical capability).
- **Opportunity** focuses on those social and physical factors external to an individual that nevertheless impact behaviour. To have the opportunity to do the desired behaviour, people must have societal permission to act (social opportunity), and they must have the resources and tools to act (physical opportunity).
- **Motivation** is defined as all those brain processes that energize and direct behaviour, not just goals and conscious decision-making. To be motivated to do the desired behaviour, people must consciously

consider it the right action (reflective), as well as be supported by unconscious and habitual drives to act this way (automatic).



The findings section of this report is structured around these six high level influencers, preceded by a section reporting on current behaviours, and followed by sections highlighting observations by audience-type and reporting feedback from health professionals on what they considered would be effective by way of supports.

DATA SYNTHESIS

Although the research approach included two discrete activities, both aimed to provide guidance to FARE on the core research questions listed earlier in this document. Findings from both have been synthesised to inform the conclusions and recommendations outlined in this report.

Findings from the rapid evidence review

This section of the report summarises the findings from the rapid evidence review undertaken alongside the primary research. As mentioned under 'Methodologies', it focuses on identifying current health professional behaviours/current practice, knowledge and attitudes related to alcohol and pregnancy, as reported in the literature. It was not intended to be an academic, exhaustive review of all the research available, but rather to be used in conjunction with the findings from the qualitative stage of this research (reported in the next chapter) to inform the development of the health professionals stream of the Alcohol and Pregnancy campaign.

HEALTH PROFESSIONAL BEHAVIOUR

DISCUSSING ALCOHOL WITH PATIENTS

Discussing alcohol with pregnant women

The Australian clinical guidelines for pregnancy care emphasise the importance of advising women who are pregnant or planning a pregnancy that not drinking is the safest option, as maternal alcohol consumption may adversely affect the developing fetus (Department of Health, 2020). These guidelines advise that midwives, GPs, obstetricians, Aboriginal and Torres Strait Islander health workers and multicultural health workers should do this at the first antenatal visit. International guidelines go further, recommending that health-care providers should ask all pregnant women about their use of alcohol and other substances (past and present) as early as possible in the pregnancy *and at every antenatal visit* (WHO, 2014).

The evidence suggests that health professional adherence to these clinical practice guidelines in Australia and internationally is sub-optimal (e.g. Payne et al, 2005; Payne et al, 2014; Ipsos SRI, 2014, France et al, 2010; Howlett et al, 2019; Chiodo et al, 2019). Some studies included in this review that have sought to establish the prevalence of antenatal discussions about alcohol, show great disparity across health professional types in the apparent proportions discussing alcohol and pregnancy, and in the reported nature and quality of the conversations being had. For instance, a survey of health professionals in Western Australia found that, of 659 Aboriginal Health Workers, allied health professionals, community nurses, general practitioners and obstetricians providing care to pregnant women, less than half (45%) routinely asked about alcohol consumption and only 25% routinely provided information on the consequences of alcohol use in pregnancy. The proportions routinely asking about alcohol consumption differed dramatically among different types of health professionals, from 67% of GPs and 57% of obstetricians, to 41% of community nurses, 30% of Aboriginal Health Workers and 20% of allied health professionals (Payne et al, 2005).

In a more recent survey of 300 Australian GPs, midwives, obstetricians, and Aboriginal Health Workers, 84% said that they routinely ask pregnant women about their alcohol consumption. Across the sample, 83% indicated that they would discuss alcohol consumption with any patient/client who is pregnant for the first time and 75% would when seeing any patient/client who is pregnant for the second or subsequent time (Ipsos SRI, 2014).

These findings were supported in qualitative research with a similar group of health professionals by France et al (2010). In this study, health professionals revealed not always seeking information from all pregnant women about alcohol use, assuming the majority to be consuming alcohol at relatively low levels or not at all, and the researchers noted the risk this presents in not recognising the group of pregnant women who drink alcohol at moderate levels (France et al, 2010). The researchers concluded that some health professionals underestimate the importance of asking and advising pregnant women about alcohol consumption. These findings were echoed by Crawford-Williams et al in 2015, who found in qualitative interviews with 10 midwives, obstetricians, and shared care general practitioners that, although they were willing to discuss alcohol with pregnant women, they did not necessarily make this a routine part of their practice. There was an assumption that pregnant women could access a lot of information on alcohol use in pregnancy and the health professionals believed that women's

knowledge levels were high, the women in their care were motivated and that they did not continue to drink after learning that they were pregnant.

Qualitative research undertaken by Hall & Partners Open Mind (2016) to evaluate the Women Want to Know health promotion program found that GPs, specialists and midwives considered the asking of questions and the provision of advice regarding alcohol consumption to be a standard part of the consultations undertaken in the early stages of pregnancy and with those who were planning a pregnancy, but it was the quality of the conversations and the advice being given that varied considerably across the different health professional groups. In this research, midwives and specialists in public hospitals and the specialists who had a specific interest in fertility appeared to have more in-depth conversations and reported being guided by procedures that ensured they always directly questioned women about alcohol consumption. Conversely, GPs and specialists (particularly those working primarily in the private system) more typically relied on women to raise the issue and ask questions, or gave the topic only brief coverage, with midwives working in private hospitals found to be only very rarely having conversations with their patients about alcohol (mainly due to not engaging with them until right before the birth). Hall & Partners Open Mind (2016) also found that alcohol was not something that was routinely discussed on an ongoing basis throughout pregnancy, unless the patient had previously been identified as a 'problem drinker'. Furthermore, health professionals who saw patients for the first time later in their pregnancy tended to assume that other health professionals would have addressed the topic earlier on, with some even feeling that by then was 'too late' for them to raise the issue themselves.

There is also quantitative evidence supporting the finding reported above that Australian midwives may be more likely than some other Australian health professionals to routinely discuss alcohol with pregnant women. Payne et al (2014) surveyed midwives around a decade after their original research with other health professionals and found a much higher proportion screening for alcohol use among this audience, with 93% of midwives at this time reporting asking pregnant women about their alcohol consumption and 64% informing about the effects of alcohol consumption in pregnancy (Payne et al, 2014).

International studies also report variable and less than universal levels of health professional engagement with pregnant women on the topic of alcohol consumption (e.g. Howlett et al., 2019; Chiodo et al, 2019; Anderson et al., 2010; Bakhshi & While, 2014; Wangberg, 2015; Smith et al, 2021; Wouldes, 2009; and Nathoo et al, 2019). However, the variability in these findings may reflect: the range of different types of health professionals focused on in each study; the differing opportunities of health professionals across these roles to engage with pregnant patients and the time in pregnancy in which this engagement usually occurs; as well as cross-country variation in health systems and clinical guidelines associated with specific health professional roles in pregnancy. Some examples of these findings demonstrating the variability in results and audiences, include:

- A UK survey of health professionals, whose roles allow them to screen for alcohol and FASD during antenatal, postnatal, and pediatric care, found that 91% of midwives; 93% of health visitors 74% of obstetricians and just 54% of GPs reported routinely screening for alcohol consumption (Howlett et al., 2019).

- A New Zealand study by Wouldes (2009) reported 80% of health professionals who spent at least 25% of their clinical time providing antenatal and postnatal care to women (including midwives, obstetricians, GPs and practice nurses) reported routinely asking about the use of alcohol, with the majority doing so only in the first trimester.

- In the USA, Chiodo et al (2019) identified an absence of routine prenatal alcohol screening practices among midwives, nurses and nurse practitioners, with a minority (35%) of this group reporting screening patients to assess alcohol use at least some of the time.

- Also in the USA, Anderson et al. (2010) found that alcohol-related screening and treatment patterns of obstetrician-gynecologists had remained largely unchanged since 1999, finding that while almost all

report asking all pregnant patients about alcohol use, 82% do this during patients' initial visit only and 11% ask at both the initial and subsequent prenatal visits (Anderson et al., 2010).

International studies lend some weight to the observation from Australian studies that midwives more commonly engage with pregnant women on the topic of alcohol consumption than health professionals in other roles, with independent studies from Norway and the UK both finding that 97% of midwives surveyed reported asking pregnant women about their alcohol use at their first consultation (Wangberg, 2015; Smith et al, 2021). In the UK study, 38% of midwives also reported discussing alcohol at subsequent antenatal appointments.

Discussing alcohol with breastfeeding women

Few studies sourced for this review specifically focused on discussions about alcohol and breastfeeding, with just one quantitative study available, however these findings suggest that alcohol may be less often discussed with this cohort than with pregnant women. Specifically, Ipsos SRI (2016) found that 65% of the Australian GPs, midwives, obstetricians and Aboriginal Health Workers surveyed indicated that they would discuss alcohol consumption with any patient/client who is breastfeeding.

Other available studies covering this issue were qualitative in nature. One qualitative study of Australian maternal child health nurses found that most maternal health professionals, while motivated to provide information to breastfeeding women about alcohol consumption, were not aware of the national policy providing direction for safely consuming alcohol during lactation and were not incorporating this information into their practice (Giglia & Reibel, 2019). Hall & Partners (2016) also reported qualitative discussions with Australian GPs, specialists and midwives in which they revealed that they tended to discuss alcohol consumption less commonly with women who were breastfeeding, than with those who are pregnant or planning pregnancy.

Discussing alcohol pre-pregnancy

The American Society for Reproductive Medicine, Committee on Gynecologic Practice (COGP, 2019) advises that any patient encounter with non-pregnant women or men with reproductive potential is an opportunity to counsel about wellness and healthy habits, which can reduce the risk of alcohol-exposed pregnancies. As such, the Committee recommends that patients should be routinely asked about their use of alcohol, alcohol use patterns should be determined and patients should be counselled that there is no safe level or type of alcohol use during pregnancy. Because health status and risk factors can change, they further advise that this should occur “several times during a woman’s reproductive lifespan”, to increase her opportunity for education (COGP, 2019).

Several studies in this review echo this, pointing out the potential preventive health benefits of discussing alcohol and pregnancy prior to women falling pregnant. Elliott (2015) suggests all Australian women attending a primary health care professional should be asked about their alcohol use, in order to identify and manage misuse before pregnancy occurs, given half of pregnancies in Australia are unplanned. Finlay-Jones (2018) and Albrecht et al. (2019) also call for universal alcohol screening practices to be adopted with women prior to pregnancy.

A recent study by Stephenson et al (2014) provides evidence that such practices can be impactful, finding that women who reported receiving advice from a health professional before becoming pregnant were significantly more likely to adopt healthier behaviours such as stopping smoking and reducing or stopping alcohol consumption before they fell pregnant. France et al (2010) cite several earlier studies (Mengel et al., 2006; Tough, Tofflemire, Clarke, and Newburn-Cook, 2006; Tsai, Floyd, Green, and Boyle, 2007) that suggest that efforts to reduce alcohol affected pregnancies would be enhanced by health professionals routinely asking all women of childbearing age about their alcohol use, both before and during pregnancy.

Despite calls for health professionals to more routinely engage with women on the topic of alcohol and pregnancy before they become pregnant (either when planning a pregnancy or even earlier), the evidence suggests health professionals are not routinely doing this (Finlay-Jones, 2018; Albrecht et al,2019).

Hammarberg and Taylor (2019) surveyed 192 maternal and child health and family health nurses who are in a position to provide pre-conception health promotion (including information about drug and alcohol use) to women who want another child, and, even though 65% agreed it was part of their role to do this, less than half (46%) reported routinely or sometimes engaging in preconception health promotion in their clinical practice.

Ipsos SRI (2014) reported a similar result, finding that just 47% of health professionals surveyed indicated they would discuss alcohol consumption when seeing any patient/client who is a woman of childbearing age.

Kizirian et al (2019) similarly reported that, despite 84% of GPs surveyed reporting that GPs should be the main providers of pre-conception care (which includes initiating discussions about alcohol), only 53% were aware of relevant guidelines advising this, 75% reported initiating such discussions with women of reproductive age, 56% reported providing it to those at higher risk of adverse outcomes and 16% reported waiting for the discussion to be initiated by the patient. However, the survey did find that among the preconception care topics that GPs could be discussing, alcohol (along with smoking and vaccinations) was the most discussed topic.

Looking more broadly at health professionals' propensity to engage in preventative health conversations, Keyworth et al (2018) report on the success of the "Making Every Contact Count" (MECC), a public health policy in the UK, which compels healthcare professionals to deliver opportunistic health behaviour change interventions to patients during routine medical consultations. Keyworth and colleagues found a significant gap between the proportion of patients that healthcare professionals perceive would benefit from opportunistic behaviour change interventions and those actually receiving them. They estimate that approximately 50% (or 16,473) additional patients could have benefited from such conversations over the period in question.

ASSESSING ALCOHOL CONSUMPTION

A number of studies in this review looked at how health professionals assess levels of consumption among those who report discussing alcohol consumption with pregnant women (or, more specifically, report "screening" for alcohol use). The quality of assessment approaches used is important, as research has demonstrated that high quality screening and brief interviewing can improve alcohol consumption disclosure rates among pregnant women (Schölin & Fitzgerald, 2019).

Taken together, the relevant studies (Australian and international) included in this review show that only a minority of health professionals use validated tools to assess alcohol consumption with pregnant women, with many using no tool at all and some simply asking a yes/no question (Payne et al, 2014; , Ipsos SRI, 2014, Hall & Partners Open Mind, 2016; Jones et al, 2011; Crawford-Williams et al, 2015; Howlett et al, 2019; Chiodo et al, 2019; Anderson et al, 2010 and Wouldes, 2009).

These findings include:

- Payne et al (2014) found that half (46%) of Australian midwives who screened for alcohol use did not always use the recommended AUDIT screening tool to do this.
- Ipsos SRI (2014) reported that, among Australian health professionals who routinely discuss alcohol with pregnant women, 70% report always assessing their level of consumption. Over half (54%) of these health professionals reported using no tools or questionnaires to do this. Tools and questionnaires were more likely to be used by GPs than by midwives and obstetricians. Among those using them, a wide variety of validated and unvalidated tools were reported to be used.
- Jones et al (2011) reported on a qualitative study based on interviews with midwives and pregnant women who see them, which found that both parties consistently agreed that conversations about alcohol were generally limited to brief screening questions at the first visit.

- Crawford-Williams et al (2015) similarly reported on qualitative research with health professionals who claimed to ask women at the start of their pregnancy about their alcohol consumption, doing so only once, and not investigating the average quantity and frequency of consumption unless women requested to talk about it, or it was known that there was prior alcohol issue.

- Howlett et al. (2019) found among health professionals in the UK that there was little consistency in the choice of alcohol screening tools, most commonly they reported using no tool at all (45%), and with validated tools such as the AUDIT, AUDIT C, TACE and CAGE all reportedly used by only small numbers of health professionals.

- Chiodo et al (2019) found that, among nurses, midwives and Nurse Practitioners in the USA who reported screening pregnant women on alcohol consumption, just 23% reported using a specific screening tool, and few of those were validated tools recommended for use with pregnant women.

- Similarly, Anderson et al (2010) found that, when asked which validated alcohol risk screening tool they most commonly use with pregnant patients, 58% of health professionals said they use no tool.

- Wouldes (2009) found that less than one-third (29%) of the NZ clinicians surveyed reported using a standardised questionnaire to assess alcohol consumption. Furthermore, those who did, often reported this was simply a standardised maternity questionnaire that only included "yes/no" questions about alcohol use, and did not assess the frequency, quantity or timing of use.

- Hall & Partners Open Mind (2016) found that health professionals viewed the AUDIT-C as a tool to help them assess and monitor alcohol consumption among 'problem drinkers', rather than as a screening tool that they would have time or inclination to use with all pregnant women.

EDUCATION/BRIEF INTERVENTION AND USE OF GUIDELINES

The literature suggests that conversations about alcohol with pregnant women rarely progress further than asking about or assessing consumption, and that health professionals are failing to provide adequate education and advice to women consistent with guidelines to prevent alcohol-affected pregnancies (Payne et al, 2005; Ipsos SRI, 2014; Crawford-Williams et al, 2015; Hall & Partners, 2016; Chiodo et al, 2019; Payne et al; 2014; Ojukwu et al, 2016).

Studies supporting this finding revealed that:

- **Australian alcohol consumption guidelines for pregnant and breastfeeding women were not always mentioned and advice given could be inconsistent with these**. Some health professionals also reportedly did not fully support the guidelines.

    - Payne et al (2005) found considerable variation in the proportion of health professionals who report giving advice to consider not drinking at all in pregnancy (88% of GPs, 57% of obstetricians, 92% of community nurses, 93% of Aboriginal Health Workers and 89% of allied health professionals reported doing this). However, a minority, just 13% overall, gave advice fully consistent with the NHMRC guidelines applicable at the time (ranging from 17% of GPs to only 11% of allied health professionals). More recent research by Payne et al (2014) with midwives found that almost all midwives (93%) asked pregnant women about alcohol consumption during their pregnancy and 99% offered advice that there is no safe level of alcohol consumption, in accordance with the Australian Alcohol Guidelines.

    - Ipsos SRI (2014) found that 76% of health professionals advised abstaining from alcohol while pregnant and 59% advised abstaining while breastfeeding. Across both of these findings, GPs were more likely to give abstinence advice to pregnant and breastfeeding women and

Aboriginal health workers were less likely to do so. Just 14% reported advising that there is no safe level of alcohol consumption during pregnancy, with midwives more likely than other types of health professionals to give this advice. Overall, 6% of health professionals (0% of Aboriginal Health Workers, 2% of GPs, 8% of midwives and 18% of obstetricians) in this survey reported advising pregnant women that consumption of occasional small amounts of alcohol is 'reasonable' and 5% reportedly believed there is a lack of evidence behind the guidelines.

  - In interviews with midwives, obstetricians, and shared care GPs, Crawford-Williams et al (2015) uncovered a lack of faith in the guidelines, with most unwilling to recommend complete abstinence for pregnant women based on a perceived lack of evidence. All participants in this study believed that small amounts of alcohol, such as an occasional glass of wine, were unlikely to cause harm.

  - Hall & Partners (2016) reported similar findings in qualitative research with health professionals, revealing key differences in how recommendations were communicated by different groups. Midwives and specialists working in public hospitals, and fertility specialists reported adhering to the guidelines in conveying to women that no alcohol is the safest option and that they should avoid drinking any alcohol during their pregnancy, while some GPs and specialists, particularly those in private practice, adhered less strongly to this level of advice. This latter audience was more inclined to question the evidence that alcohol could be harmful at very low levels or to undermine discussion of the guidelines by also advising that occasional consumption posed little to no risk.

- **Health professionals are less likely to discuss risks and reasons behind the guideline advice.**

  - Ipsos SRI (2014) found minority proportions of health professionals reported explaining to women the risks of alcohol consumption on unborn babies (20% overall), mentioning FASD (6% overall), or advising that alcohol passes through breastmilk (20%) when advising pregnant and breastfeeding women about alcohol consumption.

  - This is consistent with the findings of Payne et al (2005) who reported that only 25% of health professionals routinely provided information on the consequences of alcohol use in pregnancy. The proportion that reported providing this information ranged from just 3% of allied health professionals to 32% of GPs. Later research by Payne et al (2014) with midwives found the corresponding proportion among this group to be 64%.

- **Even when alcohol consumption is disclosed, some health professionals fail to provide further information or interventions that are indicated**.

  - For example, Payne et al (2014) found that only 70% of midwives reported conducting a brief intervention on alcohol consumption when it was indicated by patient reported consumption.

  - Chiodo et al (2019) found that, when facing a woman who admits drinking alcohol while pregnant, only half (56%) of US health professionals surveyed reported advising abstinence during pregnancy and 12% reported neither advising reducing nor abstaining from drinking.

- **Health professionals fail to take advantage of opportunities to educate women pre- and postnatally to prevent future alcohol-affected pregnancies**. The literature reveals a lack of action on the part of health professionals to discuss guidelines and provide advice and information about alcohol consumption with patients they see pre-pregnancy and once pregnant.

- Ojukwu et al (2016) found in qualitative discussions with GPs in the UK that while alcohol tended to be mentioned in the context of preconception advice (alongside healthy eating, being a healthy weight, starting folic acid supplementation and stopping smoking), the content of advice about alcohol varied, and abstinence was not consistently advised in these conversations.

- Ipsos SRI (2016) found that, despite being more likely than other health professionals to have the view that brief interventions are very effective in modifying alcohol consumption for breastfeeding patients/clients, GPs in this survey indicated that they are less likely than other types of health professionals to talk about alcohol consumption with patients/clients who are breastfeeding (56%) and less likely to mention that alcohol passes into breastmilk (11%).

- No studies included in this review specifically discussed the positive educational opportunity presented by post-natal checks to educate women on the effects of alcohol consumption in order to prevent future alcohol-affected pregnancies. However, more broadly, Talbot et al (2018) reported GPs participating in qualitative research did identify the postnatal period as presenting an opportunity to engage further in health promotion, recognising that women may have already changed or considered changing several health behaviours during the significant life-changing stage of pregnancy, including reducing or ceasing alcohol consumption. Though the GPs in this study identified the postnatal checks as a potential opportunity to initiate discussions about behaviour change with women, most reported this topic was not readily discussed during these consultations.

Finally, findings from research on screening for alcohol in pregnancy suggest health professionals tend to focus more on asking about alcohol consumption than engaging in deeper conversations or taking opportunities to engage in educational interventions or provide further support. This accords with the literature on the alcohol-related health promotion practices of health professionals more broadly. An international review of literature on this topic undertaken by Bakhshi & While (2014) found that more health professionals tended to focus on the first component of the best practice 5-As framework, namely, Assess (e.g. asking their patients about their alcohol use in general, assessing the quantity and frequency of alcohol use, and recording their alcohol use histories). The review reported a high degree of variation in practices across the remaining 4 As, (Advise, Agree, Assist, and Arrange), finding that only minority proportions (between 2%–43%) of the health professionals in the studies reviewed assisted over 50% of their patients with written information, goal setting, counselling and specialist support when needed (Bakhshi & While, 2014).

REFERRAL PRACTICES

The studies exploring referral practices among health professionals when pregnant patients disclose alcohol consumption included in this review tended to focus more on health professionals' estimation of their likely behaviour if they found themselves in this situation, rather than actual referral behaviour. This may be because health professionals report rarely or infrequently encountering patients who disclose alcohol consumption in pregnancy in practice (Howlett et al, 2019).

Ordean et al (2020) reported on referral practices among 89 health professionals in Ontario, Canada, though it is unclear whether this referred to actual referrals made or expected behaviour should they encounter women disclosing alcohol consumption in pregnancy. Of the 89 health professionals surveyed, less than 50% reported referring pregnant women on, including to brief counselling, addiction treatment, social work or other resources.

Howlett et al. (2019) reported on levels of drinking at which midwives, health visitors and GPs expected they would refer pregnant women who disclosed alcohol consumption. These reported levels varied considerably, with 43% specifying they would refer for any reported alcohol consumption, 13.5% stating they would refer if assessment revealed drinking more than 14 units of alcohol per week and 11% if it revealed drinking more than

21 units per week. A further 15% indicated they would only refer if the patient was visibly drunk at an appointment. Some participants in this study (only midwives are mentioned in relation to this finding) had referred a patient for alcohol use in pregnancy, most commonly to an obstetrician or alcohol specialist nurse.

Finally, it appears that health professionals may focus more on intervening with and referring pregnant women who disclose smoking or drug taking, than with pregnant women who disclose alcohol consumption. Wouldes (2009) found that health professionals surveyed in NZ were more inclined to monitor, refer and offer counselling to women who reported they were using other drugs than if they reported using alcohol, and this is supported by qualitative findings with health professionals in Australia, who indicated they would be more concerned about reported smoking or drug taking in pregnancy than alcohol consumption (which was also assumed to be generally low-level if it occurs at all) (Hall & Partners, 2016).

BARRIERS TO ENGAGING WITH PREGNANT AND BREASTFEEDING WOMEN ABOUT ALCOHOL

The literature reveals a broad range of barriers acting to prevent health professionals adequately and effectively engaging with pregnant and breastfeeding women in relation to alcohol consumption. The full range of barriers noted in this review is collated in Table 1 below under the broad COM-B factors of capability, opportunity and motivation, with each specific barrier discussed in more detail in the following sections.

Table 2. Summary of barriers to effective health professional intervention on alcohol and pregnancy – evidence review

CAPABILITY BARRIERS
(1) Knowledge and skills needed to intervene with patients • Lack of knowledge of risks of alcohol consumption during pregnancy and breastfeeding • Lack of awareness of recommended guidelines • Lack of knowledge of the available resources to help facilitate intervention, including tools, support materials and referral pathways • Lack of skills to intervene, including skills in assessment of consumption and motivational interviewing
OPPORTUNITY BARRIERS
(2) Professional identity and perceptions of the healthcare professional role • Belief that addressing issue is outside of own professional remit • Lack of consensus from HPs about their role in relation to issue, and relative to other HPs • Lack of enjoyment in delivering behaviour change interventions • Fear of damaging the relationship with patients **(3) Social and cultural role of alcohol, including how it relates to health professionals' own attitudes and behaviours regarding alcohol consumption** • HP engagement, and/or that of their loved ones, in alcohol consumption and alcohol consumption in pregnancy/breastfeeding • Normalised social acceptance of alcohol consumption • Social pressure for patients to underreport alcohol consumption in pregnancy

(5) Perceived lack of time

- Short or time limited consultations
- HPs eager to fit with patients' agenda within this limited timeframe

(6) Lack of personal and structural/system prioritisation of issue

- Low priority given to behaviour change by HP or organisation in which HPs work
- Tendency to focus on disease management and presenting symptoms only
- Lack of specific protocols and systems to embed consistent best practice

(4) Beliefs about resources and support needed

- Perceived lack of support to engage in intervention, including support from other members of staff
- Lack of or limited availability of tools and resources including alcohol and pregnancy-specific resources and educational materials to give to patients
- Lack of specific training on alcohol and pregnancy/breastfeeding and FASD

MOTIVATION BARRIERS

(7) Beliefs about the need to intervene, ability to do so and likely success

- Attitudes towards the guidelines and belief in insufficient evidence supporting abstinence message
- Lack of confidence in ability to deliver desired outcomes
- Doubts about perceived benefits of intervening overall, and in the case of specific patients

(8) Attitudes towards and beliefs about patients and perceptions of patient risk

- Perceptions of level of patient risk and need for intervention overall
- Biases towards certain types of patients based on perceptions of patient risk
- Negative assumptions about patients based on observable factors

(9) Perceptions of patient motivation

- Perceptions of how motivated patients are to change
- General pessimism about patients' will and abilities to change their behaviour

CAPABILITY BARRIERS

Knowledge or skills needed to intervene with patients

A number of knowledge and skill deficits have been reported in the literature as barriers to effective health professional engagement on the topic of alcohol and pregnancy/breastfeeding. These include:

- **Lack of knowledge of risks of alcohol consumption during pregnancy and breastfeeding**

  Alcohol consumption in pregnancy is associated with significant deficits that have lifelong impacts for affected children such as low body weight, poor coordination, hyperactivity, poor attention and memory, learning disabilities, speech and language delays, delays in fine and gross motor development, intellectual disabilities, impulsivity, vision and hearing problems, and cardiac, renal, or skeletal malformations (Albrecht et al, 2019).

A number of studies have demonstrated insufficient health professional awareness of this range of consequences of maternal alcohol consumption in pregnancy, their incidence in the population and diagnostic features of associated conditions.

For example, Crawford-Williams et al (2015) found that although health professionals displayed adequate knowledge that alcohol can cause physical and mental difficulties that are lifelong, knowledge of the term FASD and the broad spectrum of difficulties associated with alcohol consumption during pregnancy was more limited. The research uncovered differing views among health professionals about risks and impacts, including the risks associated with consumption frequency, quantity and timing. These findings have been supported in a number of other Australian studies, including those by Payne et al (2005 and 2014) and Jones et al (2011); as well as internationally by Wouldes (2009) in New Zealand, Chiodo et al (2019) and Johnson et al (2010) in the USA, and have been acknowledged by the British Medical Association Board of Science (BMA, 2016). Payne et al (2005) also found that just 12% of health professionals surveyed could correctly identify all diagnostic features of FAS.

Both Howlett et al (2019) in the UK and Chiodo et al (2019) in the US have shown that health professional awareness of the prevalence of FAS and FASD is poor, with around 20% of health professionals in each country aware of their respective prevalence rates for FAS and/or FASD.

- **Lack of awareness of recommended guidelines**

Only a third (33%) of health professionals surveyed by Ipsos SRI (2014) indicated they were somewhat or very familiar with the Alcohol Guidelines. Almost half (45%) had heard of the guidelines but were not familiar with the content and more than one in five (22%) had not heard of the guidelines at all. These findings did not differ significantly across health professional types. This research also revealed that those who were more familiar with the Alcohol Guidelines, were more likely to discuss alcohol consumption with patients, more likely to discuss the risks to the fetus, more likely to initiate conversations about alcohol and pregnancy rather than wait for it to be raised with them and were more familiar with referral pathways available to them (Ipsos SRI, 2014). Awareness of guidelines was reportedly higher among midwives in the UK, with 58% aware of the guideline current at the time, although 19% cited recommendations from previous guidelines. Qualitative research with GPs in the UK also revealed low knowledge of and usage of guidelines, with knowledge gained predominantly from clinical experience, past training and patient information sources more so than from guidelines (Ojukwu et al, 2016).

Giglia & Reibel (2019) explored barriers to Australian maternal and child health nurses covering alcohol with breastfeeding women and found low knowledge of the NHMRC guideline current at the time covering alcohol consumption and breastfeeding to be a key factor.

- **Lack of knowledge of the available resources to help facilitate intervention, including tools, support materials and referral pathway**

Payne et al (2014) reported midwives recognise a need for more training on alcohol screening tools and Finlay-Jones (2018) calls for ongoing capacity-building within the health workforce to support clinicians to effectively screen for advice about, and provide appropriate intervention for, pregnancies affected by alcohol.

Findings relating to awareness of referral pathways demonstrate low awareness among health professionals. For example, Ipsos SRI (2014) found that 42% were not very/not at all familiar with referral pathways available to assist pregnant patients/clients with their alcohol consumption, and only 19% reported being very familiar with referral options. This did not differ significantly by role and the health professionals in this research more frequently nominated lack of referral options (25%) as a barrier to their discussing alcohol with pregnant patients than other potential barriers. Anderson et al (2010) report a

similar need expressed by obstetrician gynecologists in the US for "referral resources for patients with alcohol problems".

- **Lack of skills to intervene, including skills in assessment of consumption, brief intervention and motivational interviewing**

  In a systematic review of the available evidence, Oni et al (2019) cite a lack of adequate screening skills as one of seven key barriers to health professionals engaging more closely with pregnant women on alcohol consumption.

  Nathoo et al (2019) note that the quality of conversations during brief interventions is important and that the motivational interviewing skills that underpin most brief interventions can be learned. However, they cite studies from the UK and South Africa that show midwives' interactions with pregnant women in the context of substance use tend to be directive, authoritarian and paternalistic (Ebert et al, 2009 and Everett-Murphy et al, 2011; cited in Nathoo et al, 2019). Payne et al (2014) also report midwives describing their own need for more training on motivational interviewing.

The specific knowledge and skills deficits reported in this section mirror more general capability barriers identified by Keyworth et al (2020) in a meta-analysis of systematic reviews reporting barriers and enablers to patient-facing healthcare professionals delivering preventative health behavior change interventions (including addressing alcohol use). Keyworth and colleagues summarise these as:

- lack of knowledge of the available resources to help facilitate behaviour change, including patient information sources that would signpost further support services;
- perceived lack of skills including behaviour change training; and
- lack of awareness of recommended guidelines in relation to patient care.

OPPORTUNITY BARRIERS (STRUCTURAL, SITUATIONAL AND SOCIAL)

The literature reveals many barriers limiting opportunities for health professionals to effectively engage with patients on the topic of alcohol and pregnancy/breastfeeding. Opportunity barriers identified include structural, situational and social context limitations, ranging from health professional identity/role and the place alcohol consumption holds in society, to practical barriers such as lack of time and embedded practices, supports and permissions. These are detailed under the following headings.

Professional identity and perceptions of the health professional role

Keyworth et al (2020) found barriers to engagement in health promotion and behaviour change among health professionals associated with their professional role, both in relation to perceived responsibilities and the routines within each specialism.

Studies show that health professionals in certain roles are less likely to have, or see themselves as having, primary responsibility for preventative health pre, during, or post pregnancy. For example, Ojukwu et al (2016) found UK GPs did not feel they should be gatekeepers for pre-pregnancy preventive health and Talbot et al (2018) found UK GPs did not see themselves as best placed to provide this type of care pre and post pregnancy, believing nurses to be better placed to do this. Boldy et al (2010) reported that Medical Imaging Technologists are not equipped by their roles to provide health promotion on alcohol. A study by Nathoo et al (2019) reflected that midwives routinely discuss substance use with pregnant clients due to the unique nature of their role relative to other health professionals, including having longer appointment times and a holistic focus in

midwifery practice, providing opportunities for lengthier interactions, for building trust, and for avoiding judgment when substance use is discussed. In contrast to this finding, Hall & Partners Open Mind (2014) found that midwives working in private hospitals felt discussing alcohol with pregnant women was outside the scope of their role, given pregnant women they see are under the primary care of an obstetrician. Some midwives in a study by McLellan et al (2019) felt their traditional role was being eroded by the increasing expectations to cover health promotion topics including alcohol consumption.

Premji et al (2019) reported on role and responsibility confusions among health professionals given the large number of different types of health professionals who see women prenatally. In cases where pregnant women had multiple providers of care, substance abuse was least likely of all the topics studied to be discussed across providers and having multiple providers was not associated with receiving consistent or more complete information.

Another barrier associated with perceived health professional roles and responsibilities impacting engagement with patients around alcohol and pregnancy/breastfeeding was the quality or dynamic of relationships with patients. Health professionals working in roles seen as based on providing continuity of care, and/or a holistic or patient-centred focus were more likely to fear damaging their relationship with patients or to see this potential risk as a barrier to engagement on the issue (Oni et al, 2019; Ipsos SRI, 2014; Keyworth et al, 2020, Wouldes, 2019). For example, Doi et al 2014 reported that midwives in Scotland felt that the rapport between them and pregnant women was not sufficiently established early on to allow them to discuss alcohol issues appropriately and Payne et al (2014) found that, although few midwives (13%) thought that asking every pregnant woman about whether they have consumed alcohol during pregnancy would threaten their relationship, around half thought that it would distress or anger pregnant women, could cause anxiety and guilt, lead to women feeling judged and uncover complex problems that are difficult for midwives to address.

Ipsos SRI (2014) found close to one third of Australian health professionals cited concern about the patients'/clients' discomfort as the main difficulty in discussing pregnancy and alcohol. In this study, levels of concern differed significantly across health professional types, being greatest concern among Aboriginal Health Workers (50%), followed by midwives (27%) and GPs (23%), and with obstetricians being the least concerned (18%).

There is evidence that such concerns about patient negative responses and risks to rapport are to some extent unfounded, given health professionals are seen by the majority of women as the preferred information source about alcohol use in pregnancy and nearly all women agree that health professionals should ask and advise about alcohol use in pregnancy, and advise women to give up alcohol during pregnancy (Elliot, 2015).

Social and cultural role of alcohol, including how it relates to health professionals' own attitudes and behaviours regarding alcohol consumption

Several studies report that social attachments to alcohol, including how it relates to health professionals' own behaviour and and/or that of their loved ones, plays a role in determining whether and how alcohol consumption and pregnancy is discussed (Bagley & Badry, 2019; Bakhshi & While, 2014; Keyworth et al, 2020; Giglia & Reibel, 2019). Perhaps most notably, Bagley & Badry (2019) found that, when considering alcohol consumption and the risks related to FASD, health professionals referred to multiple 'non-clinical' frames of reference, including reflection on personal experience; experiences of friends, relatives and acquaintances; social constructions of alcohol use and misuse; and comparisons to other types of drug use. They noted that each of these frames of reference presented mixed messages about harm and risk that contradicted the participants' professional knowledge of FASD, yet they formed part of the professional decision-making environment. In their view, health professionals rely on these non-clinical factors to help fill the knowledge gap that exists while professional knowledge of and services for FASD remain inconsistent or inexistent (Bagley & Badry, 2019).

Bakhshi & While (2014) also found associations between health professionals' alcohol-related health promotion activities and their personal views and use of alcohol, tentatively indicating that these personal factors shape and influence relationships between health professionals and their patients.

Keyworth et al (2020) examined ten systematic reviews that have looked at the question of whether and how healthcare professionals' own health behaviour is associated with their clinical practice in delivering advice to their patients, but concluded the findings on this issue were mixed. Reviews examined found evidence for health professionals own smoking status acting as a barrier to their clinical practice with smokers; mixed evidence in relation to weight, and little evidence in relation to alcohol consumption (though these findings were not specifically related to alcohol and pregnancy).

Giglia & Reibel (2019) and Johnson et al (2010) report on the influence of normalised social acceptance of alcohol consumption on clinicians' attitudes and practices, for example demonstrating clinician reluctance to provide clinically-appropriate intervention and referral when it comes to friends and family who drink alcohol in pregnancy, and child health nurse reluctance to discuss alcohol and breastfeeding. The literature also mentions social pressure for patients to underreport or fail to disclose alcohol consumption in pregnancy as a barrier to health professionals' ability to screen appropriately for this (Oni et al, 2019; Schölin et al, 2019).

Perceived lack of time and low personal and structural/system prioritisation of issue

Short or time limited consultations and health professionals' eagerness to fit with their patients' agenda, whether known or assumed, within this limited timeframe present barriers to health professionals engaging in health promotion more broadly, and with patients specifically on the topic of alcohol and pregnancy/ breastfeeding (e.g. Keyworth et al, 2020; Oni et al, 2019; Giglia & Reibel, 2019; McLellan et al, 2019)). Furthermore, the perceived limitations of time combined with multiple tasks/issues to cover combined to drive the topic of alcohol down the list of priorities in consultations with pregnant and breastfeeding women (Doi et al, 2014; Oni et al, 2019; Giglia & Reibel, 2019).

Keyworth et al's (2020) meta review concluded that time pressures lead to a tendency to focus on disease management and presenting symptoms only. Lower priority is therefore given to behaviour change initiatives by health professionals themselves. Low organisational prioritisation of such initiatives can also mean a lack of specific protocols and systems are put in place to embed consistent best practice into routine (Keyworth et al, 2020). Giglia & Reibel (2019), for example, provide specific examples of this as a barrier to maternal child health providers engaging in discussion of alcohol consumption and breastfeeding and Oni et al (2019) cite lack of clear embedded protocols for screening for alcohol use, as one of the seven key barriers to health professionals addressing this issue with pregnant patients. This is further supported in research by Wouldes (2009) which found that health professionals would be less likely to inquire about or discuss alcohol if there were no clear procedure in the clinical environment for managing women who reported they were using alcohol or other drugs.

Beliefs about resources and support needed

Keyworth et al's (2020) meta review cites lack of support, including staffing and support from more senior members of staff; lack of or limited availability of resources, including behaviour-specific resources and educational materials to give to patients; and lack of an on-site/specialist, as barriers to health professionals engaging in behaviour change interventions with patients.

These findings are supported somewhat in the literature on alcohol and pregnancy. For example, Wangberg (2015) reported that Norwegian midwives frequently cite lack of organisational support as a mentioned barrier to delivery of brief interventions on alcohol and pregnancy.

The literature also reveals a lack of specific training on alcohol and pregnancy/breastfeeding and FASD among some health professionals, for example in a US study cited in Johnson et al (2010) only 28% of postgraduate

physicians reported being trained on FASD-screening and diagnosis and only 50% received training about screening for risky drinking behaviour (Gahangan et al. 2005, cited in Johnson et al, 2010).

Wouldes (2009) asked NZ health professionals about their perceived access to materials and resources to support patient interactions about alcohol and pregnancy. While 77% felt they had access to printed material about alcohol use during pregnancy that accurately reflects the risks, only 13% felt they had adequate training on the issue and risks and 80% called for a short screening questionnaire to help assess consumption.

Doherty et al (2020) found the antenatal service environment to be a barrier to the implementation of clinical guidelines for maternal alcohol consumption in Australian antenatal services, pointing out that the introduction of electronic systems to prompt clinicians to deliver guideline recommendations at the point-of-care, localised procedures and care pathways and educational meetings and materials to support care provision could help to address this barrier.

MOTIVATIONAL BARRIERS

Beliefs about the need to intervene, ability to do so and likely success

Health professionals' motivation to address behaviour change issues including alcohol consumption in pregnancy/breastfeeding is diminished by attitudes and beliefs about the need or urgency for intervention, their own ability to effectively intervene and the likelihood of positive outcomes if they do (Keyworth et al, 2020).

The perceived need or urgency for intervention is lessened by unsupportive or doubtful attitudes towards alcohol consumption guidelines, the severity of risks and the evidence supporting total abstinence messages (e.g. Giglia & Reibel, 2019; Chiodo et al, 2019; Ipsos SRI, 2016). The literature suggests that reasonable proportions of health professionals hold such beliefs. For example, Chiodo et al (2019) found that well over one third of midwives, nurses and nurse practitioners providing antenatal care in the US believe drinking alcohol is safe during at least one trimester of pregnancy (38%), only 40% agreed that "the effects of alcohol on development are clear". Those who believe alcohol is safe to drink at some point in pregnancy were significantly less likely to report screening their patients to establish alcohol use (Chiodo et al; 2019). Herzig et al (2006, cited in Wouldes, 2009) found that many of the healthcare providers in their study disagreed with current recommendations of abstinence and nearly all expressed some tension between what they recommend to family, friends, and some worried patients, and their official stance with all other patients. As reported earlier, Wouldes (2009) also found that health professionals were less likely to intervene and refer patients on in relation to alcohol use in pregnancy, compared to smoking and other drug use, suggesting a lower sense of urgency/ risk in relation to alcohol consumption in pregnancy.

Ipsos SRI (2016) explored health professionals' belief in the strength of the evidence underpinning the guidelines current at the time. In this study, close to two-thirds (64%) of health professionals viewed the evidence as strongly supporting guidelines for pregnant women, but opinion was more divided over the strength of evidence supporting guidelines for breastfeeding women. Less than half (46%) believed the evidence strongly supports abstinence for all levels of consumption, and over a third (36%) believed the evidence to be generally weak, but stronger for higher levels of consumption.

Studies report health professionals' feelings about their ability to intervene limit their engagement with pregnant and breastfeeding patients on this issue. Specifically, lack of comfort in discussing alcohol and lack of confidence in delivering behaviour change interventions were identified as key barriers in a number of studies included in this review (e.g. Keyworth et al, 2020; Ipsos SRI, 2016; Payne et al, 2005; Wangberg, 2015; Howlett et al, 2019; and Anderson et al, 2010; Doherty et al, 2020). While some studies reported relatively high levels of health professional confidence and comfort to discuss alcohol or deliver interventions, they nevertheless revealed that some types of health professionals were less confident or comfortable and/or that confidence could be diminished in certain circumstances.

Payne et al (2005) found than although 67% of the Australian health professionals surveyed felt it is easy to ask pregnant clients how much and how often they drink alcohol, this proportions differed significantly across health professional types, being lowest among Aboriginal Health Workers (55%) and allied health (56%), increasing to 67% of community nurses, and was highest among GPs (76%) and obstetricians (73%). Their later study found the corresponding proportion among midwives to be 75% (Payne et al, 2014).

Ipsos SRI (2014) reported similarly that, while health professionals overall reported high levels of comfort in initiating discussions about alcohol consumption, levels of perceived comfort differed depending on the circumstance being asked about, and between Aboriginal Health Workers and other health professionals. Among the total sample, comfort levels were highest for initiating conversations with women who are pregnant for the first time, and relatively high also with women who are breastfeeding, actively planning a pregnancy, or are pregnant for a second or subsequent time. Comfort was lower however, for initiating conversations about alcohol consumption with women of childbearing age pre-pregnancy.

Internationally, Anderson et al (2010) reported that, although 72% of obstetricians overall felt well prepared to screen for risky or hazardous drinking among patients, older ones indicated feeling significantly more unprepared to do this than younger ones.

Howlett et al. (2019) reported on health professional comfort discussing FASD, finding that, 80% of pediatricians, and 92% of GPs said they would feel comfortable discussing FASD, only 63% of health visitors (a role similar to community nurses) indicated they would.

Anderson et al (2010) also looked at beliefs about the likely positive impacts of intervention and found that a belief that patients who disclose drinking alcohol in pregnancy would be resistant to treatment was the top issue affecting obstetricians' propensity to undertake alcohol screening with pregnant patients. This was supported by Ordean et al (2020), in relation to maternal health care providers, who cited patient denial as a barrier to engaging in brief intervention.

Attitudes towards and beliefs about patients and perceptions of patient risk

The literature reveals that assumptions and beliefs held by health professionals about patients influence perceptions of patient risk in relation to behaviour change issues generally, and the issue of alcohol consumption in pregnancy specifically (Keyworth et al, 2020; Oni et al, 2019; Wouldes, 2009). Such beliefs serve to lower health professional motivation to screen for and intervene in relation to alcohol consumption.

Keyworth et al (2020) found evidence that health professionals can believe that patients either do not want or need information about behaviour change and this influences decisions about whether it is appropriate or welcome to deliver behaviour change advice. Other alcohol-specific studies have shown that health professionals tend to believe that most women (or some believe their own patient cohort) do not drink much or any alcohol during pregnancy, know not to drink and therefore that asking about alcohol is unnecessary and could appear judgmental (Oni et al, 2019; Scholin et al, 2019; Crawford-Williams et al, 2015). Giglia & Reibel (2019) uncovered similar beliefs among maternal health providers in relation to alcohol and breastfeeding.

Health professionals display biases towards certain types of patients they deem more or less at risk based on things they know about the patient (Keyworth et al, 2020; Bagley & Badry, 2019). For example, Wouldes (2009) and Oni et al (2019) report that health professionals are less likely to discuss drinking alcohol with pregnant patients if they were from an ethnic background, culture or socioeconomic class the health professional perceived would be at "low" risk of using alcohol (38%). Other studies have supported this finding and shown health professionals are more likely to intervene if they know something about the patient or their past that might raise concerns they would drink alcohol in pregnancy, such as alcohol dependence or past risky behaviours (Giglia & Reibel, 2019). Qualitative research by Hall & Partners (2016) supported these findings, reporting that

some health professionals used past medical history, culture, education or religion as a means to determine whether or not they would even need to discuss alcohol with individual women.

Some negative assumptions formed about patients based on observable factors are used to determine risk and then influence health professionals' propensity to engage in behaviour change interventions (Keyworth et al, 2020). Keyworth et al (2020) report this finding in relation to smoking and obesity, though in the context of alcohol and pregnancy, Howlett et al (2019) found that health professionals reported a greater likelihood to intervene to address alcohol consumption in pregnancy if the patient was observably intoxicated.

Perceptions of patient motivation

Keyworth et al's (2020) meta review cites perceptions of patient motivation, including perceptions of how motivated they are to change and general pessimism about their will and ability to change, as barriers to health professionals engaging in behaviour change interventions with patients. They found nine systematic reviews supporting this finding, which was reported to hold independent of patient demographics and the presence or absence of chronic illness and conclude that health professionals' decisions about whether to deliver behaviour change advice can therefore be based on preconceptions of patient motivation to take preventative action, rather than on actual patient need.

While these studies mainly focused on obesity and chronic disease, there is a small amount of evidence that such beliefs also serve to diminish health professional motivation to address alcohol and pregnancy. For example, Sholin et al (2019) reported that English midwives acknowledge that nine months is a long time for women to abstain, given the centrality of alcohol in many social situations, implying that total abstinence is an unlikely expectation for some. Research by Hall & Partners (2016) touched on these issues as well, reporting that there are circumstances in which health professionals assume that providing advice and support to pregnant women to abstain from drinking is unrealistic or unlikely to succeed and they need to settle for achieving a reduction in drinking, rather than total abstinence. Examples of such situations include in the context of alcohol dependence; where multiple other risky behaviours are disclosed alongside alcohol consumption, such as smoking and drug-taking; or in situations where the drinking in question was occurring against a background of trauma, illness, stress or other pressures and negative life experiences (Hall & Partners, 2016; Nathoo et al, 2019).

Findings from interviews with health professionals

This section of the report summarises the findings from the primary research. Findings related to health professionals' behaviours and practice are reported first. An analysis of behavioural influences follows, categorised into Capability, Opportunity and Motivation influences.

BEHAVIOUR

Conversations about alcohol do not appear to be occurring consistently or according to clinical care guidelines

Australian guidelines for clinical care advise that health professionals (specifically of relevance to this research, midwives, GPs and Aboriginal health workers) should, at the first antenatal visit, advise women that not drinking is the safest option[4], irrespective of any questions to the woman around consumption.

While health professionals at times spoke of advice about alcohol consumption being an important part of an initial assessment in pregnancy, findings from the interviews with health professionals suggest that adherence to this guideline is not routinely occurring among either GPs, midwives or Aboriginal health workers, or indeed any of the other audiences included in the research. In this research, health professionals variously reported:

- least commonly, adherence to the above guideline, that is, advising all pregnant women in their care that not drinking is the safest option;

  > *"Well, we explain first of all the risks to the unborn baby, slow fetal growth, low birth rate, premature birth, miscarriage, stillbirth, and the extreme, fetal alcohol spectrum disorder, or give them the risks to their own bodies, more likely to have high blood pressure, nutritional deficiencies, more likely to develop gestational diabetes, easier to have morning sickness and vomiting and become dehydrated, then of course we remind them that there is no safe level of alcohol consumption in pregnancy known and that it is safest not to drink while you are pregnant."*
  >
  > SHARED CARE GP, MALE, NON METRO

  > *"The routine advice we would give would be about a general healthy lifestyle, like don't smoke, stop smoking if you're a smoker, certainly don't drink alcohol, and then some more pregnancy specific advice about taking folic acid supplement, and then advice about what to do if you get pain or bleeding, and what else, and don't take aspirin, it's mostly those kind of bits of advice until they get to see whoever is going to look after them for the actual antenatal care."*
  >
  > GP, MALE, METRO

- screening women for alcohol use, and only advising women who indicated they were drinking, that not drinking is the safest option; and

  > *"I screen them first… Just the general history, and then go into your social history, the questions I ask everybody, it's just about your lifestyle choices, I'm just going to ask a few questions, do you drink alcohol, yes, how much, how often, how do you feel about your drinking, etc."*
  >
  > GP, FEMALE, METRO

- tailoring the message to perceptions of risk based on assumptions, including not informing some women at all and only advising certain groups of women that not drinking is the safest option, such as women

[4] Department of Health (2020) *Clinical Practice Guidelines: Pregnancy Care*. Canberra: Australian Government Department of Health.

that they assume or suspect may be drinking, or that they assume may not be aware of the potential harm.

> *"I think someone from a lower socioeconomic background that's one thing I would look at. Second… I look at the progress of the pregnancy, if the pregnancy is not going all right, so if there's no growth of the baby I would raise the issues, that's what I'm looking at, if there are any findings on the morphology scan that raise issues, that's something I should look into, looking at the placenta and all that, that might raise issues as to should I ask the patient… The pregnancy is going perfectly okay, the patient seems to be very contented and managing pregnancy quite well, there are no issues during checkups that I'm concerned about, maybe I might bypass that question."*
>
> SHARED CARE GP, FEMALE, METRO

> *"I don't even bring the subject up about alcohol drinking because it's like a lot of these things, these women just know what to do, you just get a feeling for this, maybe I'm wrong but my sense is that the women who really care about their health and ask me all the questions about how to have a very healthy and good pregnancy are not going to drink themselves silly... [later in interview] if they drink and they say they're not drinking then no, they're already aware of the issues around, surrounding alcohol and I don't need to go into it… I just don't see the point in giving a lecture about something that they're already aware of and they've already made the appropriate steps to avoid that problem."*
>
> GP, MALE, METRO

> *"..[people who] from a cultural point of view don't consume any alcohol, but I still might mention it, like as in for Islamic patients, but I might mention it. Often, we have in our software a record of their pre-pregnancy alcohol intake, whether it's heavy, light, or moderate, and so I would use that to gauge my, how much time I'm going to spend on it or sometimes it's ticked as a non-drinker but usually I still clarify that because it can be, needs to be updated..."*
>
> SHARED CARE GP, FEMALE, METRO

When directly asked, most GPs, midwives, Aboriginal health workers, nutritionists/registered dieticians and naturopaths, indicated they routinely discuss alcohol, in some way, with pregnant women at least upon first seeing that woman during her pregnancy. However, other findings from the interviews call into question the veracity of such claims, which may reflect what health professionals consider best practice or what they strive to do, rather than being an accurate recall of practice.

For example, during the first exercise in each interview, where the health professional recalled a recent patient visiting for the first time in her pregnancy, and described what was covered during that appointment, including any advice or information provided, mentions of alcohol were relatively infrequent. Alcohol was mentioned less consistently than such things as nutritional supplementation, immunity checks, plans for antenatal care, methods for dealing with morning sickness, over the counter medications to avoid during pregnancy, and the need to retain normal levels of physical activity.

> *"For me to see a patient for the first time things that I ask is have they been taking folic acid, have they had their immunisation status checked before planning the pregnancy, obviously concerned about what kind of care are they looking … Assessment-wise the first thing I would really do is a standard practice for a standard antenatal shared care is do the basic blood test that include their serology for rubella, chickenpox, their blood group... Once I have initial dialogue I would ask them 'would you like to ask any questions?' Some of them come prepared with questions…. Family history is very important, if they have a family history of diabetes I would definitely assess them for diabetes, family history of hypertension, so basic assessment is getting their height, weight, blood pressure..."*
>
> SHARED CARE GP, FEMALE, METRO

Screening for alcohol consumption and any mention of the importance of avoiding alcohol during pregnancy was not reported as being part of any standard new patient assessment approach by pharmacists, sonographers or pathology collectors, with some believing this was entirely outside their remit.

> *"We are not screening for pregnancy in the pharmacy, then I wouldn't know if someone was pregnant or not unless they come and tell me if they're in their first trimester..."*
>
> PHARMACIST, FEMALE, METRO

> *"We're not here to give advice as a sonographer, so if the patient does ask me questions, say "what should I do?", I'll say "You talk to your doctor and you listen to your doctor". So we're here to diagnose, not to treat, so we make a diagnosis and based on that, the obstetrician will do the treatment plan so we tend to never give advice to patients... patients come to us for a scan, we're there just to diagnose but it's up to their referring doctor to treat the patient."*
>
> SONOGRAPHER, MALE, METRO

> *"We have select criteria to ask them in regards to certain tests and that is it. We can't even, we're not even really meant to conversationally talk to them about their pregnancy. Sometimes patients just volunteer information, you can have a chat with them, but we're actually very bound by what we discuss with patients because of our lack of training we could say something that could get us in trouble."*
>
> PATHOLOGY COLLECTOR, FEMALE, NON METRO

Some health professionals spoke of responding to patient questions about alcohol in pregnancy more frequently than spontaneously raising the topic with patients themselves.

> *"..it's probably more around their mental and physical preparation for birth that is my passion, but I've kind of had the conversations fairly open, that allow them to talk about anything that's concerning them."*
>
> MIDWIFE, FEMALE, NON METRO

Although alcohol use is considered a priority issue in pregnancy, this does not consistently translate into alcohol being discussed with women

Many health professionals found it hard to choose highest priority preventative health issues for pregnancy considering them all important, though most agreed that if they had to choose, alcohol consumption would be one of them, alongside tobacco and illicit drug use, because of the perceived scale of negative impacts (of high level consumption). A disconnect was observed in many interviews, however, between this view that avoiding alcohol in pregnancy was of great importance, and the translation of this into consistent coverage of the issue with pregnant women. The apparent reasons for this disconnect are described in full throughout this report.

> *"Usually they find out at four to six weeks, so realistically it's like the top three things are: smoking, why? Are you drinking a lot? Are you on supplements? The three that have the outcomes that are almost that first trimester aspect."*
>
> GP, MALE, METRO

The likelihood of alcohol being raised, and depth of coverage, appears to vary by the health professional's relationship with that pregnant woman, and their assumptions about her

Among those health professionals at least sometimes discussing alcohol with patients, a number of factors relating to the woman they are seeing and their relationship with her, appears to influence the extent to which health professionals discuss alcohol consumption with pregnant woman, and indeed whether or not they raise the topic of alcohol all. These factors include:

- **the woman's education level** – common feedback from health professionals was that well educated women (or those of higher socio-economic status) know of the risks associated with drinking alcohol

during pregnancy and abstain, and therefore, the topic is less important if not entirely unnecessary to cover with this group

> *"I guess [its most important with] patients who aren't as well educated, low socioeconomic status, yeah I guess they may not be as aware of the guidelines."*
>
> DIETICIAN, FEMALE, METRO

- **whether or not the woman is an existing patient and what they feel they know about her** – some health professionals spoke of either raising or not raising alcohol consumption during pregnancy depending on what they already knew of an existing patient; some said they were likely to routinely raise alcohol with new patients with whom they were unfamiliar (by way of history, past alcohol consumption record)

> *"If a woman is already not drinking or they find it easy to quit drinking when she's starting to conceive or she has fallen pregnant then there may not be a need for us to give them that level of detail, so the level of detail is tailored to the needs… every person has a different risk… so we just cater that to the person."*
>
> SHARED CARE GP, MALE, NON METRO

> *"…the person I'm thinking of is someone I know from her previous pregnancy anyway and I know the mother and stuff, so I sort of know her quite well anyway and she works in a pharmacy, so she's pretty au fait with everything and fairly confident with things, so I didn't need to go into too much."*
>
> SHARED CARE GP, MALE, NON METRO

> *"If a lady comes in and I know her well and she says look, I hardly drink alcohol, I'm going to mention the alcohol but I'm not going on and on and on about it... It's a little bit of an art, because it comes down to how well you think you know the person and also in terms of their habits but also in terms of the person themselves and how they approach everything in their life, whether it be their job or whether it be even their medical appointments… I think you would emphasise things in different women that you think you need to emphasise because of all those factors, but at the same time everybody gets that message..."*
>
> SHARED CARE GP, FEMALE, METRO

- **model of pregnancy care and their own role** – some reported that covering this topic was of low priority for them where they perceived that it had or would be covered by another health professional the woman was seeing during her pregnancy

> *"I probably wouldn't need to go into much detail in other aspects because they are being looked after by an obstetrician in the main."*
>
> SHARED CARE GP, MALE, METRO

- **whether or not the woman's pregnancy was planned** – some health professionals appeared to be of the view that it was less important to discuss alcohol in the context of planned pregnancies, the rationale being that pregnancies are planned by conscientious women who are health-literate and well informed and know to abstain from alcohol. On the flip side, as discussed later in this report, some hesitancy was also expressed about discussing alcohol in the context of unplanned pregnancies, where alcohol consumption may have occurred prior to the woman being aware she was pregnant

> *"..the ones that are trying to conceive and having problems, they're usually quite conscious and don't smoke and don't really drink that much. Yeah, just healthy diet…. but they're usually, they're pretty good the clients that we see, they're not out binge drinking, that I don't think they admit to."*
>
> PRACTICE NURSE, FEMALE, NON METRO

- **whether or not it was the woman's first pregnancy** – the view was expressed by some health professionals that there is typically more need to educate first time mothers on all matters relating to pregnancy, given they have not been exposed to such information in previous pregnancies

> *"Obviously if they've had a previous pregnancy it helps because they know a lot more already, and they've looked up a lot more, read a lot more, experience and that, and then just yeah, sometimes some people just need more reminding than others."*
>
> SHARED CARE GP, FEMALE, METRO

> *"[Initial consult duration] for the second pregnancy probably around 20 minutes, for the first pregnancy…just under 40 minutes."*
>
> GP, MALE, METRO

Conversations about alcohol appear most likely to happen on a first interaction during pregnancy, and may be limited to gaining a yes/no response

Few health professionals in this research, even among those most astute at covering the topic at a first appointment, reported raising the topic of alcohol with any given woman more than once during her pregnancy. Most commonly, health professionals reported covering the topic at the initial appointment only.

> *"Often these lifestyle factors I would raise, because they're important to me, but I'm not necessarily going to come back to them because there's lots of other things to deal with. Yeah, so if it's not an issue, like if there's no resistance or there's no concern, we know we don't necessarily have to come back to it."*
>
> SHARED CARE GP, FEMALE, METRO

> *"I definitely touch on the topic and ask them if there are any issues about it, so it won't be on every visit, I think the initial visit I usually spend about 40 minutes with the patients when I'm doing the first assessment for antenatal, so at that time definitely gives me time to look at their diet, smoking, alcohol, I probably spend about five to six minutes on those topics. Alcohol is a part of it but maybe I may spend only a minute on alcohol."*
>
> SHARED CARE GP, FEMALE, METRO

As mentioned above, discussions of alcohol were often reported as commencing with screening for alcohol consumption. Some health professionals spoke of seeing no need to supply any advice regarding alcohol consumption in pregnancy to those women (in their view, the vast majority) who indicate that they are not drinking. Relatively few reported asking women whether they intended drinking during pregnancy, or seemed to consider that a woman may have been untruthful in her response or that her intention to drink, or actual drinking behaviour, may alter across the course of her pregnancy. Based on findings from interviews with health professionals, permissive, non judgemental questioning to provide social cues that are more likely to elicit an honest response, appears to be almost entirely absent from such interactions.

> *"I often get the sense that people seem to keep things from [in general, not necessarily in relation to alcohol], I mean I don't know how they would be with a doctor but I definitely get the sense that some people are not honest in fear of being judged... They seem to be under the belief that if they withhold certain information yeah, then they just won't be judged, so it's almost as if they'd rather jeopardise their test results than tell the truth sometimes, not all the time, some people are perfectly upfront and honest."*
>
> PATHOLOGY COLLECTOR, FEMALE, NON METRO

> *"The problem… I don't think that a lot of people would be very honest with doctors about their alcohol intake. Because it's probably embarrassing for them, do you know what I mean, and they probably know when they're pregnant they shouldn't be doing it."*
>
> PRACTICE NURSE, FEMALE, NON-METRO

> *"We used to say a glass or so is okay and then that went out and most people go oh no, I don't drink, I've never had anyone say I'm going to keep drinking. But whether they're just saying that to keep you happy, I don't know."*
>
> MIDWIFE, FEMALE, NON-METRO

Health professionals reported being most likely to return to the topic where the woman has indicated that she has been drinking, or they suspect alcohol consumption, or if the issue is raised by the woman herself.

> *"If they're not consuming alcohol and they're adamant that they don't want to drink during pregnancy then that's straightforward. The ones that ask if it's not doing any harm or underestimate their volume of consumption, I'd definitely raise it again."*
>
> GP, FEMALE, METRO

> *"If somebody… from the start didn't drink any alcohol with pregnancy we would not check probably anymore, but if somebody we knew had difficulty with alcohol then we would of course check to see more often."*
>
> SHARED CARE GP, MALE, NON METRO

> *"Yes, I'll always check, at least initially and then you'd probably at times through the pregnancy discuss it if needed or… but then I normally just move on… once it's been said it would be left alone, unless there's obvious signs of it… or just the past history of the patient if you know them, so you'd normally know their social history before they're pregnant anyway."*
>
> SHARED CARE GP, MALE, NON METRO

Some health professionals seemed unsure about what they would do in the event that a woman declared that she was drinking. Referral to drug and alcohol counselling was put forward as a good option particularly for high level drinking, but many indicated they had never encountered a woman who admitted to drinking during pregnancy, and, as discussed under Psychological Capability, wouldn't necessarily know how to go about referring.

There appears to be a failure among health professionals to positively reinforce abstinence when it is reported, or harness this opportunity to educate

To note, very few health professionals in this research reported positively reinforcing abstinence when it was reported to them, or using the woman's mention of abstinence (whether truthful or not) to further educate on and emphasise with women the need to avoid alcohol consumption during pre-pregnancy, pregnancy and breastfeeding.

> *"I say something along the lines of now you know that now that you're pregnant that you shouldn't be smoking or drinking and the response I get is usually yeah, yeah, I know that or obviously doctor, I'm not going to do that or something like that."*
>
> GP, MALE, METRO

> *"The extent of it is, probably, I just ask if they have any alcohol or, including sips, and then if they did say yes then I would advise them not to, but I don't kind of probe more than that… I just feel like I've kind of covered that and I've got other things to also ask, and I wonder if I was like, 'So you definitely don't?', just whether that might affect rapport with patients as well."*
>
> DIETICIAN, FEMALE, METRO

The importance of avoiding alcohol when trying to conceive appears to be rarely raised with women planning pregnancy, let alone women more broadly of child-bearing age

Many of the encounters with women planning a pregnancy described by those in the research, centred on issues with conception raised by women, and the associated advice provided, tests ordered, or referrals made (particularly by GPs). Relatively few health professionals spoke of such appointments as being valuable opportunities to communicate specific pregnancy preventative health information to women.

Fewer again reported ever discussing pregnancy-related preventative health information with women merely of reproductive age or considered likely to be planning a pregnancy in the future. Some questioned the practicality or even appropriateness of attempting to communicate anything of this kind.

Even in appointments with women planning a pregnancy where a key focus was preventative health, relatively few health professionals mentioned routinely raising the issue of alcohol consumption.

> *"I think yeah, if they have been actually actively trying yeah, yeah you're right, because they shouldn't be, like similar things like I would say in the ideal situation you should be taking your antenatal folate for minimum three months before you actually try to conceive, so I guess in a similar way I should actually extend it and say well actually, no smoking, no alcohol, no drugs, especially in the three months before conception because that's all very important. But yeah, I must say I don't actually"*
>
> SHARED CARE GP, FEMALE, METRO

While barriers to discussing alcohol are addressed throughout this report, it should be noted here that some health professionals perceived that women who came in for a check-up and advice from a health professional because they were planning pregnancy, were typically careful, health-conscious women, unlikely to be heavy drinkers and unlikely to be intending drinking during pregnancy, reducing the likelihood of the health professional discussing alcohol.

> *"Most people when they come to the doctor they have got pregnant, there's a minority that would come before they got pregnant, and the ones that do probably don't even need to be told that anyway because they're obsessive perfectionist people who kind of are ticking all the boxes and they're not the sort of people who would be drinking heavily anyway. So, they're not a people you need to tell, they would know…"*
>
> GP, MALE, METRO

The exceptions to this observed in the research were naturopaths, who have a longer term and stronger preventative health focus and may be seeking to "detox" female patients well ahead of pregnancy, and GPs with long term patients who are 'heavy' drinkers, and for whom pregnancy in the future may be put forward as one motivation to cut back on alcohol consumption.

> *"We've turned eating chocolate, sugar, alcohol, into daily experiences that we're not supposed to do. So one of the things that definitely happens for the women is no alcohol, if they smoke we need to get them off, they need to stop the smoking, and we have to get the sugar under control before they ever get pregnant, that's most definitely the case."*
>
> NATUROPATH, FEMALE, NON METRO

> *"When I take the history or even otherwise when I'm assessing them I take your smoking and alcohol history, I would ask them, do they do binge drinking any time, are there any times they have more than six or seven drinks a day, and that is when I would raise there's that issue that what happens when they think about falling pregnant, how do they feel about cutting down the alcohol intake to maybe, to begin with if they are heavy drinkers to begin with to come down 50 percent and see what happens. So, prepare them that alcohol is not the right thing to, because you can have fetal alcohol syndrome, it's a very common thing in heavy drinkers."*
>
> SHARED CARE GP, FEMALE, METRO

Health professionals tend to engage exclusively with the woman herself on this topic

Very few health professionals reported ever having preventative health conversations relating to pregnancy with anyone other than the pregnant woman herself. This was despite some acknowledging, when prompted on this topic, that support from others in the home environment can be pivotal in achieving behaviour change among patients.

> *"Sometimes the husband might be there or family in which case I give them education together if the patient consents to that. I guess one of the benefits is just having someone to remember the information as well and just reinforce that. Yeah, we'd never do that without the patients consent of course to have other people within the education but yeah, I think the more people who can hear those messages the better."*
>
> DIETICIAN, FEMALE, METRO

> *"I can see that sometimes it would be good if their partner was there as well, the partners normally come if they can to the first appointment when the pregnancy's diagnosed because they're just as excited but they can't always make it to subsequent ones, but I guess if the partners are, if they drink as a couple it's helpful if the partner comes in and hears it as well. I mean even though he's not carrying the baby but he might be bringing the alcohol home so then you're counselling them as a couple."*
>
> SHARED CARE GP, FEMALE, METRO

Some noted that women were relatively infrequently accompanied (whether by a partner or anyone else) to antenatal appointments, meaning there was limited opportunity to have preventative health conversations relating to pregnancy with anyone other than the woman herself.

> *"We don't see the partner that much… it's normally just mums."*
>
> MATERNAL CHILD HEALTH NURSE, FEMALE, METRO

One Aboriginal health worker reported running groups with fathers' that covered many facets of parenting and noted that although alcohol consumption by women who are pregnant or planning pregnancy was not currently covered, such a topic could seamlessly and usefully be included.

> *"I run a few men's groups in the community and we do touch on being a good dad and different, like all different kind of topics that we run through, but also with the midwife that we used to have, you'd get a contact through a male worker that does some men's groups… and we have conversations about strong families and what we can do to support our families just in a range of things."*
>
> ABORIGINAL HEALTH WORKER, MALE, NON METRO

While abstinence is mostly recommended where advice is provided, some health professionals are undermining the guidelines and providing tacit permission to drink

Most who reported providing advice to women about alcohol consumption during pregnancy advised that they recommended abstinence.

> *"I have always said to patients, if they ask me, is it okay to have one drink when I go here? I go…the best advice is to not drink at all, and I'm sure there are safe levels, but if something did happen in the pregnancy down the track, you will always look back in your mind and you will try to blame yourself and you will put yourself back to that time when you had a drink, and you'll always be thinking what if, so that's my bit of advice that I give, even though it probably has nothing to do with anything… I'm no expert in alcohol use in pregnancy, I would rather give the advice of just abstain altogether, it's not worth it."*
>
> SONOGRAPHER, FEMALE, METRO

However, it seems clear from comments from health professionals participating in the interviews that some are undermining the current guidelines depending on exactly how they present the recommendations. This included providing only a 'soft' recommendation of abstinence and suggesting that consuming a small amount of alcohol during pregnancy will not cause harm. Some appear to spontaneously offer this clarification, while others provide it in response to questions put to them by the pregnant woman.

> *"Well, just advise them… that they probably shouldn't be, it would be best to have no alcohol through the pregnancy… but I wouldn't sort of put too much pressure on them. I mean… to keep their faith up sort of thing you might say, 'Well, on the other hand, don't stress too much that you're doing damage to the baby if you have an odd drink on a special occasion'. So, they sort of feel that they maybe can relax occasionally or just have a drink or half a drink, as I said I know some patients that might have one glass of wine and stop halfway through, they're happy to just have a toast or something…"*
>
> SHARED CARE GP, MALE, NON METRO

> *"… I say, look, our advice to you regarding alcohol is no amount of alcohol is safe and I say the reason is because we can't do studies, we can't do studies and one lot get one glass, one get two glasses, etc, but I do say to them, and I'm probably not meant to say this, but I say to them, look I can't see there being any harm with one glass of wine at one wedding."*
>
> SHARED CARE GP, FEMALE, METRO

> *"I think it's standard advice, I just tell them on the special occasions they could have a drink but otherwise I would say it should be zero."*
>
> SHARED CARE GP, FEMALE, METRO

> *"… once they fall pregnant I would say no alcohol. But beforehand I would say relax, yes."*
>
> PHARMACIST, FEMALE, METRO

A small number of health professionals providing advice to women about alcohol consumption during pregnancy reported that they recommend women 'minimise' their consumption of alcohol during pregnancy, rather than recommending abstinence.

> *"To minimise it. It's really challenging, isn't it? I say look, if there's a special occasion… and you're planning on like toasting a champagne, chances are it's not going to do any harm but we just don't have any hard and fast evidence, or evidence to suggest a milligram per kilo of exposure, so it's safer not to, that's a very personal decision."*
>
> GP, FEMALE, METRO

When health professionals recommending anything other than abstinence were questioned in the interviews about what they considered to be acceptable levels of alcohol consumption during pregnancy, responses varied from a "few sips" at a special event, through to "a glass" at a special event, through to a "few times" or so a month. Some health professionals reported taking the approach of asking the patient what they were planning to do, and making a judgement call about whether or not they should confirm this was acceptable.

> *"Well honestly, I would say that it's probably okay to have a few sips, I wouldn't drink the whole glass."*
>
> SHARED CARE GP, FEMALE, METRO

> *"Normally I'd recommend none or, as I say, very light, like maybe one drink on a celebration type thing, a birthday, a friend… it's something that might happen once every month or six weeks… but certainly, I wouldn't recommend ever any more than two at any one time, and infrequently, and I guess anything more than that, there is a slight risk of developing that syndrome, I mean that's the latest advice we sort of have."*
>
> SHARED CARE GP, MALE, NON METRO

"Yeah, so I would say minimum that's one, one drink, occasional one drink okay, oh god…

Interviewer: Why did you say 'Oh god'?

Yeah, it sounds so vague, doesn't it, but yeah, I think that is what they say, that is what I would say if they're going to a party at Christmas or at a wedding, then I would say one, but once again I certainly can't quote where I got that information from.."

SHARED CARE GP, FEMALE, METRO

"If somebody came in to me that was early days or even up until or any stage during the pregnancy, if they said they had one every now and then couldn't even tell me when the last time was, then I might not think anymore about it, but if they were asking the question or saying is it okay to have a few drinks every other day then that's where I'd probably, well not probably, that's where I would be saying no, it's not recommended that that's safe but let's have a chat with your doctor about it as well and then get all the information, all the education that we can to support our claims and then here's what can happen if you do continue, yeah, and then I guess it does come down to patient choice at the end of the day, no-one can force them to or not to, but they've got to be educated on it either which way."

PRACTICE NURSE, FEMALE, NON METRO

How health professionals respond to women's concerns about drinking episodes prior to knowing of the pregnancy, can also send messages about alcohol consumption in pregnancy

Several health professionals mentioned women commonly coming to them expressing concern, guilt or remorse about alcohol consumed since conception, but prior to them realising that they were pregnant. These health professionals spoke of wanting to allay concerns, and generally reported that they informed women that it was unlikely the child had been affected and that they should not be concerned. Most also reported providing the clear message that alcohol should be avoided for the rest of the pregnancy. It does seem possible that, depending on the health professional's communication, suggestion that this drinking is unlikely to have been harmful could sends a mixed message that again may be providing tacit permission for women to continue to drink at some level through the pregnancy.

"..to be honest the most common thing I hear about alcohol in early pregnancy is "what about the drinks that I had last weekend where I had a few standard drinks in a session or got intoxicated, what do I do about that?" and our advice is always "you can't do anything about it and alcohol tends to have an all or nothing effect in those early weeks and it's a common problem" and be reassuring and then reinforce the idea that there's no safe alcohol level, so they're best to not have any alcohol for the rest of the pregnancy."

SHARED CARE GP, FEMALE, METRO

"..when they first find out that they're pregnant, but they didn't know and then they might have drunk some alcohol, and then they're panicking at that stage and then they ask 'is it okay?', and it's like, 'well it's too late anyway, so like just monitor'..."

PHARMACIST, MALE, METRO

"...'I've been drinking while I've been getting pregnant and I didn't know I was pregnant and have I done the baby any harm?', so that's the common question, and usually we'd say no, it's unlikely but it's important that you don't drink any more from now."

GP, MALE, METRO

"They personally tell me that they're worried, like they ask oh, I was trying but I didn't know that I was already [pregnant] and I had a big night, I had a big party, I had so many drinks, you say okay, it's not okay, so they bring that up, they ask the question, so…[Later in interview] I normally will say, I certainly wouldn't want to let them know the big effect, which is unlikely, the risk of them having, when they come to me they would only be about say seven, eight weeks' pregnant and a few sessions of heavy drinking the risk of anything would happen is really

> *small, so I do try not to… get them into a panicked state, but I certainly will stress the point that if you continue to do that it absolutely will, they will do damage to the little one, so I would encourage the woman not to drink."*
>
> SHARED CARE GP, FEMALE, METRO

Use of alcohol in pregnancy resources by health professionals appears to be limited

Few health professionals interviewed reported being aware of or using any alcohol in pregnancy resources, either to inform themselves, or to provide to patients. Those using resources were generally positive about those resources and felt that they were useful.

> *"Something that works quite well is if they do have questions then I can refer them onto patient information sources and within the software we've got some PDFs preloaded that we can print out for patients which can be quite helpful…We've got one for alcohol and pregnancy but we also have other topics in pregnancy as well… A patient handout reinforces the messaging that I've provided and there's a lot of messaging, there's a lot of content for patients to take in which I would struggle to remember myself, so because there is a lot of information that the doctor says, so by having it written down it helps to reinforce it…"*
>
> GP, MALE, METRO

> *"Oh yes, so we do have a NEMO resource called Healthy Eating and Weight Gain During Pregnancy and in that resource we have a section on alcohol which says basically that there's no safe level, safe time to drink alcohol during pregnancy. It's a handout, it's available on the internet… most dieticians in Queensland and Australia-wide would use that website for patient information."*
>
> DIETICIAN, FEMALE, METRO

> *"We have an in-house kind of leaflet which records those lifestyle, those key messages of lifestyle advice and doses of supplements and things, and that… That mentions alcohol, yeah, and I think it has a reference to the National Guidelines, but otherwise there's a local drug and alcohol service that I might get some information from if I had someone that was alcohol dependent and pregnant."*
>
> SHARED CARE GP, FEMALE, METRO

Those not using resources specifically about alcohol in pregnancy did include health professionals who were routinely using resources on other preventative health topics, but not on the topic of alcohol in pregnancy. In some cases, use of resources appears to be opportunistic, with those used being resources that had been provided to them (e.g. by a drug or supplement company), rather than anything they had proactively sourced themselves.

> *"I give them diet information that comes from the Better Heath Channel about deficiencies, like iron deficiency, because there's a Better Health Channel information sheet that's called Diet and Pregnancy or Pregnancy and Diet, and it's basically 11 pages and it just covers all the information someone might want to know. So I print that off and give it to them."*
>
> GP, MALE, METRO

> *"Marie Stopes International, I quite like them, they provide us with very good pamphlets on vasectomy, abortions, and miscarriages, and all that, and they have the address and everything, so there is a pathway for people to send to."*
>
> SHARED CARE GP, MALE, METRO

On prompting, many health professionals indicated believing that it would be easy to source any resources they needed, either by searching Google, or via trusted sources, whether or not they had actually tried to do this. Others disagreed and cited a lack of resources as the reason they had not been using any.

"Google and everything comes up, so I would look at the actual websites and I would pick one of the websites that I knew was a medical website, so it might be The College of Obstetrics and Gynaecology website, so I would pick sources I knew were credible."

SHARED CARE GP, FEMALE, METRO

"We don't have, a lot of our resources are all online. So, if I see something I just print it out, like guidelines and things. Yes. I think also because of COVID we don't have a lot of paper trail so much now, pamphlets and things. Yes. But I mean maybe that's what's missing too, like when you're sitting in the waiting room that there's nothing visual there."

PRACTICE NURSE, FEMALE, NON-METRO

"... fact sheets online… government websites, anything that says NSW Health. Yeah, we do sometimes look at Better Health Channel…I do have access to the university's database, so I would, probably if I wanted more specific information to look up research papers…if I want a quick search up, probably Mothersafe..."

PHARMACIST, FEMALE, METRO

"No, because there's nothing that I've actually seen that I can print off or direct them to, onto a website."

SHARED CARE GP, FEMALE, METRO

Few health professionals have received specific, relevant education in recent times

On prompting, very few reported having received education specifically about alcohol and pregnancy, FASD or the alcohol guidelines in the last few years, whether that be formal training or simply having read something relevant in the literature. This was true even of GPs and midwives, who routinely see pregnant women and discuss alcohol consumption. Some believed the last time they had received education on these topics would have been during their initial training for their qualifications.

"Last time I read about it was probably in fifth year med when I was doing obstetrics and gynaecology when we did our rotation...."

SHARED CARE GP, FEMALE, METRO

"That must go way back to medical school and then when we were training for general practice and then reading in journals or occasionally I would go to conferences or seminars… that would have been early on in my career when we were having a lot of teaching and just reading journals and that sort of stuff."

SHARED CARE GP, FEMALE, METRO

"We probably haven't had an update for I can't remember, but it's not the most pressing issue, I guess, because people are aware of that [alcohol and pregnancy]"

MIDWIFE, FEMALE, NON METRO

For some types of health professionals (e.g. pathology collectors), it appears that alcohol consumption in pregnancy does not feature at all in their initial training.

"There is no training [at all]… and as I said, I'm studying a Bachelor of Nursing so I know that that is actually in integrated health, which is integrated health professionals, allied health professionals like nurse practitioners, etc, you have to have those qualifications behind you to be able to discuss and advise patients on health information. A pathology collector doesn't even need to have a TAFE certificate to collect blood."

PATHOLOGY COLLECTOR, FEMALE, NON METRO

Alcohol may be raised even less often in the context of breastfeeding

Though full exploration of advice about breastfeeding and alcohol was beyond the scope of this research, those brief discussions that were had in interviews, suggested that alcohol may be even less routinely covered in the context of breastfeeding than it is in the context of pregnancy.

> *"I've never even thought much about that, it's not something that tends to be asked or even brought up by us I think."*
>
> SHARED CARE GP, MALE, NON METRO

> *"I would probably be more concerned [about alcohol consumption] if it was while pregnant than breastfeeding."*
>
> DIETICIAN, FEMALE, METRO

This behaviour appears to be underpinned by low awareness of risks associated with consuming alcohol during breastfeeding, and what the Australian guidelines say in relation to this, and a sense that it is of lower concern that alcohol consumption during pregnancy.

> *"In terms of alcohol and pregnancy I feel pretty well informed, it can increase your risk of miscarriage, it increases your risk about other birth defects, inadequate growth, all sorts of diseases for the baby as well as long-term diseases for the mum, but I guess I'm not as well informed about alcohol and breastfeeding."*
>
> GP, MALE, METRO

> *"Yeah, I'm a bit vague on that on what the current evidence is and I don't know, I have to say, if there's any special concern, I don't know if alcohol is in the breast milk, if it is, it's probably in pretty small amounts. I think we're less concerned, I think the main, from my understanding, the main concern is really during the pregnancy and especially well throughout the pregnancy and after that it probably is not such a big issue."*
>
> GP, MALE, METRO

> *"…drinking in breastfeeding has been more strongly discouraged in the last 12 months, but I don't think that information is in the community and that was very hard information to access, while I was breastfeeding three years ago."*
>
> SHARED CARE GP, FEMALE, METRO

After reflecting on their own lack of up to date knowledge of the guidelines in relation to breastfeeding, several health professionals mentioned the Australian Breastfeeding Association as a credible resource for breastfeeding women.

Table 3. Summary of barriers to effective health professional intervention on alcohol and pregnancy – interviews with health professionals

CAPABILITY BARRIERS
Psychological capability
• Lack of knowledge of extent of drinking and extent to which it affects their patient cohort • Knowledge of risks largely limited to 'FAS', believed to be rare & associated with high level drinking • Knowledge of risks beyond FASD also varies dramatically • Absence of detailed knowledge of level and timing of exposure that causes adverse outcomes • Knowledge of guidelines poor or absent among some HPs • Lack of awareness of actions to take if women were to disclose drinking
Physical capability
• Significant variation in skills & confidence to deliver interventions

OPPORTUNITY BARRIERS
Social opportunity
• Perceived social norms are barrier to conversations & impact reluctance to recommend abstinence • Social acceptability of drinking during pregnancy is not clear cut given permissiveness for occasional social drinking • More vigilance for smoking than alcohol consumption • Rarely aware of seeing consequences of alcohol consumption, so no sense of it being a big issue • Some interpret guideline as meaning no alcohol, but some interpret as meaning no evidence • Rarely aware of seeing consequences so no sense of FASD being a significant issue • Knowledge of and actual alcohol avoidance assumed when women present well armed with other pregnancy-related information
Physical opportunity
• Lack of cues and requirements create an opportunity deficit to discuss alcohol • Time pressures in consultations limit ability to engage fully in preventative health interventions • Perceived limited circumstances in which to discuss outside of pregnancy
MOTIVATION BARRIERS
Automatic motivation
• Automatic assumptions about pregnant women drive behaviour • Sensitivies around alcohol consumed prior to known pregnancy lead some to avoid communicating risks • Heavy reliance on own experience rather than formal training
Reflective motivation
• Perceived as less pressing than other issues • Some are not on board with current guidelines • See harm minimisation as only realistic approach for some patients with multiple challenges • Number of different HPs involved reduces the sense of ownership • View that education on alcohol is job of health departments & mass media campaigns • Lack of confidence to sensitively & effectively broach topic & take action • Unfounded confidence in own knowledge & abilities

CAPABILITY

PSYCHOLOGICAL CAPABILITY

Many lacked knowledge of the extent of drinking in pregnancy, including among their own patient cohort

Many of those interviewed as part of this research indicated that they perceived or assumed alcohol consumption in pregnancy to be rare (although some acknowledged this assumption was not necessary based on any strong evidence or real knowledge). In line with this, many also perceived or assumed alcohol consumption in

pregnancy to be rare among their own patient cohort. This held true across health professionals with widely ranging patient cohorts, including those reporting seeing differing proportions of women from low socio-economic backgrounds, culturally and linguistically diverse backgrounds, and Aboriginal and Torres Strait Island backgrounds. This led some to conclude that while alcohol consumption in pregnancy might be a high priority issue where it occurs (that is, a behaviour they would not like to see, particularly with regards high level, regular consumption), across the board, it is a relatively low priority issue given the small proportion of pregnancies it affects. This in turn appeared to contribute to alcohol in pregnancy not being a salient issue for many health professionals, and not immediately on their mental check list of topics to cover during appointments with pregnant women or those planning a pregnancy.

> *"I think everyone knows about smoking and alcohol these days but just really I guess reiterating it and also the passive smoking stuff. I think most people do know but then there's some people that still think, don't understand it, quite the extent of what smoking and stuff can do... I think in my head I could be naïve but I think from past history to now thinking that there's a lot less that will touch alcohol during pregnancy, unless there's a very, a lot of trauma and abuse in the family and I don't think women will resort to alcohol and smoking as much…"*
>
> ABORIGINAL HEALTH WORKER, MALE, NON METRO

> *"Well alcohol, the alcohol intake, so fetal alcohol syndrome, I think again because of the demographics I work with I don't really, to be honest I've never actually seen any women that I've had to actually send for help regarding drugs or alcohol…"*
>
> SHARED CARE GP, FEMALE, METRO

> *"I do think that the women we see are actually not really drinking with new babies or when they're pregnant… we do ask them and they say no, we're not drinking. But I don't know if that's, I mean I'm in an affluent area, generally healthy, I don't know how prevalent that would be everywhere…. people maybe don't tell us as well."*
>
> MATERNAL CHILD HEALTH NURSE, FEMALE, METRO

> *"It's probably significant but I'd say it's a minority percentage, in my estimation."*
>
> SHARED CARE GP, MALE, NON METRO

Just some considered it a major problem, including among their patients, and one that is potentially getting worse.

> *"Well, you don't want them to be drinking, that is the huge one, we see too many babies affected by drink and drugs, like I see that all the time… so the generations back in the 80s and early 90s were actually managing their alcohol intake much better… was much better than they are now… they don't seem to care, it's all about me, it's the 'me' generation, and I'm going to have a drink, too bad."*
>
> MATERNAL CHILD HEALTH NURSE, FEMALE, NON METRO

Among health professionals, knowledge of risks is sometimes limited to FAS (not FASD), which is thought to be rare and associated with high level drinking

Both spontaneous and prompted mentions of risks associated with alcohol consumption in pregnancy tended to focus either largely or exclusively on 'fetal alcohol syndrome' (FAS).

> *"I think Fetal Alcohol Syndrome is the main one I think of, yeah, just damage to the growing baby, yeah, that would be my primary concern with alcohol consumption during pregnancy."*
>
> DIETICIAN, FEMALE, METRO

> *"Just the alcohol syndrome that the babies can be born with basically, or I guess falls and accidents and trauma and so on, during the pregnancy, that type of thing… but I'm not aware of anything else, perhaps apart from probably a whole lot of risk of miscarriage. Maybe premature births but yeah, mainly the alcohol syndrome."*
>
> SHARED CARE GP, MALE, NON METRO

> *"No, I don't have any exact facts of figures to the development of the baby, the risk, yeah, no, I don't, and to the mum's health… I mean at high levels there's obviously the Fetal Alcohol Syndrome, but no, I don't know, and also I think drinking, the advice changed from moderate drinking is safe to moderate regular drinking actually isn't safe and obviously drinking large amounts is not safe either, but yeah you need to have days where you don't have any alcohol is important, and obviously in pregnancy."*
>
> MATERNAL CHILD HEALTH NURSE, FEMALE, METRO

Most were of the view that FAS was relatively rare, and also believed that they had seen very few babies with (and certainly pregnancies resulting in) this condition.

> *"I think I've only seen one patient in 35 years… When the baby was born it definitely had withdrawal symptoms, it was more in the hospital setting, postnatal…"*
>
> SHARED CARE GP, FEMALE, METRO

> *"... what I understand of that is that there's no clear threshold so whether that is likely to impact their pregnancy, I think I've seen one child affected by it in my career..."*
>
> SHARED CARE GP, FEMALE, METRO

> *"Well, I've actually seen, because I'm a paediatric nurse too, so I've actually seen quite a lot of withdrawal babies and babies that have had, kids that have had Fetal Alcohol Syndrome, so it's horrific, it's terrible, yes."*
>
> PRACTICE NURSE, FEMALE, NON-METRO

Generally, health professionals reported that FAS was something they believed to result from regular or binge drinking and was associated with facial morphology, although few seemed confident that they knew much about the condition.

> *"My understanding is [FAS results from] persisting, persisting heavy drinking… throughout the pregnancy."*
>
> SHARED CARE GP, FEMALE, METRO

> *"They could even have just three to four drinks a day that would cause a problem, if it's on a regular basis."*
>
> SHARED CARE GP, FEMALE, METRO

> *"I'm less informed about…fetal alcohol syndrome and the consequences of that, but …certainly not in our practice, we're not going to see that many fetal alcohol syndrome babies, and if we did see a baby that we suspected, I mean I guess what we could pick up that there's something wrong with this baby, we may not know exactly what it is, and then normally that sort of child we would refer on, and then it would be under someone else, so that's why I feel like I'd be less, I am less well informed about fetal alcohol syndrome."*
>
> SHARED CARE GP, FEMALE, METRO

Just a few health professionals mentioned fetal alcohol spectrum disorder or seemed to be aware of this change in medical understanding and classification.

Knowledge of risks beyond FAS/D varied dramatically – either risks to woman or to fetus

Knowledge of the risks associated with alcohol consumption in pregnancy outside of FAS or FASD, varied dramatically between individual health professionals, including within the same profession. Risks mentioned included both risks to the woman herself, which some focused on more heavily, at least initially, and included

such things as gestational diabetes as well as conditions that can be caused by alcohol irrespective of pregnancy (such as liver damage), and risks to the fetus, including such things as miscarriage, low birth weight, impaired neurological development and behavioural difficulties in later life.

> *"Well obviously [alcohol] can affect the liver, that's one of the things, alcohol itself can cause hypertension, it can affect the blood pressure, it can affect the nutrition… It can affect the growth of the baby, it can affect the mental development of the baby in the infancy and childhood, it can affect that."*
>
> SHARED CARE GP, FEMALE, METRO

> *"It impacts the baby's ability to grow, it's ability for the brain to develop, therefore all of the birth weight, all those things are actually affected by alcohol."*
>
> NATUROPATH, FEMALE, NON METRO

> *"Well it depends… upon the previous alcohol intake… if they've got a history or if they've got an impaired fasting glucose or blood glucose… then that can only get worse and then of course if they've got another risk factor like cholesterol or hyperlipidaemia then definitely alcohol can then seem to make it more difficult to control that.*
>
> *Interviewer: And what about impacts on the fetus?*
>
> *The impact on the unborn is… a thing called fetus alcohol syndrome, I'm sure you know everything about it and so do I, so we just tell them that it's a very serious thing, it can impair the growth of the child..."*
>
> SHARED CARE GP, MALE, METRO

> *"Obviously, it's the health of the unborn is the issue, the long-term effects, the short-term effects, fetal alcohol syndrome that occurs. I guess you're putting someone at risk who has got no choice of what goes on. They're just a passenger in the process really."*
>
> PHARMACIST, MALE, METRO

Some health professionals struggled to clearly articulate the risks and made vague mention of such things as 'impact on growth' if they were confident to articulate a risk at all.

> *"I only know that you shouldn't drink alcohol during pregnancy… I actually don't know why…. what effects does it actually have on the baby, like how toxic it is, I actually don't know, so I'm not very informed at all in terms of alcohol and pregnancy except that it's considered a bad thing."*
>
> PHARMACIST, FEMALE, METRO

> *"Not that I would be able to swear on a bible by, I would imagine it probably causes smaller birth weight maybe, perhaps might be associated with premature babies and stuff like that, but I couldn't be sure about that."*
>
> GP, MALE, METRO

Even those with more detailed and accurate knowledge of the risks of alcohol to the fetus, displayed knowledge deficits in relation to the impact of amount and timing of exposure

On prompting, some health professionals could correctly articulate that drinking alcohol during pregnancy can cause problems for the developing baby throughout pregnancy, and that there is also no safe level of alcohol consumption. Others expressed different views, notably that alcohol has a more pronounced impact at certain points during the baby's development (the first trimester mentioned most often in this context), or that risk is realistically limited to high level (and less commonly regular) drinking. Some admitted to a lack of knowledge in this area and welcomed the idea of learning more

> *"First trimester definitely because that's where the developmental stage is, but then your brain is growing constantly… so you're going to have difficulties throughout no matter when you drink."*
>
> MATERNAL CHILD HEALTH NURSE, FEMALE, NON METRO

"... it's very hard to predict the impacts, so because of that the guidelines have to be conservative and quite clear that all alcohol in pregnancy is discouraged with no safe limit. So yeah, I feel reasonably informed about the guidelines, I guess not so maybe informed about the nuance of the effect on a pregnancy... especially if I had a patient that was going to continue to drink alcohol… then I would want to know about the risks of that. Yeah, like I kind of know about the equivalent risks of smoking… but yeah, I would like to know a bit more about that, yes, and definitely breastfeeding."

SHARED CARE GP, FEMALE, METRO

"I mean how many people do you know who get pregnant on a night of complete drunken alcohol, I mean, and have perfectly healthy babies, but so I think the alcohol becomes more important during the pregnancy but I would think there's significant points of mass growth that happen in the first three months and the last three months that would be a major concern of making sure that alcohol is not there in at least the first and the third."

NATUROPATH, FEMALE, NON METRO

"I guess maybe knowing a bit more about fetal alcohol syndrome because I haven't really seen many babies born to mothers who have got it, so maybe just knowing what is the maximum someone can drink if at all and when they should, yeah maybe just more clearer guidelines."

SHARED CARE GP, FEMALE, METRO

Knowledge of guidelines is poor or absent among some health professionals

Findings from interviews with health professionals suggest that knowledge of the NHMRC guidelines, either overall or specifically Guideline 3 (which relates to women who are pregnant or breastfeeding), varies considerably. Knowledge was observed to be lowest among pharmacists and sonographers, but also to be patchy even among GPs.

"I am under the impression that you should not have any alcohol during pregnancy, but I'm also aware that it's okay to have some alcohol in pregnancy, like some people do take alcohol and it hasn't had any adverse effects in their child. I'm not sure exactly how much you can consume in alcohol before it has an effect or is it like a hit and miss sort of thing, but in general I think you should not have any alcohol during pregnancy."

PHARMACIST, FEMALE, METRO

"It potentially can be harmful for the baby if you're consuming alcohol, I mean I don't know what the threshold is, they might say a certain amount of alcohol is fine but I'm not sure what that may or may not be, but I would say my perception is that it should be that you don't drink alcohol while you're pregnant or if you're trying to conceive."

SONOGRAPHER, MALE, METRO

Based on how health professionals described the guidelines, it was apparent that many were referencing old versions of the guidelines and were unfamiliar with the updated guidelines. Others were vague about the guidelines or indicated that they were entirely unfamiliar with them.

"No, I don't know actually, I know in terms of general population who's not pregnant I think there's a small little guideline that there's a picture of how many glasses for a lady, it's like one standard drink, and for a man it might be two standard drinks, I might be completely wrong, I can't remember the exact guideline, but for pregnant women it should be really zero tolerance for any alcohol, but I'm not sure what the actual guidelines are, but in my head that's what I tell my patients."

SHARED CARE GP, FEMALE, METRO

"No, I don't think I'm across them at the moment, I will have to, you've made me think about it, I'll look at it today definitely."

SHARED CARE GP, FEMALE, METRO

"No, I'd have to look it up to be honest. I refamiliarise myself with them. I often look up things in front of patients. More for, this is where I'm getting my information from and let's just check the guidelines are up to date together while you're here and that nothing's changed."

GP, FEMALE, METRO

"I think they advise none. Zero, yes, or like I said maybe very light if any."

SHARED CARE GP, MALE, NON METRO

Nonetheless, even those unfamiliar with the guidelines said they suspected that the guidelines would be advocating no alcohol in pregnancy.

"I'd probably Google the guidelines actually first, before I give my definite answer. I'd advise not to drink, but some people might say what is the minimum amount? Zero, I think it's zero… I think it should be zero during breastfeeding as well. I'm not sure if it is or not, I haven't checked, but yeah."

PRACTICE NURSE, FEMALE, NON METRO

HPs lack awareness of actions to take or referral pathways if women do disclose drinking

As previously reported under Behaviour, most health professionals reported rarely if ever seeing patients they believed to be drinking, at least to any great extent, during pregnancy. In this context, some felt unfamiliar with the appropriate action to take should (higher level) drinking be disclosed to them during pregnancy, including the most appropriate referral pathways.

"If someone really wants to know what is considered safe and which part of the pregnancy would you say definitely, well I would say the first trimester, but what about the second and third trimester? And maybe also how to manage someone if they do have a serious drinking problem in pregnancy. I've been lucky, I haven't seen that so far… There's certainly enough psychologists around who could help the person, but I don't think there's any who are specifically geared for alcoholism in pregnancy."

SHARED CARE GP, FEMALE, METRO

"I feel like I'm pretty informed as a health professional, yeah, I feel I can't think of anything that I would like [to know more about] at the moment. Yeah, I guess it's never happened but potentially what to do if someone does say that they drink alcohol, like where to refer them to? Probably if I saw them as an inpatient I'd let the team know and we could come up with a plan together but if there's any hotlines or any services that can support that would be useful."

DIETICIAN, FEMALE, METRO

PHYSICAL CAPABILITY

Varying confidence and competence in motivational interviewing and brief interventions

The confidence that was expressed in health professionals own their ability to handle the topic of alcohol consumption in pregnancy, pregnancy planning, or breastfeeding, differed across those participating in the research, including individuals within the same profession. Relatively few admitted to being entirely out of their depth in communicating on this topic. However, irrespective of professed confidence, vastly different approaches to gathering information, providing advice, and providing encouragement not to drink, were reported, and deficiencies in a number of relevant skill areas were observed, including:

- general communication skills, including reflecting listening;
- ability to create a permissive, non-judgmental consultation environment;

- ability to sensitively gather information from women;
- ability to observe and understand verbal and non-verbal responses;
- ability to use appropriate interviewing techniques (such as motivational interviewing); and
- ability to deliver brief interventions.

While some certainly indicated that they had always been confident in having conversations of this nature with pregnant women (whether or not justifiably), others noted that their confidence had come with experience, and their skills honed over time. Some felt the development of relevant skills was absent from current training for their profession. A concern was expressed that male practitioners may be particularly ill-prepared to tackle issues so strongly pertaining to women.

> *"I'm fine with having a chat... I'm the old grey midwife, so I can sit there and be a bit maternalistic with them and empathise with them… 'what is it that you want to know about, you're having a few drinks, are you concerned about that?' I'm happy to have a conversation and see what they come up with… When I trained communication was one of our main subjects. We had a lot of communication, now there's none, because I've taught at uni for a couple of years so I know what they do. There is no communication at all and you see the young ones out there struggling because they don't have the skills... I just think that it really has to start from the beginning. And the doctors as well, they don't have, some of these doctors you just look at and go you must be on the spectrum mate, because you can't communicate at all."*
>
> MATERNAL CHILD HEALTH NURSE & MIDWIFE, FEMALE, NON METRO

> *"I ask them, what is your understanding of alcohol in pregnancy, for instance… They generally say that they know they're not meant to drink and then we explore why. By using open-ended questions, by asking them what their understanding of that topic area already is, or that drug or whatever in pregnancy already is, we can avoid spending time unnecessarily covering that topic as well as also using appropriate language with the patient, so that if they already have an understanding of alcohol in pregnancy then you can talk about in a bit more detail or you can, if they have a sound understanding you could potentially not spend as much time counselling them about it… without appearing patronising or dumbing it down too much for them, because you already know what their level of understanding is and then you can add to that understanding and fill in any of the gaps with knowledge that they might have."*
>
> GP, MALE, METRO

> *"You have to approach things nonjudgmentally, respectfully, and if there is verbal or non-verbal communications from the woman that she's annoyed by the questioning I think the important thing is to actually clarify that, to actually respond to those cues and just see what's happening…the verbal and the non-verbal cues of any reactivity or annoyance or frustration or irritation, is actually something in communication skills to be responded to as a cue in a positive way…In relation to communication and consultation skills, the importance is to learn how to be nonjudgmental and respectful and learn certain techniques such as motivational interviewing… I think all healthcare professionals as their core communication and consultation skill competencies should have a working knowledge of motivational interviewing."*
>
> SHARED CARE GP, MALE, NON METRO

> *"I'd have to go out and see if we've got any flyers or brochures, because I don't feel that my level of experience or knowledge around specific dangers is adequate to educate them on."*
>
> MIDWIFE, FEMALE, NON METRO

> *"… there are sensitivities around this that we [men] don't get good skills around it, and maybe I say that every clinician doesn't get skills around that because I imagine GPs, male GPs struggle…what gender does in a clinical environment… remote communities, Indigenous communities, they're really quite clear around gender, and it's completely inappropriate for a male dietician to be speaking to female patients."*
>
> DIETICIAN, MALE, METRO

OPPORTUNITY

SOCIAL OPPORTUNITY

On the positive, health professionals believe women to be generally open to guidance

The literature suggests that pregnant women expect to have health professionals talk to them about alcohol in pregnancy, and are open to learning, guidance, and conversation; and, therefore, that there is social opportunity for health professionals to raise alcohol in pregnancy with them. This was certainly supported by the feedback from most health professionals in this research. Several mentioned believing women to be particularly open to information and advice (on all relevant topics) during pregnancy (particularly their first), and being highly motivated by the health of their unborn baby.

Few health professionals reported experiencing any 'push back' from women when broaching or responding on this topic, and most perceived that when they provide guidance on matters of this kind, they do have an impact (somewhat counter to findings in the evidence review). It certainly seems that any hesitations or concerns about broaching the topic or pushing a strong abstinence message would be the result of assumed reaction from women, rather than an actual reaction observed by the health professional.

> *"I think people do make lifestyle changes, I do know a few mums that were smoking and then they got the feeling that they were pregnant, even early stage fully confirmed, and had stopped smoking until they've got the confirmation… there is mums out there that they do get that response where they want to do everything to protect their baby, with most mums yeah."*
>
> ABORIGINAL HEALTH WORKER, MALE, NON METRO

> *"They trust healthcare professionals because where else would they get the information from? … even if they've read something online or their friend said something they would actually confirm again with a healthcare professional… if it's pharmacy-related then obviously before they take any medications they would trust what we are saying about the medications and if it will harm the baby or not. So, they really trust what we say."*
>
> PHARMACIST, FEMALE, METRO

> *"It's absolutely clear that advice given to people by their usual GP has by far the greatest influence on what they do, especially in prevention... advice from the doctor they know and trust is the most influential of all."*
>
> GP, MALE, METRO

> *"Very occasionally, yes, some women feel like you're trying to pry… 95 percent of the time it's not a problem, 5 percent sometimes you just don't get on with the patient on a personal level."*
>
> SHARED CARE GP, FEMALE, METRO

At a base level, drinking during pregnancy is considered socially unacceptable, but this may be undermined by some of the advice provided by health professionals

Most health professionals appeared to believe that drinking alcohol during pregnancy was socially unacceptable, with, for example, some expressing the view that social unacceptability of drinking in pregnancy could be driving underreporting of alcohol consumption by women. Some health professionals holding the view that drinking in pregnancy is socially unacceptable, held the concurrent view that alcohol use in pregnancy is (therefore) a niche rather than a widespread issue.

However, the apparent social unacceptability of drinking during pregnancy does not sit easily alongside some of the advice being given to women, particularly to minimise rather than eliminate alcohol consumption (with varying advise on appropriate threshold). Advice from health professionals, and others, including past

generations who drank during pregnancy, may be increasing the social acceptability of drinking and communicating that only a certain type of drinking is socially unacceptable during pregnancy.

> *"Most young women will think that it's okay to drink an occasional glass even when they're pregnant. Some will think that it's not okay in the first three months but it's okay in the second or third trimester… Most people… won't stop while they're trying."*
>
> SHARED CARE GP, FEMALE, METRO

> *"My concern is more that people get false advice from other people, especially older women who go but I drank through all my pregnancies, mums who are now in their 70s and 80s, I drank and smoked the whole time and you guys are okay. I hear that quite a bit."*
>
> SONOGRAPHER, FEMALE, METRO

> *"I think there's a perception the risks are overstated around alcohol use, and we can get away with it… I don't think we should ever accept the risk around negating the damage of alcohol use and sort of normalise alcohol use during pregnancy or pre-conception because I still don't think we're fully aware of how damaging alcohol can be..."*
>
> DIETICIAN, MALE, METRO

Health professionals may underestimate the ease of women giving up, given the pervasive drinking culture in Australia, evidenced by the permission women seek to drink

Health professionals universally acknowledged that alcohol is heavily entrenched in Australian culture, with drinking the norm, in sports, at social events, and to 'fit in'. Yet at the same time, the view was expressed by health professionals that very few women drink during pregnancy, and certainly that women generally give up immediately upon knowing they are pregnant. On reflection, health professionals note this paradox and its implications - women understating their alcohol consumption and health professionals overestimating the ease with which women give it up.

> *"I think people underestimate their own drinking... I like drinking myself but I'm very aware of the damage that alcohol can do to people, so I'm quite circumspect about what I drink, but every now and then I drink more then I should and I think most people do. I see alcohol as a huge issue in community causing a lot of medical and psychological and social problems within the community, huge, it's huge."*
>
> GP, MALE, METRO

> *"..alcohol is consumed in an unhealthy way all too often by most people, so we make no illusions around that, so yeah, I think we have to be aware that patients don't always tell you full truth either, so you have to have some sort of understanding about all that stuff."*
>
> SHARED CARE GP, MALE, NON METRO

> *"I get the feeling that it isn't a core problem for us, but that might just be, I don't know, I might not really have a basis for that because… like I say… it's quite socially acceptable, so women might be drinking a lot more than we actually think they are …"*
>
> MATERNAL CHILD HEALTH NURSE, FEMALE, METRO

The reported number of women seeking permission to drink during pregnancy (for example, by asking whether drinking at a special event would be acceptable), indicates that women may find it harder, or are more reluctant, to give up alcohol than health professionals acknowledge.

> *"„everybody at that age, we're talking about the 20s and 30s everybody's got social events, and I think alcohol's such a big part of social events… and I think maybe in their hearts they know what I'm going to say about zero alcohol but that's part of their enjoyment, and I think they want that reassurance that one glass is going to be okay."*

SHARED CARE GP, FEMALE, METRO

Only a few health professionals expressed the view that given the pervasive drinking culture in Australia, they were sure that drinking was carrying over into pregnancy.

"I think, well look, I still think a large proportion, maybe 40 percent [are drinking during pregnancy]. I mean they're not drinking-drinking, like heavily, they're still having a glass of wine here and there because that's what they've been doing, they go home from work and it's what do they do, drink a bottle of wine, and they go a glass of wine, that's not going to hurt.

Interviewer: So is it that it's seen as acceptable to drink during pregnancy or is it more that it's just so acceptable to drink full stop that…?

I think it's acceptable to drink full stop, not that it's acceptable in pregnancy because we're constantly telling women not to do it, but I just don't think they really pay much attention."

MATERNAL CHILD HEALTH NURSE, FEMALE, NON METRO

Perceived social norms for alcohol use in Australian culture may be acting as a barrier to conversations and a reluctance for some health professionals to recommend abstinence

It was observed that some health professionals in the research seemed reluctant to recommend abstinence to women even where they knew this was the safest course of action, and were very willing to *volunteer* the advice to reduce, rather than eliminate alcohol during pregnancy. It almost seemed that these health professionals considered alcohol consumption a 'right' that is undesirable to take away from women.

"Interviewer: And just to confirm what is your advice if they're actually planning pregnancy in regards to alcohol?

To minimise it."

GP, FEMALE, METRO

"I just tell them on the special occasions they could have a drink but otherwise I would say it should be zero."

SHARED CARE GP, FEMALE, METRO

A few health professionals expressed views strongly opposed to alcohol

Some health professionals in the research expressed very strong views opposed to alcohol consumption both generally and specifically in pregnancy. These health professionals spoke of the far-reaching health impacts of alcohol that they see, and their perception that major cultural change is required to reduce the social acceptability of alcohol consumption.

"...alcohol is the major problem drug in Australia. It causes more death, more harm, more everything..."

GP, MALE, METRO

"It's an important issue, you shouldn't be drinking alcohol if you're pregnant. I think you shouldn't be drinking alcohol at all, not just with pregnancy. I would have no problem if alcohol was banned or made an illegal substance like any other drug because of the damage it causes people and society..."

SONOGRAPHER, MALE, METRO

Alcohol is positioned differently to smoking, where more vigilance is generally exercised

Some health professionals noted that in their workplace, there were procedures in place to assess and intervene on tobacco use in a way that does not exist for alcohol.

> *"When we're screening in our clinics we're always asking the question about smoking and trying to impart, making people think about it, most of us have all done the Quit Skills training to the Cancer Council, so we do talk about the options and the support services."*
>
> ABORIGINAL HEALTH WORKER, MALE, NON METRO

> *"...there's the Quit Line and it's up to you as a midwife to recommend that they use this to quit and then Pregnancy Quit Line often will give free help to the partner if they want to quit as well, and we encourage partners to quit as well..."*
>
> MIDWIFE, FEMALE, NON METRO

On prompting, some acknowledged the incongruity of this far stronger focus on tobacco use than alcohol use, given how harmful both can be for the developing fetus if used during pregnancy, and given the much higher prevalence of use of alcohol compared to tobacco in the community as a whole. Some health professionals expressed the view that communicating the quit message was far easier than advocating changed alcohol consumption, both because unlike alcohol there is no safe level of tobacco use ever (in pregnancy or at all), and the far stronger social norms against smoking (in pregnancy or at all).

> *"The anti-tobacco campaign has probably been stronger in its message to stop tobacco use during pregnancy than it has been, than the anti-alcohol campaign… there is a demonising, you're a social outcast, you're going to be a bad mum [if you smoke in pregnancy]… social pressures normalising non-smoking during pregnancy, which is a far better norm than alcohol misuse in pregnancy."*
>
> DIETICIAN, MALE, METRO

Rarely aware of seeing consequences of alcohol consumption during pregnancy in paediatric patients or broader community – no sense of diagnosed FASD being a big issue

The lack of salience of alcohol consumption during pregnancy may be partially explained by a lack of visibility in the community of the outcomes of alcohol consumption in pregnancy. Few health professionals are seeing the consequences of alcohol consumption during pregnancy in either their pediatric patients or in the broader community.

> *"I think I've seen a case or two over the years but only, like they weren't involved with me during the pregnancy."*
>
> SHARED CARE GP, MALE, NON METRO

> *"To be honest I don't know… I think it takes a while to be, like when children are not reaching their milestones, but I have seen some babies with quite dysmorphic features at birth that it's been very highly suspicious, but I've never heard of the diagnosis being made at birth, it's more… behavioural and down the track as the child is not really meeting its milestones and fitting in with behavioural norms."*
>
> MIDWIFE, FEMALE, NON METRO

HPs have different interpretations of the idea that 'no safe level' has been identified, with some equating it with problematic evidence

Obliquely, the alcohol guidelines themselves appear to be offer an opportunity for health professionals to provide advice to pregnant women *other* than not to drink. Certainly the 2020 update to the guidelines has clear, unambiguous advice that 'women who are pregnant or planning a pregnancy should not drink alcohol'. Unfortunately, as previously noted, many health professionals appear unfamiliar with the revised guidelines and may still be working off the 2009 wording of 'for women who are pregnant or planning a pregnancy, not drinking is the safest option'. It is the articulation of why avoiding alcohol is the safest option that is providing a loophole for some, namely the idea that no safe level of alcohol consumption has been identified. As will be discussed under Reflective Motivation, while some health professionals are correctly concluding that all alcohol must be avoided to prevent risk of alcohol-related harm, others seem to feel that the guideline is inappropriately

conservative, that there is no evidence that low level drinking will cause harm, and it is simply the case that there is no evidence currently for the threshold for 'unsafe' drinking. It is of course possible that some health professionals are using this 'loophole' to absolve guilt about potentially having provided incorrect advice, now or in the past, or to accord with previous decisions made, including in their own or their partner's pregnancy.

> *"...if they have a few drinks here or there I don't think there's any real evidence that there's a problem. My wife certainly had a few glasses of alcohol when she was pregnant with our children and all of them are very healthy, normal, intelligent members of society. I think it's like a lot of most things in life, as long as you do things in moderation, and you're sensible about what you're doing, and given the circumstances you're in, you'll be fine..."*
>
> GP, MALE, METRO

Given the ubiquitous nature of information about health and pregnancy, HPs see women as already armed with relevant information

Health professionals noted the huge volume of information available to all women through many channels and observed that some patients come to them already armed with information about a range of pregnancy-related topics such as fertility, nutrition and genetic testing. This appears to lead some health professionals to assume that women are already well informed on many topics relevant to pregnancy, including the need to avoid alcohol during pregnancy, diminishing the perceived need for them to address this with patients.

> *"I think most women know now that in terms of a healthy safe pregnancy it's all about a good diet, avoiding alcohol, about avoiding recreational drugs, about not smoking, about being aware that… before they take any medication they need to check with someone."*
>
> GP SHARED CARE, FEMALE, METRO

> *"..the women these days get a lot of education by the apps. So that's probably the next thing, someone needs to probably research which apps they're getting, but then we'll never be able to control which apps are the best or which ones they should be accessing."*
>
> MIDWIFE, FEMALE, NON METRO

Some health professionals, as previously noted, believe that women look to them for dependable information and advice and to confirm what they may have read or heard. These health professionals see it as their role to educate regardless, and to confirm, clarify or correct assumptions women may have.

> *"I think most women in the area that I work in do their own research anyway and are very highly motivated, and so the conversation is more a reinforcement of what they're already doing."*
>
> GP, MALE, METRO

> *"Often the women have other sources of information, they've got various groups, Facebook resources, and also just general online resources published by New South Wales Health or the Better Health Channel in Victoria and stuff like that, so they use those. For me as a GP, what I often do is reinforce what they already know, reinforce for instance the importance of abstinence in terms of alcohol consumption, reinforce physical activity for the patients, the importance of that, and ensure that they're on the correct supplements to prevent birth defects in the baby..."*
>
> GP, MALE, METRO

However, other health professionals suggest that the availability of information and the presentation of pregnant women with some prior knowledge regarding health during pregnancy as justification (conscious or unconscious) for skipping conversations with pregnant women that they might otherwise have had, assuming no need.

"I don't know if GPs go through those things because some of the things seem like common knowledge or things that they would have been able to read up on the internet, for example, don't take alcohol while you're pregnant or like too much strenuous exercise, like those things seem like common sense but it's not…

Interviewer: Do you think that could be a factor in whether or not healthcare professionals communicate these things?

Yeah, I think so. Like so from a personal perspective as well, I would assume that women would know not to drink alcohol during pregnancy or like to decrease their caffeine intake or something like that. So I wouldn't go oh, you're pregnant, make sure you don't drink alcohol because I just assume that they know."

PHARMACIST, FEMALE, METRO

Health professionals believe GPs and midwives are best placed to engage with women

Most considered GPs and midwives to be *best placed* to provide information on alcohol in pregnancy and any associated support to women. GPs considered themselves, and were considered by others, to be important gate-keepers, the first port of call for most women in their pregnancies, and the health professional most often accessed pre-pregnancy for a wide variety of reasons (creating opportunity for conversations). GPs were seen as in a particularly strong position to support women where they have an existing relationship with the woman pre-pregnancy, such as in a 'family GP' scenario.

"Australians make an average of six visits to GPs per year, people under 60 make about four visits, women tend to make some more than men because of contraception needs and all that kind of stuff, so clearly GPs are in the best position of all the health professionals. "

GP, MALE, METRO

"I think the GPs are in a very good position to because they often have a relationship with the woman prior to her being pregnant. It's unusual for a GP to see a patient for the first time [in pregnancy]… there's a relationship that's based on trust, and so therefore, they trust and understand and usually follow what their GP would recommend to them."

GP, MALE, METRO

"…we have an important role in providing these checks and giving this information and particularly in family medicine we have a longitudinal relationship with patients, one that builds trust and one where we approach things nonjudgmentally and respectfully which hopefully gives them the best chance to come and talk, particularly when there are difficult circumstances."

SHARED CARE GP, MALE, NON METRO

"In this area look, the GP still has to hold that central hub of healthcare delivery… I don't know their medical history, I don't know what their alcohol usage was in the past, I don't know whether they've got alcoholism in the family history or there's an addiction issue.."

DIETICIAN, MALE, METRO

"Probably their family GPs, all of my patients will no doubt have that conversation as one of their starting points… Can I say, like we would sell a lot of pregnancy tests but we don't get the tests coming back. If that makes sense, so people are coming in and they're wanting to know if they are, but there's obviously another step before they get back to us. Which I would imagine is going to be their family doctor."

PHARMACIST, MALE, METRO

Midwives considered themselves, and were considered by others, to also play a key role given their specialist knowledge of pregnancy-related topics, familiarity with speaking to pregnant women, and ongoing relationship with many women through their pregnancy and potentially beyond. A key limitation acknowledged for midwifery in respect discussing alcohol consumption in pregnancy, was that midwives typically do not see

women prior to 14-16 weeks gestation, thereby entirely missing pregnancy planning and the first trimester of pregnancy.

> *"I think every health professional has their own… bent on where that information comes from, and I really do believe midwives are probably the ones who have the all-round information. Obviously, pharmacists would have a little bit more information about drugs or medications and side effects, but sadly, I find anyone feels that they have the right to tell a pregnant woman what's going to happen and what they should be doing, even random strangers in the supermarket queue… I find often obstetricians have a, the way they have come up through the system they are doctors, surgeons, then obstetricians, so they know how to fix problems, but the majority of the time pregnancy isn't a problem that needs to be fixed, it's a normal physiological bodily process that just needs to be observed and monitored..."*
>
> MIDWIFE, FEMALE, NON METRO

> *"People walk into a specialist like they are all very nervous, but when the midwives tend to be there, they're all mums… they have been in the same situation and they're just really approachable… I get so many people who come in and they say, they ask me a million questions because they feel uncomfortable asking their doctor when they're in the consult and it's all very formal."*
>
> SONOGRAPHER, FEMALE, METRO

> *"It's usually the GP that is managing the first stage of pregnancy, and then you get referred to the hospital and usually you're seeing midwives, you're not seeing obstetricians."*
>
> SONOGRAPHER, MALE, METRO

But health professionals recognise the need for all to be 'on the same page'

While most felt GPs and midwives were best placed, few (perhaps outside of the field of pathology collection) believed they had absolutely no role to play at all in relaying preventative health messages to women, including about alcohol in pregnancy. Given the volume of information women must take in about pregnancy, it was felt that information would be most successfully taken on board if heard from several sources.

> *"It has to be across the board, it has to be multidisciplinary, it's the only way it will work, you can't hone in on one or the other, it has to be multidisciplinary… Until everyone's trained exactly the same and has all the same skill base and knowledge base and ability to communicate these issues we're never going to see a change."*
>
> MATERNAL CHILD HEALTH NURSE & MIDWIFE, FEMALE, NON METRO

> *"I think it should be a shared responsibility, like it shouldn't just be up to one person… everyone should be asking and supporting when seeing the patient whether it's the dietician, the midwife, the doctor, yeah, it should all be reinforced in those messages, and all be on the same page as well."*
>
> DIETICIAN, FEMALE, METRO

> *".. .people when they go into a clinical setting get a bit daunted and they don't take in what they're being told, so if that's reiterated in other areas, like such as ultrasound or the midwife or their pharmacist, I think that is really useful, because I have people come in here and they say 'oh, my doctor did say something but I really, I couldn't take it all in'."*
>
> SONOGRAPHER, FEMALE, METRO

> *"I think they all should have a part to play, now how much of that part would have to be determined by a multidisciplinary team to go 'okay, really, you shouldn't really go into all of this because that's not really your speciality' but definitely need to go into… this, and this because that's the repetitive knowledge that they need."*
>
> MATERNAL CHILD HEALTH NURSE, FEMALE, NON METRO

The importance of avoiding different messages being relayed by different health professionals and hence women receiving mixed messages, was also noted.

> *"..in the 12 minute consultation with the GP they can't give really health promotion advice, one, because they don't have the skills or the capacity or the strength or the time, maybe even the personal interest… and then the patient then goes see someone else that's not the expert, and then the message gets mixed or less strong… where you've got GPs that… have a community expectation to give health promotion advice, and [if] they don't have the structure to do that, it all goes very wrong."*
>
> DIETICIAN, MALE, METRO

Some indicated they would be *less* reticent to provide advice on this subject, were they 100 per cent confident in what they were saying and were they sure they were delivering the same message as other (potentially 'core') health professionals.

> *"I think as a healthcare professional you have to be very careful about what you do tell patients because quite often it's not my role to tell. So, I know a lot of people have different views about what they divulge to patients, some people have the view that they will say nothing at all because they don't want to be responsible for the patient acting in a certain way … patients as well, they're quite vulnerable because they're in a situation where they are hurt or they are scared so they're anxious, so they're more open to suggestion and open to someone leading down a certain path, so I think people have to be very careful with what they say."*
>
> SONOGRAPHER, MALE, METRO

PHYSICAL OPPORTUNITY

Lack of cues and requirements create an opportunity deficit to discuss alcohol in pregnancy

The findings from this research suggest that currently there is less physical opportunity for health professionals to screen for and discuss alcohol consumption than there is for them to address various other issues relevant to pregnancy. There is an absence of both cues to remind them to address alcohol in pregnancy, and system or process requirements for them to do so.

For example, as mentioned under Social Opportunity, some reported that screening and intervening on tobacco use is built into their practices and procedures in a way that screening and interviewing on alcohol use is not, and that alcohol is not a focus of staff training or professional development in the same way as tobacco.

> *"The question about smoking is one of our trigger questions that's asked early in pregnancy and then again it's asked later in pregnancy and it's one of our recorded in a dropdown box on our birth outcome system, the database that we use to capture pregnancy care and outcomes, but the alcohol question is not one that is a mandatory, shall we say, question to ask again later in pregnancy…"*
>
> MIDWIFE, FEMALE, NON METRO

Some suggested that including relevant prompts in practice software would be an ideal means for ensuring universal and consistent coverage of alcohol consumption in pregnancy.

> *"If somebody comes in for a B12 injection we write dot B12 and a checklist comes up automatically and same with immunisations, it's a dot IM and then all of the information, have you discussed contraindications, have you discussed this, have you discussed that, kind of a bit of a cheat sheet... so I really feel like specifically with alcohol and pregnancy there should be a bit of a shortcut for that sort of stuff because we see a lot of ante-nates but mainly for observation purposes as in weight, height, and all those things come up and we're checking their urine, so why isn't there a little 'have you discussed alcohol and pregnancy?' or something like that, and then us getting educated on exactly what is best practice and exactly what is the most current knowledge. Hopefully,*

the doctors are doing that but nurses get chucked so many things, particularly in our practice, and I'm sure it happens across the board, but we need that prompt I suppose because there's so much stuff that you have to remember."

PRACTICE NURSE, FEMALE, NON METRO

"In principle we should have a checklist and as soon as we diagnose pregnancy, the computer system should give us the list to go through, and some of that could be given to the patient in advance, essentially we should have a more reliable way of covering all the important issues."

GP, MALE, METRO

Time pressures in consultations limit ability to engage fully in preventative health conversations, with other matters and patient's own agenda often taking priority

On its own, lack of time was not typically provided as the reason for failing to screen for, or provide basic information and advice on, alcohol use in pregnancy. It was, however, occasionally given by health professionals as a justification for not returning to the topic a second time with pregnant women, for not providing information to pregnant women who had indicated they were not drinking when screened, or for covering the topic of alcohol in pregnancy very briefly.

This research indicates that in the face of time constraints, other activities, issues and risks, seen as more relevant to their patient, more pressing, or more in line with the patient's own agenda, can take precedence at all stages from pre-pregnancy through to when seeing women post-partum.

"Time is a barrier, making sure that our agendas are similar, that they're feeling that they've got what they want out of the consultation as well as getting your agenda across..."

GP, FEMALE, METRO

"Yeah, and also the time factor, appointments are so time, like life is so time limited at the moment in general, so you don't have the choice, and sometimes a doctor will have the consult and the patient will come in and then be like 'can you explain what they've just told me because I haven't understood and I haven't had the chance to ask the questions because now your consult is finished and it's time to move along?', so that part of it frustrates me but that is also the medical professional in general."

PRACTICE NURSE, FEMALE, NON-METRO

"...their first pregnancy and they're sort of unsure of what the next steps are, so that then takes quite a bit of time to unpack… absolutely, a much more time-consuming consultation…because often these women that I see are generally quite healthy, so they've had relatively limited exposure or limited interactions with doctors and the healthcare system until they do become pregnant."

GP, MALE, METRO

Somewhat contrasting with findings from the evidence review, lack of time to adequately cover the array of preventative health and other topics relevant to women in pregnancy appeared to be most keenly felt by midwives. Some GPs did note, when asked about time constraints, that they could re-book a patient should they feel the need to cover any topic more thoroughly.

"You only get to do it [talk about alcohol] once… that's at booking in [30 minute appointment]. Because you don't have time to raise anything after that, you've got 15 minutes to see a woman and get her out, so you're trying to just get all the physical stuff done, the bloods sorted, get her results, that sort of stuff, and 15 minutes is not much time, and then answer the questions that she has if she has any."

MATERNAL CHILD HEALTH NURSE (ALSO, AND RESPONDING AS, MIDWIFE), FEMALE, NON METRO

"Yeah, there's always time pressure, so sometimes you split it into two, like you might cut it short a bit and organise the blood tests that I was talking about and then get people to come back after the blood tests and organise a bit of extra time then to finish off what you were telling them if you haven't got time all in one go, because it would invariably take more than 20 minutes… Most GPs work on a 15-minute appointment basis so they're always going to be, if someone comes in and wants to talk about pregnancy there's always a little bit of a mental groan… oh no. Put me back by half an hour, yeah."

GP, MALE, METRO

Perceived limited circumstances in which to discuss outside of pregnancy

As noted above under the section 'Behaviour', relatively few health professionals spoke of discussing the topic of alcohol during pregnancy before seeing a woman expressly to discuss pregnancy planning, and in some cases this did not occur until the woman presents as pregnant. When directly asked why this was the case, some health professionals said that, until a woman is planning for or pregnant, they perceived there to be limited circumstances where they would have the opportunity to discuss pregnancy-related topics. Not all health professionals considered appointments such as those to discuss contraception options an opportunity to raise alcohol in pregnancy, and thus did not exploit such an opportunity.

"Well I definitely raise these [preventative health] issues with my younger female patients who come 25 plus and ask them if and when you want to plan a pregnancy, have you thought about what tests you need to do, so it's a standard thing that I do in patients who I've been seeing for a while, I would do some kind of prenatal assessment… [also] when I'm doing Pap smears on patients, when you're taking the social history you do ask them whether they're single or with a partner, have they been on contraceptives or not, if they are not on contraceptives what do they think about if pregnancy happens, are they prepared to continue the pregnancy, have they thought about it, and I would discuss STIs at that time."

SHARED CARE GP, FEMALE, METRO

"I think it should be a continual thing, for us it's actually just when we catch the pregnant woman, for example, I mean if they're going through the hospital system we might only catch them for their vaccination and if they're unwell during it. Generally, we catch them through the second and third trimester. Yeah, especially if they're well or if they're going through private, they don't tend to come to their GPs unless they are unwell really, yeah."

PRACTICE NURSE, FEMALE, NON-METRO

"Yeah, it used to be, well the pill scripts is always the time we often talk about that, and we always get people in yearly for their check-up, blood pressure, and pills and it's because the CST is now out there, it's five-yearly, there's a lost opportunity, starting at 25. So, really, education at 15 with the pill, any kind of conversation it's only one, it's really key, and that's being diverted potentially to pharmacy…and usually if you're filling out a new patient form or something, so if they're changing practices or new to an area that's generally the time to at least find out if they do [drink alcohol], otherwise it gets very problem focused per consult, but there's less opportunity I think systematically than there used to be, so it's just tagging that onto contraception device, might be a message like that to contraceptive options that gets printed on."

GP, MALE, METRO

MOTIVATION

AUTOMATIC MOTIVATION

Assumptions about a pregnant woman can drive health professionals' behaviour

The research revealed a number of *assumptions* commonly held by health professionals, that is, beliefs accepted as true, without proof. These assumptions included that:

- women who plan pregnancy are motivated and less likely to be drinking than those who haven't planned pregnancy;
- drinking in pregnancy is only common (and therefore an issue) in some sections of the community, particularly women from lower socio-economic backgrounds; and (related to this)
- educated women will already know not to drink during pregnancy.

It appears that these assumptions are driving health professional behaviour. Some health professionals reported only briefly covering the topic of alcohol in pregnancy with a woman, or skipping a conversation on this topic entirely, based on one of the above assumptions. These assumptions were also observed to limit the extent to which the issue of alcohol in pregnancy was top of mind for health professionals or something that they prioritised discussing in interactions with pregnancy women or those planning pregnancy.

> *"If I had a suspicion that the woman has been an alcoholic kind of thing or has been drinking a lot of alcohol at a young age and all that she's still drinking then I would broach it and go over it thoroughly but I think that's very rare, I haven't seen any cases here present here where women are drinking because maybe I'm in a much more elite environment in [name of suburb], but maybe if we went into real up north where there's not much of TV and education material they have…"*
>
> SHARED CARE GP, MALE, METRO

> *"I work in a suburb that's not socially disadvantaged, like socioeconomically disadvantaged, so that would be a different customer base or like where I work people are quite educated as well. So I don't have that, I would assume that there are some locations where people are not as educated and we can't make assumptions that they know or not know, so I don't generally give that information because I think that the people who I serve generally know or have basic common sense."*
>
> PHARMACIST, FEMALE, METRO

To note, virtually every health professional included in the research expressed the belief that women in their patient cohort were not drinking or would not drink during pregnancy, and this included a diversity of health professionals from those for whom lower socio economic patients constitute a very small proportion of their patient base, all the way through to those for whom lower socio economic patients constitute a very high proportion of their patient base. The result was that alcohol consumption in pregnancy was not reported as a major issue among their patients, for any in the research sample.

> *"Yeah, I mean I guess to some point women who are likely to be drinking that much are unlikely to come to a naturopath. So I think a doctor needs to know about that stuff, and they need to ask those questions for sure because they need to be aware of it, but I guess… I don't end up with a lot of those cases, again because of the money it costs to come and see a naturopath compared to going to a GP."*
>
> NATUROPATH, FEMALE, NON METRO

> *"I come from an area which is relatively low socioeconomic clientele… we do have some more affluent women in the society but they're not as common… the majority of the women I see are yeah, probably middle to lower socioeconomic. Some homeless, some from Aboriginal background... **[Later in interview:]** In different*

socioeconomic groups I think yes [alcohol consumption in pregnancy may be an issue], maybe to a different extent, but most of the clientele I see they realise that no alcohol is safe at all, and completely abstain."

MIDWIFE, FEMALE, NON METRO

"I would imagine that somewhere in a less educated demographic maybe it [alcohol] might be, or where there is drug and alcohol abuse, like a community, like that might be an issue or they might not care or where like pregnancies are not planned. Yes, but in the community where I serve, I don't think alcohol is an issue, it's just common sense that you shouldn't drink."

PHARMACIST, FEMALE, METRO

"I'm predominantly a private billing GP, so I have a different population that can afford as well as chooses to invest some of their own funds in their healthcare, so I think my patient population is skewed towards those who tend to take more responsibility for their health, so I don't have much of an issue of that in my practice, however, for example, if I worked in a practice with predominantly low socioeconomic patients that were bulk billed that would be very different… I think use of alcohol, tobacco, and recreational drugs would be higher in that population."

SHARED CARE GP, MALE, NON METRO

"In private practice you find that most people are more affluent and they're quite smart, they know not to consume drugs and alcohol in pregnancy, but also because they're older, they're more educated and they probably, they're planning this, like they've planned, it hasn't just happened while they've been out completely drunk on a Friday night, do you know what I mean?"

SONOGRAPHER, FEMALE, METRO

During these discussions, few participating in this research seemed to recognise the inherent contradiction in what they were saying, namely that alcohol is strongly entrenched in mainstream Australian culture and widely consumed at unhealthy levels (including, in some cases, by their patients), but at the same time, the female patients they see are sufficiently educated and health conscious not to consider consuming alcohol (at least at any perceived 'harmful' level) in pregnancy.

"I think again, it depends on the type of demographics you're speaking to, like the community that I work with they tend to be fairly educated, most of them have gone to university, they work in a white-collar job, so a lot of them, I think they do know that alcohol in excess is not good for you. Like a lot of times you would do a screening panel or blood test and it's like oh, your liver function is raised, your GGT is raised, oh, do you by any chance drink a lot of alcohol and then they have a laugh about it, so they do know and they go oh yeah, I know, I need to cut down, yeah."

SHARED CARE GP, FEMALE, METRO

Some mentioned that it felt inappropriate for them to discuss alcohol consumption in pregnancy with women they believed not to be drinking, including as it might damage their relationship with the woman because: it was seeming that they were inappropriately pushing their own agenda rather than being client-focused; or even that they were being offensive by implying the woman was a 'bad mother'.

"I think it would be a turn-off for them if you create an issue out of something that was no issue. I wouldn't think that there's any need, it's like someone who doesn't smoke, I wouldn't go and tell them not to smoke again because they're not doing it. It just becomes boring and you lose the message because you focus on things, there are many other things that you can help with a person, but there's no point focusing on things which aren't an issue, non-issues."

GP, MALE, METRO

Women's sensitivities about alcohol they consumed prior to a pregnancy being confirmed, led some HPs to avoid fully communicating the risks to prevent amplifying their guilt

Some health professionals interviewed as part of the research spoke of how stressful they perceived pregnancy to be for many women, particularly those who have struggled to conceive.

> *"...when you're not there and it's [pregnancy's] not happening, it becomes, I think the lady becomes a little bit insecure, a little bit sort of what's wrong with my body…"*
>
> DIETICIAN, MALE, METRO

The health professionals spoke of seeing women expressing guilt about sub-optimal behaviours from in early pregnancy, prior to the woman realising she were pregnant, or 'blaming' herself, either rightly or wrongly, when difficulties arose during a pregnancy. On the topic of alcohols specifically, some health professionals were clearly treading a fine line between communicating the risks associated with alcohol consumption during pregnancy and avoiding amplifying any pre-existing guilt, thereby reducing their motivation to articulate the risks and provide a clear message to women to avoid all alcohol moving forward in the pregnancy.

> *"..the other thing I say [to pregnant women] is that alcohol has this all or nothing effect in early pregnancy which I don't know whether that's entirely true, but as in that if they had caused damage that it might lead to a miscarriage or it might be unaffected, and it's probably, I probably should actually do some research on that idea before I keep saying that..."*
>
> SHARE CARE GP, FEMALE, METRO

> *"A lot of women especially when things go wrong will blame themselves and they'll try and look back and go, was it this? Was it that? But usually it's unexplained and it wouldn't have changed, it would have ended up that way anyway. So I find that women need to stop putting so much pressure on themselves to produce a perfectly healthy baby."*
>
> SONOGRAPHER, FEMALE, METRO

> *"You don't want to make them feel bad if they do have one or two, like they're going to hurt their baby."*
>
> SHARED CARE GP, MALE, NON METRO

HPs draw on life experience, consciously or unconsciously, when communicating on this topic

As reported under Behaviour, few health professionals participating in this research indicated they had recently, or for some ever, received specific training or education on alcohol in pregnancy. In some cases, it seems clear that health professionals' attitudes and advice to women is influenced by what they themselves did during their pregnancy, what members of their family (including a male health professionals' partner) had done during pregnancy, and their own personal drinking and acceptance of alcohol. It also seems clear that a lack of visibility in the community of problems brought on by alcohol consumption in pregnancy, coupled with this lack of education, is contributing to health professionals failing to appreciate the extent of the issue.

> *"Yeah, well, I've got three kids of my own, I've sort of been through that process before, that would be my own experience as well I'll draw upon. And then at the other end of the scale generally speaking for me during my career I've had, look, it's an industry dominated by ladies as far as shop staff go so there's a wealth of knowledge there as well of ladies that have had their own kids, or one of their kids' kids…There's no shortage of firsthand experience in the pharmacy when it comes pregnancy."*
>
> PHARMACIST, MALE, METRO

> *"So five years ago, so I drank, I had my farewell party, I had my dad's 60th and everything all when I was pregnant before I knew, so I actually consumed a fair amount of alcohol in my first trimester and I was mortified and so I had, I actually found my diary when I was moving the other day, I had all these questions written down*

> *for each of my antenatal appointments, and the very, very first one for my first antenatal appointment, which was actually with a midwife, not even with an obstetrician, it was my essentially booking in appointment and I said 'I drank a lot a few times in my first trimester, are my children going to be okay'? And the nurse kind of just laughed at me and like 'yeah, they'll be fine'… I also asked my GP about the alcohol thing and she said 'that's a question for the obstetrician because I don't know'…The obstetrician said the same thing as the nurse, had a chuckle and went 'yeah, you'll be fine'."*
>
> PATHOLOGY COLLECTOR, FEMALE, NON METRO

REFLECTIVE MOTIVATION

Health professionals are fundamentally motivated, at least to some extent, to provide preventative health information in line with patient expectations

On the positive, as noted under Social Opportunity, a belief among health professionals that women expect to receive and are open to receiving preventative health information from health professionals, particularly during pregnancy, facilitates preventative health conversations, including those about alcohol during pregnancy. That is, a desire to meet expectations, and fulfill a role as educator, is motivating to health professionals.

However, oftentimes, alcohol is perceived to be less pressing than other issues and deprioritised

While motivated to provide preventative health information including in line with perceived patient expectations, the results of this research suggest that oftentimes health professionals are less motivated to focus on alcohol, than they are on other preventative health topics. For any given patient, and in the context of there being many health issues for health professionals to consider, and much information to impart, alcohol consumption is often lower down the priority list. The reasons for this vary and are covered elsewhere in this report, but certainly to increase health professionals' motivation to address alcohol consumption would require an increase in various aspects of both capability and opportunity.

> *"Well we're already time poor and it's just another box to tick, so there has to be some real awareness of why it's so important, so I think if we're reading a case study of a story of a mother who gave birth and she thought her baby was normal and this is what happened and here's the child at 18 and it's in jail and came from a good family and I don't know, just a case study that shows how damaging a little bit of alcohol can be."*
>
> MIDWIFE, FEMALE, NON METRO

Some are not entirely on board with the alcohol guidelines, reducing their motivation to advise women in line with the guidelines

As reported under Psychological Capability, some health professionals in this research lacked knowledge of the alcohol guidelines. Ideally, those aware of the guidelines would be motivated to provide guidance to women in line with the guidelines. However, this research suggests that some health professionals aware of the guidelines are not entirely 'on board' with them, and these health professionals therefore lack motivation to provide advice to women in line with them.

Specifically, findings from the interviews with health professionals suggest some health professionals:

- perceive the evidence behind the guidelines to be problematic (as discussed under Social Opportunity);
- perceive the guidelines to be too cautious or conservative (as also discussed under Social Opportunity); and
- believe the alcohol guidelines to only be 'a guide' to be adapted to each situation, thereby providing license to the health professional to modify the message as they see fit.

Separately or in combination, these attitudes towards the guidelines contribute to some health professionals being unwilling to advise abstinence. In preference, these health professionals typically encourage women to minimise their alcohol intake in pregnancy – whether for reasons of harm minimisation, or because they entirely fail to see a risk in 'low level' consumption – if they address the issue of alcohol in pregnancy at all.

> *"I don't think there's any evidence anywhere that a glass of alcohol or two during pregnancy's going to cause any significant issues, I've never seen it."*
>
> GP, MALE, METRO

> *"Well, it's a bit like saying it's safest not to have any cigarettes but if people have one or two during their pregnancy it's not going to do any harm, so although I tell women that you're not supposed to drink during pregnancy, if they said to me 'what if it's my birthday and I have a glass of champagne?', I would just say don't worry about it, as long as it's not regular, I'd probably say don't have anything in the first three months but I don't think it's something that women should beat themselves up about, I don't think you're going to give your kid brain damage by having a glass of beer every now and then. If you think about it, we were all born like that, we were all; our mothers would have drunk alcohol during their pregnancies so it can't be that bad. Yeah, and it's a bit like, as I said, it's a bit like somebody smoking and saying so what if I have a cigarette when I was 35 weeks, I'd say well it's not really, it's better not to but if you do, I wouldn't beat yourself up over it."*
>
> GP, MALE, METRO

> *"And anyway, it's a continuum, so you could argue that it's safest not having alcohol at all so they don't say that, they've just drawn a line somewhere and the line's completely arbitrary, so because we know that drinking alcohol does increase the risk of getting cancer and other diseases. You have to draw the line somewhere and say that I'm happy for that small risk, I'm happy to live with that small risk, and where they've defined it is where they've decided to rule the line, next year it will be somewhere else."*
>
> GP, MALE, METRO

As discussed under Automatic Motivation, health professionals' own drinking behaviour also factors in here, with their own past behaviours appearing to affect their views on the guidelines, and their views on the guidelines dictating what they believe they would themselves do in a pregnancy.

> *"Interviewer: what would you be likely to do if it was your own pregnancy, how would you approach alcohol?*
>
> *I would have a few sips on special occasions.*
>
> *[Later in the interview] Interviewer: Is there anything else that you would like to know or better understand about risks associated with alcohol and pregnancy?*
>
> *Probably the amount of alcohol, the amount of alcohol permissible, to drink on special occasions and what effect it has in pregnancy, but my understanding is that the advice is there should be absolutely no consumption of alcohol in pregnancy."*
>
> GP, FEMALE, METRO

> *"...having had three pregnancies relatively recently, I cut down what I drank before trying to conceive and then had a drink in each pregnancy on very special occasions, yeah."*
>
> SHARED CARE GP, FEMALE, METRO

> *"I think I would do what I've been recommending, so I think, so I personally do, well I don't drink heavily, but maybe one glass every second day, so if I do, if I did fall pregnant, I think I would try to stop, but at special occasions I think I would have one."*
>
> SHARED CARE GP, FEMALE, METRO

Just some appreciate that if you give an inch, a mile may be taken

To note, some health professionals saw danger in giving women permission to drink small quantities of alcohol in pregnancy, in terms of this creating a slippery slope from, in their mind 'negligible risk' to 'risky' drinking. This included some health professionals even from within the rank of those expressing the view that a small quantity of alcohol consumed within pregnancy will absolutely not pose any risk to the woman or her fetus. In this way, concern about the 'slippery slope' motivated some to push an abstinence message.

> *"I do think for some people would be difficult, if they regularly drink, but having said that I feel if they are pregnant already then if they put that first before anything then hopefully that will help, and coming from a healthcare professional to give them the advice of not drinking then hopefully they will get that message of not to drink at all because, like I'm sure if you hear the health professional say you don't drink at all, then the patient still drinks one here and there. If you hear the health professional say you can drink one a day every day, I'm sure they will drink more than that, even though they're saying maybe two a day, something like that, so…"*
>
> SHARED CARE GP, FEMALE, METRO

> *"I think the grey area was when there were research articles coming out where they were saying one drink a week is safe, two drinks a month is safe, one drink, but now everyone seems to be on the page of zero, and that to me is better if there's no grey area. Everyone is on the same page and most people accept that. When you give people a grey area they will use it and they will try and make their situation fit into that grey area."*
>
> SONOGRAPHER, FEMALE, METRO

> *"...if I normalise it like, oh you said I could have a glass of wine, then that perception around well 'how often do you have a glass of wine, was it just that once because of the party, or is it once every Saturday?' I don't want to take that responsibility in having that come back at me..."*
>
> DIETICIAN, MALE, METRO

> *"I actually truly believe one glass isn't going to make any difference, and I also, as I said, I wouldn't say that to a lady who I think will think one means two means three means four. I would only say that to a woman who that I know doesn't engage in risky behaviour, and if I suspect does engage in risky behaviour or I know in the past they have I wouldn't say that, I'd say no amount of alcohol is safe in pregnancy."*
>
> SHARED CARE GP, FEMALE, METRO

Others saw little merit in this argument for pushing a strong abstinence message.

> *"I guess so, I guess there is a chance that will happen, but yeah, I mean I guess that's always a small risk but people are adults and they're able to sort of make a calculated risk themselves and they can then, like one drink every now and then is okay but go on to become a regular thing, then I think, yeah, I don't think many people are going to take that as a green light to just drink light."*
>
> GP, MALE, METRO

Harm minimization seen as only realistic approach for patients with multiple challenges

Some dealing with female patients who are really struggling, acknowledged that a holistic view needs to be taken, recognising the importance of empathy, ongoing dialogue, and whole-of-person support. In these cases, health professionals noted that harm minimisation – at most – may be the only realistic approach, in their view, for tackling alcohol use in pregnancy, reducing motivation to broad or focus on the topic of alcohol in pregnancy specifically.

> *"Our service really focuses on social and emotional wellbeing. So, we know that for a lot of our people there's a lot of stuff in their life that is affecting them and the reasons why they might go to substance abuse and why they don't want to interact in looking after their physical health… we go through a holistic approach and try and*

> *really investigate… what's relevant and what they see a priority in their life is… we try and support in all aspects by if it's counselling or even if it's educating the family, getting health checks… because I think we have a better success when we strengthen the spirit of our clients and then they, once they're feeling better about themselves then all that other stuff they kind of, they take… they've just got the energy to deal with it I guess… We have a rehab facility, a men's and women's one that attend our clinics, and most of them that are there, their priority is getting off the drugs and alcohol and when we talk about smoking, getting off the smoking, that's, they're like I want to quit but at the moment this is the thing that's helping me with other drugs but yeah, we just try and, if they're prioritising that we support them..."*
>
> ABORIGINAL HEALTH WORKER, MALE, NON METRO

For some, the number of different HPs involved may reduce ownership of the issue

As mentioned under Social Opportunity, HPs realise that women typically see a number of different health professionals during pregnancy (and pregnancy planning), all of whom could potentially play a role in communicating relevant preventative health information to women such as the need to avoid alcohol during pregnancy. Further, as noted under Behaviour, some health professionals expressly reported not addressing alcohol consumption in pregnancy with a woman if they perceived this had already been covered by another health professional. It certainly does seem likely that the number of different health professionals involved in looking after and providing advice to women in pregnancy could reduce any given health professional's sense of ownership of their role in communicating on this topic, reducing their motivation to provide information to women on this topic and this resulting in 'falling through the gaps' and not receiving this information from anyone. There was not, however, particularly strong evidence one way or the other for this from the interviews.

> *"I would be flicking back through her history and just seeing if that question has been already asked… if it's already been asked once and it's been answered appropriately, I just take it as it's already been discussed, unless they present with issues in that presentation and then I would raise it again."*
>
> MIDWIFE, FEMALE, NON METRO

> *"I would think maybe if they had a gynaecologist or an obstetrician would go through that with them or a midwife might go through that with them initially when they're first pregnant, or if a good GP might go through that with them, but then I don't think anyone would go through the whole thing with them, substance abuse or alcohol use."*
>
> PHARMACIST, FEMALE, METRO

> *"... probably the midwife, there's doctors, and sometimes GPs do shared care, they'll look after the pregnant woman until roughly 37, 36 weeks, but often it might be a midwife, but often when we meet them… they've missed out a bit of the midwife talk on what to expect, because there's some doctors in a busy clinic so they might only be getting ten minutes or so. And then most GPs aren't going to be at their birth but they'll see them post. And then sometimes we've got, also we've got midwives that look after their own girls all the way through."*
>
> MIDWIFE, FEMALE, NON METRO

Some suggested this issue iss beyond the scope of what health professionals can deal with, and requires government action

As mentioned under Social Opportunity, many health professionals in the research noted the great extent to which alcohol (unhealthy reliance on and unhealthy levels of drinking) is entrenched in Australian culture.

A small number of health professionals went further to suggest that they themselves could do little to address drinking among their patients, including during pregnancy, and that rather broad education on alcohol and changing culture (including around alcohol in pregnancy) was firmly the remit of health departments, the education system and/or mass media campaigns. It is possible this viewpoint is reducing the motivation of some health professionals to communicate with women on alcohol consumption during pregnancy.

> *"Maybe that's something that can even be started at the school level, that might actually be more impactful, because kids they absorb and they learn stuff from school, so if they can learn about the effects of drugs and alcohol from an earlier age even before they become of legal age to drink I think that might be the way to go actually. Yeah, so maybe we need to look at the school curriculum."*
>
> SHARED CARE GP, FEMALE, METRO

> *".. .the guidelines, there's not a lot of subtlety in them is there, no smoking, no safe level of alcohol, be vaccinated, maybe guidelines around eating and exercise there's probably more nuance to, but yeah, they're quite kind of black and white information, one size fits all information that lends itself to public health measures."*
>
> SHARED CARE GP, FEMALE, METRO

Lack of confidence to broach the topic sensitively and effectively and take action

As mentioned under Physical Capability, some health professionals interviewed as part of this research indicated that they were not particularly confident in their ability to handle the topic of alcohol consumption in pregnancy, pregnancy planning, or breastfeeding, either in terms of sensitively and effectively broaching the topic or knowing what to do in response to a woman indicating that they were drinking. As mentioned under Behaviour, few had completed relevant training in recent times if at all. Lack of confidence in their ability to have a quality conversation with women on the topic is clearly reducing motivation, for some, to go beyond basic screening for alcohol use, if they touch upon the topic at all.

> *"Would you tell someone on the street, would you pull the cigarette out of their hand and say stop smoking, it's going to give you cancer, you're likely to get slapped back if you have that approach. So like any conversation you have with it, if someone comes to you for help you can offer them help but you don't just walk up to people and say what you're doing is wrong.*
>
> SONOGRAPHER, MALE, METRO

Unfounded confidence in own knowledge and ability to deliver an intervention

On the flipside, some in the research, including those not appearing to speak routinely with women about alcohol in pregnancy, said they were very confident in their knowledge in this area, and ability to broach the topic sensitively and effectively, and to deliver an intervention as required. In some cases, this confidence appeared to be relatively unfounded, but acts as a motivation barrier to seeking professional development opportunities in relevant areas.

> *"You've got your mums with diabetes, pregnancy induced diabetes, and those sorts of mums who shouldn't be drinking because of the sugar in it. I'm sure, there's a lot of things that I don't know all the way down to the nitty gritty, but certainly there's going to be some developmental issues regarding that baby. [LATER IN THE INTERVIEW:] Oh I don't need to worry about my level of knowledge. Yeah, my knowledge is quite high when it comes to the risks of alcohol in pregnancy and breastfeeding so no, I'm good there"*
>
> MATERNAL CHILD HEALTH NURSE, FEMALE, NON METRO

> *"Yeah, well I'd say I'm relatively expert in all those things that are not really specifically about pregnancy, that general advice about how to stay healthy, yeah."*
>
> GP, MALE, METRO

HEALTH PROFESSIONALS' VIEWS ON REQUIRED SUPPORT

Near the end of each interview health professionals were asked what might be helpful for them in terms of alcohol-related information, resources, or materials, and what in their opinion was most needed to motivate or support health professionals to engage with their patients on the issue of alcohol in pregnancy. Not all had an opinion, and feedback where provided was varied. Some offered their feedback spontaneously, earlier in the interview.

Views on whether or not additional health professional resources for women were needed were mixed. Some believed this would not be the best use of funds as they would be unlikely to be effective.

> *"I think the health professionals, yes, for their own reference, maybe there needs to be a bit more stuff… we throw so much stuff at these women via pamphlets, websites, they don't look at it, I know they don't… They actually need one-on-one, face-to-face conversations."*
>
> MATERNAL CHILD HEALTH NURSE & MIDWIFE, FEMALE, NON METRO

> *"… if you were going to consider giving a woman a piece of paper that tells them all the risks associated with alcohol and the pregnancy I think what you're doing there is you're creating far too much anxiety… young women are basically bombarded with information and it creates all this anxiety… a piece of paper saying look if you drink alcohol this is a risk to your baby and list all the fetal alcohol syndrome symptoms, that might be relevant for a woman who you know is abusing alcohol and you want to ram the message home to her..."*
>
> SHARED CARE GP, FEMALE, METRO

Other health professionals saw value in materials being provided to them (or heavily promoted so they would know where to find them) to distribute to women. As previously noted, few in the research reported currently being aware of, having access to, or distributing, any such resources.

> *"A brochure which is coloured, and which … has a graphic that shows the effects of alcohol consumption in pregnancy, like an infographic style thing rather than the text…with a link to a YouTube video or something."*
>
> GP, MALE, METRO

> *"...if there was a one-page fact sheet on the harm of alcohol in pregnancy that you could give to someone that might be ambivalent about the risks, that might be useful, yeah."*
>
> SHARED CARE GP, FEMALE, METRO

> *"..they're only going to believe me if I seem credible and I may not be giving them the right information, but if there was brochures or booklets that they could take that are written by a legitimate body then people are going to go okay, this is what I've been told, and this is what I'm going to do… it just has to be open and available instead of being something that you have to ask for, because when you have to ask for something people sometimes feel intimidated."*
>
> SONOGRAPHER, FEMALE, METRO

> *"Probably some number crunching helps with some patients…like if you drink X amount, even if you drink one drink twice a week for X amount of weeks and in the first trimester, there's a 25 percent risk of fetal abnormality from that or something, if there's such a thing possible... and maybe like an A4 summary of important points maybe in the guidelines or something, I don't know, perhaps something like that might be useful. So then you can go through it with a pregnant woman"*
>
> SHARED CARE GP, FEMALE, METRO

Health professionals with limited opportunity to discuss the topic with women, but who were able and willing to pass on information and currently did so one various other preventative health topics, were particularly likely to speak of the utility of providing them with materials aimed at pregnant women or those planning a pregnancy.

"If a representative from a certain government health department would go to pharmacies and educate pharmacists on it, if there was any advertising even on TV, but mainly if we were to distribute it, it would probably be the pamphlets or fact sheets that we can print off."

PHARMACIST, FEMALE, METRO

"Look, we could probably distribute leaflet type things, if they were running a campaign… we often get involved in short-term things where we can put up a poster up for a period of time if it coincides with some sort of promotional campaign that's running. Certainly leaflets or information, we've got other types of information that we keep on file called self-care cards, I don't think there's one on pregnancy specifically but there'll be other, lots of other medical conditions where we might have a bit of information that we can give out, and there wouldn't be any reason why we couldn't add something like that to our pile and if someone came in and wanted something that's specifically about it or we thought it might be useful for them to know about then we could use it… We often have a new mums pack that a couple of companies have put together that we give out, so that's something that we could, if there was a leaflet that could go in that I don't see why it wouldn't be suitable for it to go into that pack. Or it can just be given out at the same time to say look, whatever organisations asked us, made these available, it's there if you want a read of it have a read of it, if you want to not read it not read it."

PHARMACIST, MALE, METRO

Whether or not they saw value in materials designed to be given to women, many health professionals expressed the view that it would be valuable to devote efforts to further educating health professionals about alcohol in pregnancy, particularly clarifying:

- risks associated with alcohol consumption during pregnancy, including at different points in pregnancy;
- thresholds for unsafe drinking in pregnancy (i.e. better explaining the alcohol guidelines and the reasons for needing to push the abstinence message); and
- the best practice approach to addressing the issue with women, including how to best screen, what information to provide and to whom, and how to intervene if drinking is admitted to.

"In the hospital that I work in we have professional development twice a week and it might be case studies or someone presenting on updated guidelines… so that is definitely an avenue."

DIETICIAN, FEMALE, METRO

"I wouldn't mind a three to four hour seminar on it, just on alcohol and pregnancy and see what it does in different stages, pre-planning, pre-conception, and during pregnancy… I would have a lot to learn from it."

SHARED CARE GP, MALE, METRO

"Reminding us that every time you see a pregnant woman how do I raise the question of alcohol, so giving us small tips, not something that is time involved, but tips on how to raise a dialogue, how to intervene, assess quickly does the patient need help, does this patient, is this a high-risk patient or a low-risk patient, how can I assess that during my normal consultation with a pregnant patient?"

SHARED CARE GP, FEMALE, METRO

"So I do shared care with the hospital, so they have talks from time to time, and we need to do the alignment program with them so the alignment program they have these talks and we need to attend so we can continue to align with them and do the antenatal care, so of course sometimes alcohol could be one of the topics that they would want to talk about."

SHARED CARE GP, FEMALE, METRO

It should be noted that several said they were always looking for seminars and courses for the purposes of meeting their continuing professional development requirements, so anything well promoted in this area would grab their attention. It should also be noted that some expressly stated that the research process had made them

appreciate the deficiencies in their own knowledge and practice in this area, and so that they would now actively look out for such opportunities.

Some reported seeing value in materials designed for use by health professionals themselves (rather than for distribution to women), that summarised the key pieces of information they needed to be across as a health professional.

> *"The thing that would encourage me most would be that if they were to produce like a fact sheet or a very succinct to the point, like maybe a one A4 sheet of what I should be telling the patients… that I can look at and go all right, I'm doing that, oops, I'm not doing that… it would be something that I could have up on my board at the front of my desk and I could see it all the time and it would remind me when people come in to do that.*
>
> SHARED CARE GP, FEMALE, METRO

As mentioned under Reflective Motivation, some spoke of the perceived need to work on reducing the social acceptability of alcohol consumption in society generally. Some felt the best value would be gained from educating the broader community generally, outside of the context of a health professional client relationship, starting from adolescence.

> *"Having had a daughter that …has just gone through high school, I don't, she's never really reported to me a day where she was sat down and given a serious hard conversation around how to ensure a decent pregnancy."*
>
> DIETICIAN, MALE, METRO

> *"Well it's lifelong… and that's where the mistakes are made. We're not getting enough information to the young ones, it's all lifelong… it's the only way you'll change a generation and the next generation."*
>
> MATERNAL CHILD HEALTH NURSE, FEMALE, NON METRO

> *"I mean this should just be general life conversations too, shouldn't it? … this kind of health education about the risks of drugs and the benefits of nutrition and all these things, should be something that's instilled in society early. Rather than oh, you're pregnant, you do realise it's not good to drink… I think if you try and educate people once they've made bad choices all their life it's, the damage is already done. So yeah, all that good health, those conversations need to be had at earlier stages in life, so I would say teenagers."*
>
> SONOGRAPHER, MALE, METRO

> *"So, I would definitely do maternal and child health because they are they ones that see the women after, but they often see the ones that have had previous babies and stuff. Yeah, the GPs, practice nurse, even just district nurses and community nurses, but I'd also do youth workers and you need to think outside the box when we're talking about alcohol, it's such a massive problem in our society, and even starting at schools, do you know what I mean, I think earlier conversations with kids at high schools about even in their development and the effects of alcohol, whether it be with pregnancy or just in general, I think you're better off to start it earlier, the conversation, than later."*
>
> PRACTICE NURSE, FEMALE, NON-METRO

As mentioned under Social Opportunity, some health professionals noted that in their workplace there were strong procedures in place to assess and intervene on tobacco use, but not on alcohol use. Some suggested the best support that could be made available to health professionals to ensure appropriate conversations were had with pregnant women was to imbed this within practice, including within any relevant practice software.

> *"I think they should cover it throughout all their pregnancies. Like throughout all the stages. And before as well, if they come to say we're going off contraception, often they get bloods done beforehand and stuff, so yes, it should be just a tick list, the conversation is automatically said or had."*
>
> PRACTICE NURSE, FEMALE, NON-METRO

"It could be useful to be able to push a button that sends them a link to information about things you need to know, important things to know before you plan to get pregnant, and that would include alcohol, as well as the other things we talked about, so rather than leaving it up to us to try to remember and whether we covered everything we should probably have a way to do that to make sure that everything including alcohol is covered."

GP, MALE, METRO

Implications for communicating with health professionals

Findings from both the evidence review and primary research indicate there is a need to further encourage health professionals to better engage with pregnant patients about alcohol. Current behaviour across all stages of pregnancy and across all types of health professionals demonstrates a lack of focus, and adherence to the clinical care and alcohol guidelines, on the issue of alcohol consumption and pregnancy, see Figure 1 below.

Figure 1 – HP behaviour across the stages of pregnancy

Evidence suggests that women look to and even expect healthcare professionals to provide guidance, information and advice and, by their own admission, healthcare professionals acting in their roles exert a powerful influence on behaviour. This represents a lost opportunity for the healthcare professionals campaign stream to consider addressing.

In the context of early pregnancy communications, and health prevention messages in particular, current HP discussions show alcohol as a having lower salience, and therefore lower apparent priority, than other issues such as nutrition and smoking. In terms of patient communication then, we must consider not only the impact of what *is* said by HPs, but also what isn't said, on patients' perceptions and consumption of alcohol during pregnancy.

With the array of health professionals involved across the stages of pregnancy, two major impacts become clear. Firstly, that this dilutes a sense of ownership of patient care and allows many of those involved to imagine that communication about alcohol and pregnancy is the remit of another HP (other than themselves). Secondly, that it can deliver mixed messages to patients about alcohol and pregnancy, that makes it easier for those patients so inclined to find inconsistencies and loopholes to support occasional or celebratory drinking. Whatever the role, then, messages need to be consistent across healthcare professionals.

Health professionals do recognise this conundrum and see the importance of imparting consistent information. Most acknowledge they have a role in this – for some this may be limited, while others show greater interest and willingness to expand their knowledge, provide more information and increase their role. Based on this research, the primary priority focus for the health professional stream of the campaign should be on those:

- with perceived responsibility for the outcomes of pregnant and breastfeeding patients;
- who see a critical volume of women who are pregnant or planning pregnancy;
- who provide continuity of care to patients across their pregnancy; and/or

- that have opportunities to discuss alcohol with pregnant and breastfeeding patients before they fall pregnant or very early in pregnancy.

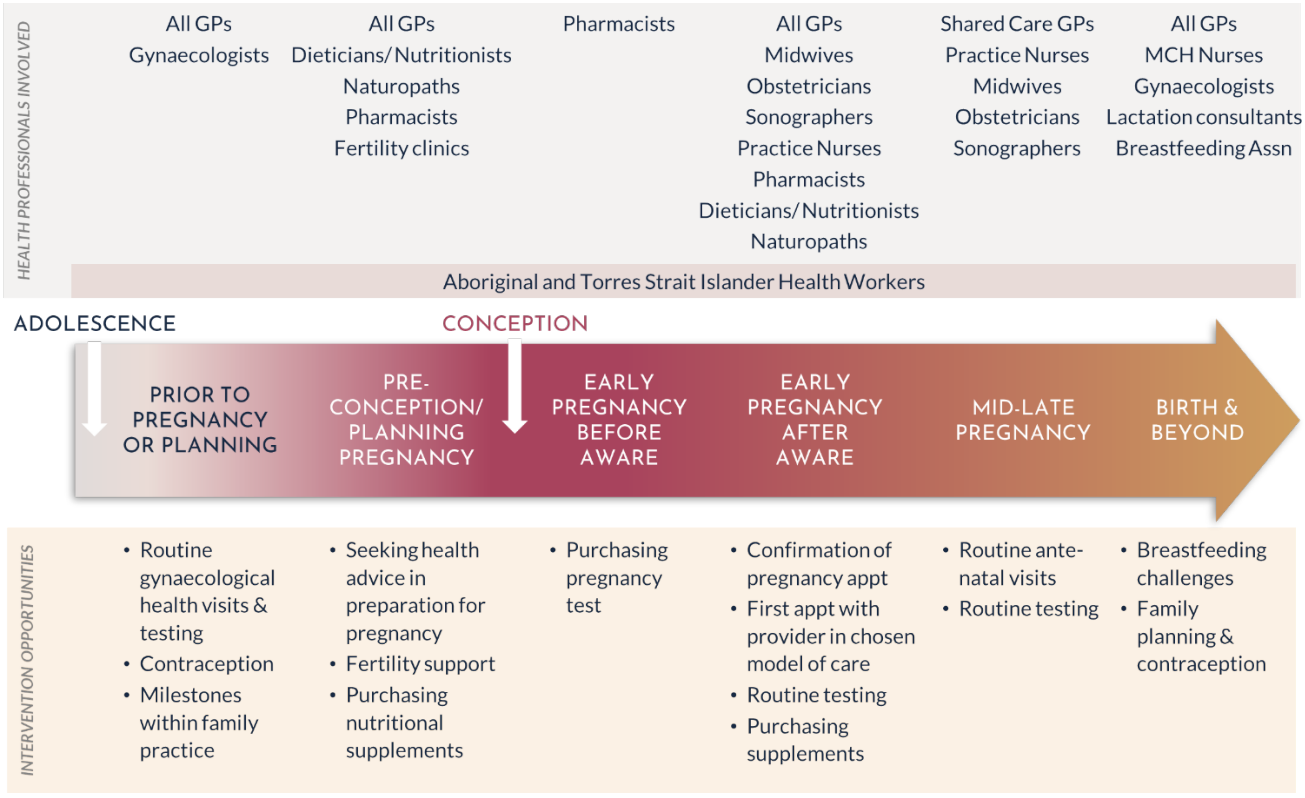
As reiterated by the research evidence, this primarily includes GPs (especially shared care) and midwives; but could also extend to Aboriginal health workers, maternal and child health nurses and practice nurses, as supporting audiences with capacity and some interest, but for whom such discussions are not currently part of daily practice. See Appendix A for further information about these primary audiences.

The potential role for allied health and any other health professionals who encounter pregnant women appear more limited, and perhaps will only usefully include receiving campaign materials to display and hand out, and consistent reinforcement of the message to speak with their main pregnancy healthcare professional about the issue. Among this 'third tier' audience, pharmacists, nutritionists/dieticians and naturopaths are perhaps highest priority. Pharmacists routinely see pregnant women but have no specific training and practical barriers such as lack of patient privacy. Nutritionists/dieticians and naturopaths have some relevant training, licence to talk about the subject, and likely adequate time within consultations, however, see a small proportion of pregnant women, and women relatively infrequency (so no primary responsibility or continuity of care).

Also of some relevance are sonographers, who, depending on their work setting, see pregnant women for more than 20 minutes at a time, in an one on one setting, that in some cases leads patients to ask questions and comment about alcohol and pregnancy. While these third tier HPs may not see engaging with patients about this issue as part of their role, this research shows clearly that they can and do impact overall communication about alcohol, which at the very least reinforces the need for consistency of message.

The results of this research suggest that there are several points of intervention across the stages of pregnancy that are under-utilised or not currently utilised, and could be harnessed to assist in reducing the incidence of alcohol exposed pregnancies. These intervention points, as well as the HPs involved at each stage, are illustrated in Figure 2.

Figure 2 – Intervention opportunities and HPs involved across the stages of pregnancy



In order to maximise the effectiveness of the health professionals campaign stream, there are number of obstacles to be tackled. The research highlights barriers across the domains of capability, opportunity and motivation that reduce the number, nature and quality of clinical discussions and interventions currently being provided. The focus of the campaign should primarily be on increasing the *capability* of HPs to engage on this issue, while also addressing their perceived *opportunity* to do so. In turn, this will increase motivation and improve behavioural outcomes. In particular, the campaign needs to focus on addressing that:

- Health professionals need to believe that there are ways to discuss alcohol with all patients who are pregnant and planning pregnancy, and even with women outside of these life stages, that facilitate honest disclosure, accurately inform and encourage positive choices and that will not elicit discomfort, shame, and negative patient reactions. They also need to feel confident to initiate these discussions including upskilling on sensitive questioning, motivational interviewing, brief interventions and referral pathways and believe that support is available to help them deal with increased levels of disclosure that may result.

- Most professionals are on board with the benefits of addressing alcohol consumption, many are regularly broaching the topic with relevant women and reveal some awareness of the overall abstinence message communicated in guidelines. The goal of communications should therefore not be to encourage more health professionals to discuss alcohol with their patients, but to ensure universality and consistency in approach, and that messages communicated by health professionals are in alignment with the guidelines and the overall general public campaign (and are not inadvertently undermining these). Specifically, there is need to:

    - increase knowledge of clinical care guidelines, including that information should be provided to all, irrespective of whether or not drinking behaviour is mentioned;
    - ensure HPs recognise that behaviour is not fixed, realise that alcohol consumption may be underreported, and so are motivated to revisit the topic during subsequent interactions, encouraging women and providing positive reinforcement of abstinence; and
    - increase knowledge of what the alcohol guidelines say about alcohol in pregnancy and during breastfeeding; as many are not aware of the revised alcohol guidelines, this could be positioned as new information and new evidence to support cut-through.

- Health professionals need to understand and consider credible the risks of alcohol consumption in pregnancy, believe in the urgency and importance of communicating as early as possible and consider the issue as relevant to *all women* including those they assume do not need further education or advice. Therefore, efforts need to address all areas where professionals' lack knowledge, to reduce reliance on personal experiences, beliefs, assumptions, biases and other non-clinical frames to guide clinical decisions. New information has the potential to knock health professionals out of complacency while enhancing salience and perceived priority of the issue, in particular:

    - Alcohol is more widely consumed in pregnancy than perhaps they realised (especially if underreporting is considered), including by their own patient cohort, rather than being limited to women who are not well educated or are in socially or economically disadvantaged situations.
    - The full range of risks associated with drinking in pregnancy and the impacts of alcohol are considerable and varied for both mother and fetus during the pregnancy, as well as afterwards for the baby, supported by any evidence regarding the incidence of the impacts of alcohol consumption during pregnancy, which is assumed to be low.
    - Increased knowledge of FASD as a spectrum and the nuance of its possible impacts, not only FAS - which is assumed to be more severe and only the result of repeated binge drinking or consistent high level alcohol consumption.

  - That addressing alcohol in pregnancy is as important as encouraging use of supplementation, checking for disease immunity and advising against tobacco use, and time must be made during consultations before and after conception to address it universally and repeatedly.
  - Increased appreciation of the importance of tackling this issue early – prior to pregnancy confirmation, when damage may have already been done – with reminders of relevant intervention points at which the topic could be raised.

- All health professionals coming in contact with women who are pregnant or planning pregnancy have a role to play in delivering a consistent message about alcohol consumption, even if this is confined to refraining from communicating misinformation or anecdotes, and referring women to their main ante-natal health professional. Considering could therefore be given to:
  - emphasising the need for consistency and the risks of divergent messaging (both overt and covert) from health professionals to impressionable patients;
  - audience-specific communications to foster internalisation of this being an action that is their responsibility to take;
  - working with organisations to support the embedding of discussions about alcohol into cues, processes and practices; and
  - aligning HP communications with broader community messages about alcohol and the impact of community acceptance of alcohol consumption on women's interest in and propensity to drink, as well as HPs proclivity to implicitly or explicitly sanction this.

The change in health professional behaviour sought by the campaign will clearly require a multidirectional approach.

Appendix A: Empathy maps for key HP audiences

GENERAL PRACTITIONER

- All general practitioners seeing pregnant women or those planning pregnancy at least sometimes
- Large variation in how often seeing pregnancy women

MAINTAIN RELATIONSHIP & GET THROUGH THE MANY ESSENTIALS

- Time pressured & inundated with staying on top of developments across all areas of medicine
- Consider patient relationship before & after pregnancy

What do they HEAR/not hear?

- Women may not give accurate info
- Women ask if drinking will/has hurt
- Women armed with information already

What do they SEE/not see?

- All pregnant women regardless of risk profile
- Most contact at beginning & limited thereafter
- Rarely see FASD in practice

What do they DO/ not do?

- Make assumptions about women's risk
- Assess need for education & may not provide any
- Do not provide continuity of care across pregnancy

What do they SAY/not say?

- Typically will ask for yes/no consumption response
- Unlikely to mention guideline or risks
- May be ambiguous or explicit that one glass is okay

Feelings & beliefs as barriers

- Lack of belief in guidelines
- Don't want to cause alarm or discomfort
- Lack sense of overall responsibility for patient

Motivating feelings & beliefs

- Want to look after health of patient & unborn baby
- Want to provide relevant, sound & realistic advice
- Belief in gravity & health harms would motivate

"The things that you think are most common, each of them makes up a surprisingly small part of GPs' work, our work is so broad that it's a constant challenge, so we're constantly dealing with situations that we might deal with once a year or once every two years."

MALE, METRO

"They all have their own role to play in this thing and I think as a GP we are sort of the referral agent basically, once we have compiled everything, we're sort of a record keeper kind of thing, and we then involve the others due to their specialities and their professional expertise, we involve them so that we can get the best for the patient."

MALE, METRO

"I'm a GP I'm looking after them for their normal care, while they're pregnant of course then they would be seeing either a GP who does antenatal care or the obstetrician for the routine visits, but if they get sick with the flu or something else happens then they'll come to me, if they fall over and twist their ankle…come in for flu vaccine… if they bring the other children in, I'm seeing them while they're pregnant, although it's nothing to do with them directly, so that's the whole point of long-term personal continuity of care."

MALE, METRO

"Being a GP you have a longitudinal relationship with the patient, you see them not only when she's pregnant but also then after the pregnancy, after she's given birth and has had the child, so potentially 30 to 40 years you could be seeing this patient, so it's important not to only look at the pregnancy but also look … over a whole lifetime.

MALE, METRO

SHARED CARE GP

- GPs who also provide care for pregnant women along side hospital ante-natal clinics in public system
- May do less shared care since midwife group practice

KEEP UP-TO-DATE WITH LATEST CHANGES TO PROVIDE QUALITY CARE

- Demanding for GPs to stay up to date in changing ob/gyn environment
- See role as sharing responsibility for mother & baby

What do they HEAR/not hear?

- Few reports of women drinking
- Women often ask if one drink will hurt
- Little CPD/training opportunities

What do they SEE/not see?

- Shared care through public system means no high-risk pregnancies
- Seeing women at beginning & middle - less at end

What do they DO/ not do?

- Make assumptions about women's risk
- Highly variable provision of info/ education
- Variable interpretation of guidelines

What do they SAY/not say?

- Will ask re alcohol consumption for yes/no response
- May mention guidelines
- May be ambiguous or explicit that one glass is okay

Feelings & beliefs as barriers

- Perceive alcohol as less urgent than other issues
- Some lack belief in guidelines

Motivating feelings & beliefs

- Personal & professional interest in shared care
- Feel responsibility across whole pregnancy
- Want to look after health of patient & unborn baby

"Within obstetric shared care I have to do ongoing CPD which is usually seminar based, and so some information there would be useful. But to be honest it seems like we had lots of changes to the kind of offering of testing and recommendations in early pregnancy recently, and so I can see how alcohol information would get dropped down the list of priority because there's been major changes to other things.."

FEMALE, METRO

""We consider ourselves… to be the patient's medical home, and in this model we are not talking about the patient/GP relationship, we're talking about the patient/care-team relationship and our care team consists of not only GPs and even nurse, we have medical practice assistants to observe, we have also psychologists here, so we try to develop a care-team relationship not simply a GP relationship."

MALE, NON METRO

"..in the last 10 or 15 years especially I see fewer [pregnant women] than I used to in the 90s, etc, I feel unsure with some of these new technologies… I ring a younger colleague of mine I trust, and just ask her a question or run by her what I said or whatever, so clarify something to do with early pregnancy.…in my younger days I used, well, I think I was fairly successful in keeping up to date with a bit of everything, but nowadays you need to be, there's so much every month, six months, whatever, it's so much harder to keep up now than it used to be… [Later in interview] suppose the thing I've kept up more with is the contraception side in terms of, but that's across the board with older and middle-aged women, in terms of younger women, but I find the planning the pregnancy a bit more tricky in terms of all this information and new technology and new tests and all that sort of stuff, like it's probably the trickiest part I find."

FEMALE, METRO

MIDWIFE

- Midwives who conduct antenatal appts including as part of Midwifery Group Practice (rather than mainly in birthing suite / seeing those with complications)

SUPPORT WOMEN TO HAVE A SAFE & HEALTHY BIRTH

".. last year I've done 180 hours of education online…there's x many standards for safe-nursing care practice.." MIDWIFE, FEMALE, NON METRO

What do they HEAR/not hear?

- May not hear women speak about consumption or ask what they should do
- Not emphasised in CPD

What do they SEE/not see?

- Pregnant women from 14-16 weeks onwards, rarely before
- See same women if part of MGP

What do they DO/ not do?

- May have no exposure to training on guidelines
- Provide huge range of brochures often at first appt

"To make quality conversation we need to increase our length of… bookings" FEMALE, NON METRO

What do they SAY/not say?

- Alcohol education may not be standard at intake

"I hate getting in there… you feel like you are drilling them, and then once you've done that there's another four pages.." FEMALE, NON METRO

Feelings & beliefs as barriers

- Assume message already delivered by GP or OB
- See themselves as supporting not changing women, but open to learning more

Motivating feelings & beliefs

- Want to look after health of patient & unborn baby
- Offer support that fits with women's choices & care from other HPs

PRACTICE or MCH NURSE

- Practice nurses may see pregnant women throughout pregnancy, if supporting shared care GP
- MCH seeing women after baby

PROVIDE EDUCATION & EMPATHY

- See preventative health as part of role
- Holistic focus on pt & providing understanding

What do they HEAR/not hear?

- Hard to know what other HPs have covered
- MCH mainly hear about baby & struggles of early motherhood

What do they SEE/not see?

- Practice nurse may not see women at first appt
- MCH nurse focussed on mother's support & mental health

What do they DO/ not do?

- Practice nurses may do only what the GP asks
- Little training & knowledge about guidelines

What do they SAY/not say?

- Very little spoken about alcohol
- MCH nurse may mentioned smoking cessation due to link with passive smoke and SIDS

Feelings & beliefs as barriers

- Low level of responsibility for pregnant pts
- Rely on own experience to inform guidance
- Unclear as to who's role it is

Motivating feelings & beliefs

- Want to look after health of mother & baby
- Want to offer support that fits with care from other HPs (practice nurse)


ATSI HEALTH WORKER
• Can be working as part of a team
• Have relationships with whole community
• Usually not just looking after pregnancy
PROVIDING CULTURALLY APPROPRIATE COMMUNITY CARE
• Preventative health part of role
• Harm minimisation approach
• Consider whole person & whole community
What do they HEAR/not hear?
• Some women acknowledging alcohol use
• Little CPD/training opportunities
What do they SEE/not see?
• High risk patients with multiple challenges
• Poor outcomes but precise cause unknown
What do they DO/ not do?
• Little training and knowledge of guidelines
• Respond to client concerns and priorities
• Engage in community education
What do they SAY/not say?
• Do not mention guidelines
• Advise minimising alcohol
• Manageable, achievable steps
Feelings & beliefs as barriers
• Want to provide realistic, supportive advice
• May see detailed medical advice beyond their role
Motivating feelings & beliefs
• Being accepted as HP within community
• Offer support that fits with woman's goals

Appendix B: Evidence review references

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Appendix C: Recruitment specifications for interviews

RECRUITMENT SUMMARY

- 36 x in-depth interviews:
  - Each up to 45 minutes duration
  - Conducted via telephone, Zoom or Skype (as preferred by participant) at mutually convenient time (given interviewers' availability, no overlapping interviews)

- Sample: **Health Professionals across Australia who see pregnant women** (except for certain audiences, they must also see women planning pregnancy or actively trying to conceive). Three audience types:
  - n=20 GPs (5 must specifically at least sometimes provide GP Antenatal Shared Care)
  - n=6 Nurses (split evenly between midwives, practice nurses & maternal child health nurses)
  - n=10 Allied Health Practitioners (see required mix overleaf)[5] – we need to ensure that none are working in an emergency or hospital in-patient setting

- Incentives paid by TKW via bank transfer:
  - GPs – $180
  - Nurses & allied health professionals – $150

- 2 waves of fieldwork (with pause after initial third of interviews, to allow for potential adjustments) with fieldwork dates:
  - First 10 interviews – Thurs 29 April – Thurs 6 May
  - Remaining 26 interviews – Wed 12 – Tues 24 May

- Within each audience type, requirement to cover mix of (with specific quotas noted overleaf):
  - States and territories
  - Health professionals working within versus outside of a metropolitan area – please try for some specifically rural and remote
  - Tenure
  - Health professionals' gender
  - Health professionals' cultural background, with inclusion of some trained oversees
  - Health professionals' special interest areas (GPs only)
  - SES and cultural background of patient cohort

[5] For the second tranche of interviews (post interim debrief), the recruitment script was amended to include this requirement

SAMPLE FRAME

Broad audience type and number	Role with pregnant women	Core demographic factors	Other relevant factors
General Practitioners n=20	5 GPs offering shared care to pregnant women	Mix of states/territories – 3 Metropolitan areas, 2 Rural/regional/remote Mix of men and women GPs Mix of GP tenure	Mix of SES and cultural background of patient cohort Representation of different GP special interest areas Representation of GPs from different cultural backgrounds, including trained overseas
	15 GPs who see pregnant women and women planning pregnancy / actively trying to conceive (*but need not provide shared care*)	Mix of states/territories – 9 Metropolitan areas, 6 Rural/regional/remote Mix of men and women GPs Mix of GP tenure	
Nurses n=6	2 Midwives	Mix of states/territories – 4 Metropolitan areas, 2 Rural/regional/remote Mix of tenure Mix of men and women nurses	Mix of SES and cultural background of patient cohort
	2 Practice nurses		
	2 Maternal child health nurses		
Allied Health Practitioners n=10	2 ATSI Health Practitioners/Aboriginal Health workers	Mix of states/territories – 6 Metropolitan areas, 4 Rural/regional/remote Mix of tenure Mix of men and women practitioners	Mix of SES and cultural background of patient cohort
	2 Dieticians/Registered Nutritionists		
	1 Naturopath		
	2 Sonographers		
	2 Pharmacists seeing pregnant women		
	1 Pathology collector/ Phlebotomist		

RECRUITMENT SCREENER

Introduction – must read to all potential participants.

We are looking to recruit GPs, Nurses and Allied Health Practitioners to a research study being conducted by Heartward Strategic and commissioned by a not for profit organisation[6]. The aim of the research is to understand more about practitioners' conversations with patients about preventative health.

The research will involve you participating in a one-on-one interview (via telephone or teleconference), that will last up to 45 minutes, with a consultant from Heartward Strategic, an independent social research consultancy. There is nothing you need to do in preparation for this interview. You would receive [*GPs:* $180 / *All others:* $150] as a thank you for your time, paid by us via bank transfer into your nominated account.

Please be advised that the interview will be audio taped to aid the researchers with data analysis. Recordings will be stored securely and destroyed by Heartward at the end of the project. Would that be OK with you? ***Seek permission for this from all participants[7].***

Everything you say during the interview would be treated as anonymous and confidential. No one would be trying to sell you anything, nor would there be any personal consequences for you arising from what you say. Participation is completely voluntary.

We are trying to recruit a mix of practitioners, including those who have been practicing for different periods of time, and who see different types of patients. May I please ask a few questions to confirm you complement the people we have already recruited?

Screening questions:

Q1. Note gender ***Record, noting we are aiming for roughly equal split of men and women***

Q2. To confirm, are you currently practising as a … [*select as per database information*]?
- Generalist GP[8]
- Midwife
- Practice nurse
- Maternal child health nurse
- ATSI health practitioner / Aboriginal Health Worker
- Dietician / Registered Nutritionist
- Naturopath
- Sonographer
- Pharmacist
- Pathology collector / phlebotomist
- ***If not currently practising in any of the above, terminate***

Q2b. And do you work in a hospital in-patient or emergency setting? ***Terminate if yes.***

[6] If raised, advise that name of sponsoring client will be provided at the end of the interview, so that it does not influence how they respond in the interview.
[7] Permission to produce a de-identified transcript to be passed to client will be sought during the interview, but agreement is not a requirement for participation.
[8] For the second tranche of interviews (post interim debrief), the recruitment script was amended to include this requirement

Q3. How often would you say you see each of the following types of patients? [*Prompt: never*, *rarely*, *sometimes*, *often*]

	Never	Rarely	Sometimes	Often
1. Patients from low socio-economic backgrounds			***Include some** saying 'sometimes'/ 'often' for each of 3 broad audience types.*	
2. Patients with serious mental health issues				
3. Patients from culturally and linguistically diverse backgrounds			***Include some** saying 'sometimes'/ 'often' for each of 3 broad audience types.*	
4. Patients who are pregnant ***Do not ask for midwives or maternal child health nurses***	***Terminate***	***Terminate***[9]		
5. Very elderly or geriatric patients ***Do not ask for midwives or maternal child health nurses***				
6. Patients from an Aboriginal and Torres Strait Islander background			***Include** some saying 'sometimes'/'often' for each of 3 broad audience types.*	
7. Patients who are planning pregnancy or actively trying to conceive ***Do not ask for midwives or maternal child health nurses***	***Terminate***	***Terminate***		

Terminate if 'never' or 'rarely' at both 4 and 7 (and not a midwife or maternal child health nurse).

Q4. ***If GP:*** Have you developed interest in any specific areas of general practice? Which areas?
If yes, record. Aim for some representation e.g.
Obstetrics (e.g. I am a GP operating in a regional area who also supports pregnant women and delivers babies etc)
Addiction Medicine
Antenatal / Postnatal Care
Child and Young Person's Health
Integrative Medicine
Obesity Management
Sexual Health Medicine

Q5. ***If GP:*** And do you provide GP Antenatal Shared Care? ***Record, noting we need 5 answering 'yes.'***

Q6. ***If Allied Health Practitioner (i.e. not a GP) & answering 'sometimes' (rather than 'often') for 4 and 7 at Q3:***
And when was the last time that you saw a patient who was pregnant / planning pregnancy?
If more than 3 months ago, terminate

Q7. In what state or territory do you practise? ***Record, aim for a good spread***

[9] Some answering 'rarely' were included in the first tranche of interviews, but the recruitment specification was changed to excluding these practitioners for the final interviews.

Q8. And do you work in a metropolitan, regional, rural or remote area? ***Record, noting quotas for outside of metro – please try for some rural/remote, not just regional***

Q9. And for roughly how many years, in total, have you worked as a [***insert audience type from Q2***]?
Record number of years. Within each of the 3 broad audience types, aim for roughly equal split of:

- ***up to 5 years***
- ***6-19 years***
- ***20 years +***

Q10. Do any of the following apply to you? ***Aim for several (at least among GPs) answering yes to either of the following:***
You completed medical training in another country
You speak a language other than English at home or with family/friends

[Only ask if Practice nurse or ATSI health practitioner / Aboriginal Health Worker] Q11. The research is about preventative health relating to pregnancy. Are you willing for us to schedule an interview? ***If "no", terminate. If they mention they don't talk about preventative health, confirm they do see pregnant patients as per earlier spec, and if so recruit.***

Schedule preferred date & time for interview (noting Heartward availability)

Offer telephone and videoconference options. Collect best contact number as applicable, and email address for appointment invite.

END OF SCREENER

Appendix D: Interview guide

SET-UP AND INTRODUCTION (4 minutes)	
Welcome	I'd like to thank you for giving up your time to participate in this research, it is very much appreciated. This interview won't take more than 45 minutes.
Recap of purpose	Today we are going to be talking about any preventative health conversations that you may have with patients who are pregnant or are planning pregnancy. There are no right or wrong answers, we are simply seeking your personal experiences and opinions.
Recap voluntary nature of participation	Confirming that your participation in this research is entirely voluntary. Please let us know if you wish to withdraw from the study at any point. If you do withdraw, you can request to have your data removed from the study.
Recording and confidentiality of participant information	This research is being carried out in compliance with the Privacy Act. You will be participating anonymously, and we hope you feel comfortable to be honest in providing your opinions. Are you still OK for me to make a recording of our conversation to help with our analysis? The recording will be stored securely and will be destroyed after the end of the project. ***Do not record if permission not confirmed. See closing for permission seeking re: transcripts.***
Introduction	As background, please would you tell me a little bit about the setting in which you currently work, and the sorts of patients you typically see.

RECENT INTERACTION NARRATIVES (8 minutes)	
Initial narrative prompt – most recent interaction, **newly confirmed pregnancy**	**To begin with, please would you think about the last time you saw a female patient who was visiting you for the first time in her pregnancy (whether or not this was her first child). Can you think of someone?** *If HP describes a visit where the patient was having the pregnancy confirmed, then ask whether they saw them afterwards and if anything was discussed then? Or if HP describes the first visit with a practitioner after they have had confirmation of pregnancy, then ask about any prior appts and whether they spoke about preventative health at any point?* **Ok, so please tell me a little bit about that patient, and describe to me what you covered during that appointment… any checks or examinations you performed, any tests you ordered, what you discussed with them, any advice or information you provided. Please share with me the story of that interaction.** *Prompt as required to help participant flesh out their story:* • What followed that? • Can you remember anything specific about that_____? • How did that relate to _____? • What about that was important for you? *Key areas in relation to preventative health conversations to note & explore later if they arise:* • *Language used and emotional climate*

	• *Motivations and perceptions of role* • *Confidence / hesitations* • *Pressures and challenges* • *Features of conversations – nature, length & quality, questions asked, advice provided.* **How typical would you say this was of interactions you have when first seeing women who are pregnant? How was it similar / different?**

Initial narrative prompt – most recent interaction, **planning a pregnancy / actively trying to conceive** *Skip for those who do not see women planning a pregnancy*	**Now think about the last time you saw a patient advising you for the first time that they were planning a pregnancy or actively trying to conceive.** **So again, please tell me a little bit about that patient, and share with me, the story of that interaction.** *Prompt as required to help participant flesh out their story:* • What followed that? • Can you remember anything specific about that_____? • How did that relate to _____? • What about that was important for you? *Key areas in relation to preventative health conversations to note & explore later if they arise:* • *Language used and emotional climate* • *Motivations and perceptions of role* • *Confidence / hesitations* • *Pressures and challenges* • *Features of conversations – nature, length & quality, questions asked, advice provided.* **How typical would you say this was of interactions you have with women planning pregnancy or actively trying to conceive, when you see them for the first time? How was it similar / different?**

ROLES AND RELATIVE PRIORITY OF TOPICS (10-12 minutes)	
Roles in providing health care to women pregnant, planning or actively trying to conceive	• In your role as a _____ [PARTICIPANT'S OWN TYPE OF HEALTH PROFESSIONAL], at what stage/s do you see women who are pregnant or planning or trying to conceive? • What do you see as important, if anything, for women to know at this stage/each of these stages, about what they can do to help them have a safe and healthy pregnancy? [PROMPT ON PREVENTATIVE HEALTH AND SPECIFIC SUBJECTS *such as nutrition, physical fitness, strenuous physical activity, pharmaceutical medications, substance use, alcohol consumption, mental health, stress, work*] • How powerful or influential do you think it is for health professionals to be delivering such information during consultations with patients? • Which health professionals, if any: o Currently impart this information? [ENCOURAGE THEM TO GENERATE LIST, *prompt on GPs, nurses, dietitian, naturopath, sonographer, pharmacist, pathology if not mentioned.*]

	○ Could most credibly and successfully impart this information? [ENCOURAGE THEM TO GENERATE LIST, *prompt on GPs, nurses, dietitian, naturopath, sonographer, pharmacist, pathology if not mentioned.*] • Why do you say this? [EXPLORE PERCEPTIONS OF OWN VS OTHER HEALTH PROFESSIONS] • **When** should these conversations ideally be happening with women? [*Allow unprompted response and probe fully before prompting with list*: 1. *Pre-conception – planning or actively trying to conceive, or taking steps to potentially fall pregnant but not actively trying ie. Cessation of contraception* 2. *Conception – prior to confirmation of pregnancy* 3. *Confirmation of pregnancy by a health professional* 4. *Remainder of first trimester* 5. *Second trimester* 6. *Third trimester* 7. *Birth* 8. *Post-partum period/Breastfeeding* • Are there other patient groups- apart from women who are pregnant or planning a pregnancy - with whom such conversations would be relevant? (*Note possible responses - women of child bearing age, male partners, sexually active teens etc*) • How frequently, if ever, do you have conversations with women who are pregnant or planning pregnancy about these issues?
Relative position and priority of alcohol as an issue in the context of pregnancy	• Which of the issues we have been talking about are the most crucial/highest priority? When do you think issue should be discussed for maximum positive impact? [ESTABLISH ORDER OR PRIORITY] • INSERT EXPLORATION OF PERCEPTIONS OF ALCOHOL IN AUSTRALIAN SOCIO-CULTURAL CONTEXT, INCLUDING OWN BEHAVIOUR AND IMPACT ON WOMEN PREGNANT OR HOPOING TO CONCEIVE • In general, how would you describe community perceptions of, and consumption of, alcohol in Australia?[10] • How, if at all, does this impact you own views or consumption of alcohol? • How, if at all, do you believe it impacts the views or consumption of alcohol by women pregnant or wanting to conceive? • How much of an issue do you see the consumption of alcohol by women who are pregnant or planning a pregnancy to be in the general population in Australia? • In your view, how critical an issue is alcohol consumption in pregnancy or when planning a pregnancy? • To what extent does this issue feature in your interactions with patients? • What priority does this issue have in your interactions with patients? To what extent are conversations about this topic a core part of your role? Why do you say that? With which types of patients is it most important to have such conversations? Why do you say that? [EXPLORE YOUNGER/OLDER, FIRST PREGNANCY/SUBSEQUENT PREGNANCIES, SES, ALCOHOL DEPENDENCY, CULTURAL DIFFERENCES/ASSUMPTIONS]

[10] This, and the next four questions, were introduced after the interim debrief for the second tranche of interviews.

CONVERSATIONS WITH WOMEN ABOUT ALCOHOL (10 minutes)	

Advice provided and why	• What are your main concerns, if any, about women consuming alcohol during pregnancy? *Listen out for:*
	  ○ *Quantities of alcohol/ patterns of use (e.g. binging) they are concerned about*
	  ○ *Whether FASD exclusively or also other impacts (e.g. miscarriage, still birth, premature birth, small birth weight)*
	  ○ *Perceived relative risk of FASD as an outcome – explore how many instances of FASD do they suspect they have seen – how would they identify this – have they screened for it vs suspect based on apparent physical symptoms or other presentation?, with what sort of alcohol consumption they associate it*
	  ○ *Whether concern covers all trimesters, or just one trimester exclusively and extends back to pregnancy planning*
	• To confirm, what advice, if any, do you provide to women about alcohol and pregnancy? Does this vary? How? Under what circumstances?
	• Do you have a sense of what has influenced the advice that you provide?
	• Do you ever provide advice related to drinking on special occasions? What is that advice? Does this vary? Under what circumstances? 2nd pregnancy? That the patient is already drinking?
	• Do you have a sense of what has influenced the advice that you provide?
	• What *would you be likely to do if/did you do* when it was your own pregnancy?[11]
	• And what advice, if any, do you provide to women about alcohol and breastfeeding? Does this vary? How? Under what circumstances? Are you more or less likely to discuss alcohol in relation to pregnancy or in relation to breastfeeding? Why or why not?
	• How informed do you feel about the issue? What else would you like to know or better understand about risks associated with alcohol and pregnancy? *Listen out for / probe on impacts on neurobiological impairment, and points in time of fetal development at which impairment occurs*
	• What can you tell me about what the current Australian guidelines to reduce health risks from drinking alcohol say in relation to alcohol in pregnancy? What about alcohol and breastfeeding?
	• What are your beliefs about the current guidelines? Do you use them? Are they realistic? Why / why not? [*Probe whether they see them as realistic, easy for lay people to interpret, do they go far enough/cause confusion etc*]?

More detailed examination of the nature of conversations, and who conversations are had with	• Do you **respond** to patients raising this topic, or are these conversations you **initiate**?
	• In **what contexts** do you raise the issue of alcohol?
	  ○ How do you like to raise it?
	  ○ With what patients do you consider it most important to raise?
	  ○ Where do partners fit in?
	  ○ How do you establish whether / how much alcohol the woman is consuming? Is the AUDIT-C tool relevant as an assessment tool? Do you use others?
	• How **long** do you typically spend on these sorts of conversations? Is this enough?

[11] This question was also introduced after the interim debrief for the second tranche of interviews.

	• Do you feel that these are **quality** conversations? Why / why not? What is lacking? • Would these be **one off conversations**, or something you would mention more than once?

Barriers to having conversations	• Are there any situations in which you'd be **unlikely** to raise the topic of alcohol?
	  ○ Situations where it doesn't seem necessary?
	  ○ Situations where it doesn't seem important?
	  ○ Situations where other potentially competing priorities are more pressing/important (e.g. relieving stress)?
	• Are there situations in which you give advice that is different to or that does not definitively adhere to the Guidelines and why? (such as occasional glass should be fine)
	• Situations where you'd ideally like to raise the topic, but there are barriers or challenges to doing so? What are these challenges?
	• Overall, how do you **feel** about discussing alcohol with patients?
	  ○ What are your main **concerns**?
	  ○ *Explore anticipated and actual reactions from patients*
	• *Only include if sufficient time as not a current priority* - What if (hypothetically) substance use in pregnancy became mandatory to collect - Do you have any thoughts about this? How might that change practices/outcomes?
	• Given the role you already play, what else/more would you like or be interested to do to support women pre-pregnancy / pregnancy when it comes to alcohol consumption / preventing FASD?

SUPPORT FOR HEALTH PROFESSIONALS (7 minutes)	

Explore sources of information and possible supports to increase role	• Where do you generally find out about issues such as the effects of alcohol in pregnancy, FASD and its prevention? Which sources are most credible and reliable?
	• What alcohol-related information, resources, materials do you use, if any, to support you when seeing women who are pregnant or planning or trying to conceive?
	  ○ Do you have enough? What else would be helpful? What about in terms of their format? [*Prompt on hard copy materials, websites, training/seminars etc*]
	• What, if any, resources do you share/use with patients? Is this specific to Alcohol and Pregnancy, or more generally? [Prompt *on hard copy vs electronic, anything else*]
	  ○ Are these sufficient for your needs?
	  ○ Is there anything else that would assist you in communicating with patients about this issue?
	• Do you feel there are adequate support services and referral pathways for pregnant women who have alcohol dependency issues?
	• Imagine you were an organisation supporting health professionals to better engage with patients who are pregnant or planning pregnancy about the topic of alcohol consumption.
	  ○ Which types of health professionals would be your top priority to aim your efforts at?

	○ What one thing do you think they would most need to motivate or support them to engage with their patients on this issue?

DEBRIEF, SEEK PERMISSION TO PRODUCE TRANSCRIPT AND CLOSE (3 minutes)	
Offer thanks	Thank you so much for your time today, it's been a really stimulating discussion and I hope interesting for you too.
Incentive	*Explain incentive will be paid by TKW by bank transfer*
Seek permission to produce and share de-identified transcript	This research has been commissioned by the Foundation for Alcohol Research and Education, or FARE. We would love to get your permission to produce a de-identified transcript of this interview (from the recording that I've made) that we could share with FARE. In the future, FARE may wish to provide the transcript to an academic institution for further thematic analysis, to publish on the topic of 'the beliefs, attitudes, knowledge and practice behaviours of health professionals related to alcohol and pregnancy'. **Do you give permission for this de-identified transcript to be produced and shared alongside others from this study?** ***Record whether or not permission is granted***