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Midwives and pregnant women talk about alcohol: what advice do we give and what do they receive?

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ABSTRACT

Background: the Australian National Health and Medical Research Council (NHMRC) recently revised its guidelines for alcohol consumption during pregnancy and breast feeding, moving from a recommendation of minimising intake to one of abstinence. Women are potentially exposed to a variety of messages about alcohol and pregnancy, including from the media and social contacts, and are likely to see midwives as the source of expert advice in understanding these contradictory messages.
Objective: to explore the advice that midwives believe they give to pregnant women about alcohol consumption, and the advice that pregnant women believe they receive; the knowledge and attitudes of both groups regarding alcohol consumption and the consistency with the NHMRC guidelines; and the receptivity and comfort of both groups in discussing alcohol consumption in the context of antenatal appointments.
Design: individual semi-structured interviews with midwives and pregnant women.
Setting: face-to-face interviews with midwives and telephone interviews with pregnant women were conducted in two regional areas of New South Wales in 2008–2009.
Participants: 12 midwives and 12 pregnant women.
Findings: midwives and pregnant women consistently agreed that conversations about alcohol are generally limited to brief screening questions at the first visit, and the risks are not discussed or explained (except for high-risk women).
Key conclusions: both groups expressed comfort with the idea of discussing alcohol consumption, but lacked knowledge of the risk and recommendation, and it appears that this opportunity to provide women with information is under-utilised.
Implications for practice: there is a need to provide midwives with accurate information about the risks of alcohol consumption during pregnancy and effective communication tools to encourage them to discuss the risks and recommendations with their patients.

Introduction

Australian guidelines for alcohol use during pregnancy

In February 2009, the National Health and Medical Research Council (NHMRC) released their new 'Australian Guidelines for Low Risk Drinking' (NHMRC, 2009) after a lengthy public consultation process. In the 2007 call for comment, the NHMRC advised that the intent was to give Australians 'clear guidelines on how to avoid or minimise the harmful consequences of drinking alcohol' (NHMRC, 2007, p. 17). While available to the general public, the document also states that the guidelines are primarily intended as a resource for individuals and groups, including health professionals, community groups, industry, professional organisations, schools and educational organisations; as well as informing those with a broader responsibility to the community, such as policy makers, planners and those responsible for providing alcohol.

Substantial revision of the 2001 guidelines (NHMRC, 2001) resulted in a reduction of 12 to reach three specific guidelines: one universal guideline for men and women; one for children and people under 18 years of age; and one for women who are pregnant, planning a pregnancy or breast feeding. In particular, Guideline 3 reads: 'For women who are pregnant, are planning a pregnancy or are breastfeeding not drinking is the safest option'.

The 2009 guidelines represent a significant shift in advice and bring Australia into line with the US Surgeon General, the New Zealand Ministry of Health and the Public Health Agency of

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Canada in advising an abstinence approach (O'Leary et al., 2007). In the 2001 guidelines, women who were 'pregnant or might soon become pregnant' were advised that they 'may consider not drinking at all; most importantly, should never become intoxicated; if they choose to drink, over a week, should have less than seven standard drinks, AND, on any one day, no more than two standard drinks (spread over at least two hours); and should note that the risk is highest in the earlier stages of pregnancy, including the time from conception to the first missed period'. That is, although women could 'consider' not drinking at all, no firm advice was given not to drink, with the authors noting that although it was difficult to exactly identify the lower levels of drinking that may cause harm to the child, the limited available evidence indicated that drinking at guideline levels (an average of one drink per day) had no measurable impact on a child's physical and mental development.

The difficulty in developing specific alcohol guidelines for pregnant women lies in the nature of the research evidence, with methodological problems arising from lack of standardisation in the measurement of alcohol intake and failure to account for confounding factors continuing to lead to uncertainty in the interpretation of the literature (NHMRC, 2007). However, it is not just different interpretations of the research evidence which have led to conflicting conclusions. The establishment of guidelines for pregnancy is also rooted in issues surrounding the autonomy of women to make an informed choice, the duty of care of governments, and the necessity for safety margins for public health standards. They have, therefore, engendered much debate within medical, policy and consumer areas in Australia and internationally.

Evidence of harms associated with alcohol use during pregnancy

Alcohol readily crosses the placenta and is both 'teratogenic and ferotoxic in the human' (RCOG, 2006, p. 2). Fetal alcohol syndrome (FAS), defined clinically in the 1970s, is the most severe expression of the effects of alcohol on the developing fetus, and is a pattern of abnormalities featuring: (1) growth retardation, (2) characteristic facial features, and (3) central nervous system (CNS) anomalies or dysfunction, combined with (4) a history of confirmed maternal alcohol exposure, resulting in permanent major cognitive and behavioural dysfunction (RCOG, 2006; Calhoun and Warren, 2007; O'Leary et al., 2007). Although FAS is related to alcohol consumption during pregnancy, researchers have been unable to define specific thresholds for damage as not all children are affected, or affected to the same extent, by similar amounts of alcohol consumption during gestation (O'Leary, 2004). Factors other than quantity, such as patterns and timing of intake, fetal development stage, and genetic and socio-behavioural factors, all appear to change the likelihood and patterns of effects (NHMRC, 2007). As the levels of drinking resulting in FAS are ill defined, so too are the levels for lesser effects which come under the umbrella term of 'fetal alcohol spectrum disorders' (FASD), which includes alcohol-related neurodevelopmental disorders, fetal alcohol effects, partial FAS and alcohol-related birth defects (Calhoun and Warren, 2007). Adverse effects in FASD can manifest as a combination of some but not all of the four features of FAS, CNS structural defects without the pattern of neurodevelopmental disorder, neurodevelopmental disorder without structural defects, growth deficiency, or behavioural or cognitive dysfunction (O'Leary, 2004; RCOG, 2006). Other established risks of alcohol use in pregnancy include miscarriage, stillbirth, preterm birth and decreased fetal growth – effects generally related to high levels of alcohol exposure (NHMRC, 2007).

The risks to the developing fetus from low to moderate alcohol intake continue to be debated. Henderson et al. (2007), in a systematic review of research from 1970 to 2005, found no consistently significant effects of low to moderate alcohol intake (less than 12 g/day) on miscarriage, stillbirth, intrauterine growth restriction, prematurity, birth weight, small for gestational age at birth, or birth defects including FAS. However, some criticism has been made of the study because of the exclusion of cognitive and neurological evidence, and the results of animal studies from the review (Black et al., 2007). The review authors themselves state that methodological weaknesses in many of the studies reviewed mean that it cannot be concluded that it is safe for women to drink at these levels, rather that the existing evidence is inconclusive.

Other research related to low to moderate levels of alcohol consumption in pregnancy evaluated by the NHMRC (2007)[1] in developing the 2009 guidelines found: a dose–response relationship between consumption and visual acuity, observed at levels of one or more drinks per day (Carter et al., 2005); a significant reduction in nerve conduction velocity and amplitude in peripheral nerves persisting at one year of age (Avaria et al., 2004); a negative dose-dependent linear relationship between alcohol and impact on mental development in children aged 12–13 months (Testa et al., 2003); deficits in working memory and executive function in children exposed to more than 14 g/day prenatally (Burden et al., 2005); neurological abnormalities in infants whose mothers consumed more than 20–110 g per week (Van der Leeden et al., 2001); deleterious effects on children's verbal and non-verbal learning and memory score at 10 years of age with prenatal exposure to three or more drinks per week, and deficits in the verbal domain at 14 years in the same cohort (Richardson et al., 2002; Willford et al., 2004); and no association between alcohol consumption of less than one glass per day in early pregnancy and intellectual ability, learning and attention at 14 years of age (O'Callaghan et al., 2007).

The NHMRC report concludes that 'although the risks from low-level drinking (such as one or two drinks per week) during pregnancy and breastfeeding are likely to be low, a 'no-effect' level has not been established, and it is therefore impossible to set a 'safe' or 'no-risk' drinking level for pregnant and breastfeeding women to avoid harm to their unborn fetus or young baby' (p. 57). This is similar to the summary of the evidence in the National Institute for Health and Clinical Excellence (NICE, 2008) antenatal guidelines: 'No threshold level of alcohol consumption during pregnancy, above which alcohol is harmful to the baby and below which it is safe, was identified clearly across all studies' (p. 98). However, it is interesting to note the difference between NICE and NHMRC in the resulting guidelines for pregnant women – with the former recommending abstinence in the first trimester and then no more than one or two UK units once or twice a week, and the latter recommending that not drinking (throughout pregnancy) 'is the safest option'.

The British Medical Association (2007) advises that 'FASD are completely preventable through the elimination of drinking during pregnancy' (p. 1), but notes that prevention requires an increased awareness of the risks among the general public and particularly among women who are pregnant or planning to become pregnant.

Prevalence of alcohol use in pregnancy

Australian estimates for alcohol use in pregnancy vary but are generally high. A national survey in 2004 found that 47% of women reported having consumed alcohol whilst pregnant or breast feeding (Australian Institute of Health and Welfare, 2007). Giglia and Binns (2007), in examining data from 587 women from

[1] This list is not inclusive of all the evidence cited in the NHMRC report.