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Beyond 'the choice to drink' in a UK guideline on FASD: the precautionary principle, pregnancy surveillance, and the managed woman

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In many countries, official guidance promotes alcohol abstinence to women during, and also before, pregnancy, on the basis of concern about Foetal Alcohol Spectrum Disorder (FASD). Guidance has moved away from reference to a 'choice to drink', claiming absence of evidence about safety of even 'low level' drinking as a justification. Scholarship drawing on sociologies of risk and uncertainty has drawn attention to problems with precautionary thinking in this area of policy making, including for women's autonomy. We build on these insights to assess a more recent type of UK guidance. This is directed not *to* women advising them to abstain, but instead it is *about* women, and tasks health professionals with managing the risk pregnant women's behaviour is deemed to present. Using qualitative discourse analysis, we assess one such example, developed in Scotland, called SIGN 156. We contextualise SIGN 156 first through discussion of the relevant literature, making particular use of Ruhl's considerations of the meaning of risk and the social conditioning of choice, and second through an account of developments in UK Government advice in recent years. We show that SIGN 156 builds on a policy context where a precautionary approach is explicit, but we furthermore detail how this approach innovates the guidance and practice field. SIGN 156 expands the meaning of risk and uncertainty and so justifies 'routine' monitoring and screening, generating the case for an expanded form of surveillance of pregnant women. We conclude with a critical commentary on the implications of this case for analyses of risk and uncertainty, and power.

Keywords: Risk; Choice; Pregnancy; Alcohol; Uncertainty

Introduction

Official guidance about pregnancy in many countries now promotes alcohol abstinence to women during, and also before pregnancy, on the grounds this is the best way to prevent a form of disability classified as Foetal Alcohol Spectrum Disorder (FASD).

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Guidance developed in the 21st century has increasingly made reference to the precautionary principle and associated conceptions of risk and uncertainty in order to justify concerns about what is referred to as ‘low level’ alcohol consumption. The claim that evidence is uncertain regarding the relation between FASD and ‘low level’ drinking, and that therefore alcohol abstinence is to be advised on precautionary grounds, has come to feature centrally in policy discourse in the UK, North America and many European countries. Some scholarship has drawn critical attention to the assumptions behind, and implications of, this use of a precautionary approach, questioning the validity of associating *any* drinking in pregnancy with FASD and highlighting the effects of the validation of alcohol abstinence for women’s autonomy (Bell et al., 2009; Holland et al., 2016; Lee, 2014; Leppo, 2012; E. M. Armstrong, 1998; Pollitt, 1998; Ruhl, 1999; Thom et al., 2020).

In this article, we build on this scholarship and present a critical assessment of a new form of guidance based on the precautionary approach, developed in the UK. The focus of this guidance is people (mainly, but not only, children) who could be given a diagnosis of FASD. Rather than advising women about their alcohol consumption, its audience is relevant healthcare professionals, such as midwives involved in prenatal care. The guidance sets out what it considers best practice in the diagnosis of FASD, the provision of services to those given this diagnosis, and prevention of FASD, and detailing healthcare practices that should be adopted in prenatal care. Our study is therefore concerned with the movement in guidance based on the precautionary approach from women being thought of as *managers of risk*, encouraged to ‘make a choice’ (and ideally change their behaviour in line with precautionary advice), to women *managed as a risk* by professionals because of the problem of FASD.

We provide an in-depth analysis of one such guideline to consider what this movement entails. Developed by the Scottish Intercollegiate Guidelines Network (SIGN) and introduced in Scotland in 2019, it is titled ‘SIGN 156: Children and young people exposed prenatally to alcohol, A national clinical guideline’ (Scottish Intercollegiate Guidelines Network (SIGN), 2019). To contextualise SIGN 156 and account for its background and innovations, we first discuss its basis in the social construction of the problem of uncertainty and its formulation in UK policy, and the perceived associated need for precautionary advice. Our case is that the approach developed in SIGN 156 arises out of prior discursive shifts in policy but adds distinct dimensions to precautionary thinking and to the practices associated with it, which deserve more attention and debate than they currently attract. Although there is a chronological development in the policy discourse, one sort of discourse is not replaced by another over time. Rather, the precautionary approach builds on and influences a variety of policy experiments and discourses, of which SIGN 156 is one.

Our approach overall is informed by the idea that ‘paying attention to ideas, discourse and conceptual history’ should be an objective of policy analysis (Béland & Petersen, 2015, p. 6). Such research can draw attention to important developments, particularly with regard to policies justified as ‘evidence based’. Smith (2013, p. 71) argues the rise of ‘evidence based’ policies, particularly in the domain of health, has a clear appeal to policy-makers as ‘the concept of “evidence” is imbued with a reassuring sense of objectivity and corporeality and it may well be more desirable to claim that policies have been based on scientific evidence than on ideas’. However, ‘in reality it is rare to find policies that are clearly based on scientific evidence (and extremely easy to find examples of policies that seem to run counter to the available evidence)’. This tension, Smith explains, accounts for the 'growing interest in the role of ideas within studies of the relationship between research and policy and within the broader field of policy studies' (p. 71). Our interest is in the increasing emphasis on the need for precaution made thorough certain claims about evidence, and the consequent meaning ascribed to the concept 'choice' within policy. Specifically, through our discussion of SIGN 156, we draw attention to the total removal of the words 'choice to drink' from the language of guidance, and the associated effacing of the woman herself as a moral agent.

We organise our initial commentary around discussion of Ruhl's (1999) useful conceptualisation of the 'social conditioning of choice'. This contribution sets out the tension as it arose from the 20th century between, on one hand, precautionary thinking regarding evidence and uncertainty and the advocacy of alcohol abstinence it gives rise to and, on the other, women's autonomy. We also provide an overview of the wider literature internationally that has critically engaged conceptions of risk used in discussions of alcohol intake in pregnancy. Next, we summarise the shifts in policy in the UK context that occurred in the 21st century, that came to make explicit reference to the precautionary principle, and which lie behind SIGN 156. We then discuss our analysis of this document.

The social conditioning of choice and the pregnant woman as 'risk manager'

> Pregnant women are presented with a series of 'choices' during their pregnancy, which, upon closer scrutiny, turn out to be not free choices at all, but are really highly circumscribed by the language of risk. Thus the decision whether or not to consume moderate amounts of alcohol is presented as a choice for the pregnant woman but her decision is heavily conditioned socially. She is informed that in the absence of thorough studies it is safer (less risky) for her to abstain from alcohol entirely than risk the effects of even small amounts of alcohol on her foetus. (Ruhl, 1999, p. 104)

Ruhl's comments, now more than 20 years old, alert us to the way concept 'choice' can be given meaning. The word 'choice' can be taken to mean there is the possibility for a person to decide between two valid courses of action (Knaak, 2005). As Ruhl observes, however, by the end of the 20th century its meaning in advice to women about alcohol and pregnancy had acquired different connotations. The designation of forms of disability as Foetal Alcohol Syndrome (FAS) in the early 1970s, and later as Foetal Alcohol Spectrum Disorder (FASD), had impelled an association between a pregnant woman's consumption of alcohol and an inevitably undesirable outcome. While women were presented with a decision to make, the concept choice was 'highly circumscribed' by 'the language of risk'.

As Ruhl indicates, this language of risk comprised discussion of 'studies' relating to the association between pregnant women's alcohol consumption and negative outcomes. More specifically, however, it focused on precautionary statements to do with the *absence* of 'thorough studies' documenting the precise relationship between 'even small amounts of alcohol' and foetal impairment. Others have detailed at length how this emphasis on the absence of evidence conditioned the context for 'choice' as a concept and, therefore, decisions that should be made by women. They have shown how the effects of behaviour deemed 'unknown' by merit of this absence were described as a 'risk', and how the problem of drinking in pregnancy came to be defined as ever larger (Armstrong & Abel, 2000; E. M. Armstrong, 1998). Women came to be advised that it was better to assume the worst about these unknown outcomes of a decision, and to circumvent the possibility of harm through making the socially conditioned choice to abstain from alcohol altogether.

A wealth of discussion in the literature considers how and why this particular social conditioning of choice emerged, with its prioritising of the *absence* of evidence and the attendant construction of uncertainty and risk. The accounts written about the US by E. M. Armstrong (1998), E.A. Armstrong (2003) and Golden (1999; 2005) emphasise, broadly speaking, a powerful, moralised trajectory towards the individualisation of responsibility for disability, with its causes read back into factors impacting foetal development in the womb. Armstrong uses the term 'maternal-fetal separation' to summarise the content of this trajectory as a shift in the definition of 'pregnant' as something a woman 'is', to 'regarding pregnancy as something she *carries*' (E.A. Armstrong, 2003, p. 9, our emphasis). Pregnancy becomes perceived as separate and independent from the woman and even in potential conflict with her; with maternal behaviour and lifestyle therefore understood as especially significant for accounts of causes of disability.

Maternal-foetal separation is regarded as predicated, in part, on sophisticated developments in science and medicine that have transformed understandings of life in the womb. The reflection of knowledge about the foetus in activities directed at modifying the lifestyle of pregnant woman on the basis of risk-as-danger has been understood, however, as requiring a shift in the moral status of the pregnant woman, where she is depersonalised and her actions and decisions medicalised (E.A. Armstrong, 2003; Lee, 2014). The foetus and its development becomes the starting point, and the woman's health, quality of life and situation is considered secondarily. Törrönen and Tryggvesson explore the transformation of 'the private fetus into a public fetus', whereby the foetus becomes 'an object of externalized mechanisms of surveillance and regulation' (Törrönen & Tryggvesson, 2015, p. 57). They describe these mechanisms as extensive, including those which directly assess the foetus but also women's 'behavior and lifestyle choice prior to pregnancy, while pregnant and during breastfeeding'; and note that, 'in this context, drinking during pregnancy has become a serious public health concern in all Western countries' (Törrönen & Tryggvesson, 2015, p. 58).

Ruhl explained, 'The subject of risk reduction is not the pregnant woman; the effort here is not to reduce *maternal* risk during pregnancy, but rather to reduce possible risks to the foetus due to maternal behaviour' (Ruhl, 1999, p. 95). Golden (2005)emphasised that in the history of abstinence advocacy, the problem of drinking in pregnancy came to be considered less as one of *alcoholism* as a medical condition suffered by some women who need help and treatment, to the teratogenic substance *alcohol*, and the pregnant woman's behaviour as a consumer of it, in any quantity. Research describes the expansion of attention to risk to the foetus and alcohol-associated disability has been described as a 'democratised' condition because of this (Armstrong, 2000Lee, 2014; Lee et al., 2016). FASD has been increasingly defined as potentially experienced by *any* child conceived by any woman who drank *any* alcohol, rather than linked to wider social conditions or circumstances pertaining in the lives of some women.

From the early 21st century, this democratisation of risk has expanded. Leppo and Hecksher (2011) have detailed, using the examples of Denmark and Finland, how total abstinence advocacy has come to dominate policy approaches, justified through a precautionary approach (rather than evidence of harm). As they note, this has become the global norm. It has also expanded to include 'lifestyle choices' *before* pregnancy (Budds, 2020; Törrönen & Tryggvesson, 2015) and has gained influence worldwide, including in countries considered to score highly on measures of attention to women's equality (Leppo et al., 2014). In turn, scholarship has considered variations in forms and outcomes of alcohol abstinence advocacy, generating accounts of the differences in and effects of this social conditioning of choice (Hammer & Burton-Jeangros, 2013; Hammer & Inglin, 2014; Holland et al., 2016).

Back in 1996, Weir argued that the 'problematic' that already existed in communicating around uncertainty, absence of evidence and unknowns, was ' … how to govern pregnancy consistent with the freedom and autonomy of pregnant women' (1996, p. 389). This suggested a tension between advocating abstinence on precautionary grounds, and the existence of an idea of the pregnant woman as an autonomous individual who can assess risk for herself and make a choice. Ruhl discussed how 'liberal governance of pregnancy' works through 'a discourse of risk, and risk prevention and reduction', and enlists the co-operation of the 'responsible' pregnant woman' who chooses the right way – thereby framing 'behaving responsibly' as a 'moral act' (Ruhl, 1999, pp. 95–6). It is for this reason that many analyses have highlighted 'self-regulation', whereby emphasis is placed on the workings of a moralised framework that centres on 'responsible' mothers making the 'right choices'. Hammer's research among couples in Switzerland, for example, has drawn attention to:

> [T]he framework of self-surveillance to describe the social experience of pregnant woman within a social context characterised by risk avoidance for the sake of their baby. (2019, p. 335)

Research also shows that finding a resolution to the tension identified by Weir in *self*-surveillance co-exists with other forms of intervention predicated on risk-as-danger, that involve *third parties*. Potter, in her governmentality-oriented study in the US, argued that:

> … the state attempts to institute *modalities of self-surveillance* in citizens and thereby, *risk is individually managed*; citizens *control their own behaviors*. (Our emphasis)

She continues by observing that, 'the state must actively oversee the individual's management of their health risks' (2012, p. 133), suggesting choice can be conditioned differently to self-surveillance:

> When self-surveillance is not effective at controlling women's drinking behaviour more punitive measures … . including legislation are employed by the state … By 2011, 44 [US] states had introduced FASD-related bills, and 89 where passed into law. While many of the enacted laws established treatment programmes or educational initiatives, an increasing number intervened directly in the lives of pregnant women. They assigned particular government agencies the responsibility for assessing future or current risk to the fetus or child. (2012, p.134-135)

This sort of approach to prenatal alcohol (and especially drug use) has been discussed as especially characteristic of the US (Bell et al., 2009; E.A. Armstrong, 2003; Pollitt, 1998). Leppo's comparative research focusses on what might seem to be the surprising emergence of compulsion and detainment of women from the late 20th century in Scandinavia, as part of treating pregnant women with 'substance abuse problems'. This measure was debated in Finland and put into operation in Norway and Sweden; the Norwegian Government (amid controversy) accepted compulsory treatment of pregnant women where it was considered that probable substance abuse will damage the foetus, and voluntary treatment is deemed insufficient. Leppo draws attention to the distinction, however, between, ‘dealing with the problem through the criminal justice system’, as is more the case in the US, and the Scandinavian approach which functions far more ‘through increasing the use of control within the treatment system’ (Leppo, 2012, p. 187).

In summary, the literature indicates that the social conditioning of the ‘choice to drink’ designates *any* alcohol consumption as risky. It tends to acknowledge the woman as the manager of risk and so prioritises her choices in explanations for disability diagnosed as FASD, encouraging self-surveillance based on the pregnant woman’s choice to abstain. Other more or less coercive and punitive programmes that bring third parties into the practice of risk management have been shown to be shaped by national context. Reference to ‘the precautionary principle’ has recently become explicit in the language of policy and the word ‘choice’ removed: a development that underpins the innovations in the management of risk set out in SIGN 156, as we now discuss.

UK health policy: the reconditioning of choice through the precautionary principle

> … a *modus operandi* is developing in which policy in some instances circumvents the problem of uncertainty by simply associating what is unknown with certain danger, and acting accordingly. (Lowe & Lee, 2010, p. 306)

In 2007 the English Department of Health (DH) made statements that newly prioritised alcohol abstinence in its advice to women. That year, advice *both* to pregnant women, and to women ‘trying to conceive’, was reformulated in a new iteration, in which the initial sentence used the words ‘avoid alcohol’. The extract above is part of a commentary on this reformulation of advice, noting that this policy statement explicitly detached advice from the existence of evidence of harm associated with all and any drinking. Indeed, it was developed against the backdrop of a commissioned review that described available evidence about the detrimental effects of ‘low level’ drinking as ‘poor’, noted no reliably documented relation between ‘low level’ drinking and impaired foetal development, and generally emphasised uncertainty at the level of evidence (Lowe & Lee, 2010). The decision was made for the first time, nevertheless, to make the case that women should be encouraged to act as though evidence was more certain, and so to ‘avoid alcohol’. The then Deputy Chief Medical Officer (CMO) formulated this position as ‘strengthening advice to women’ to ensure ‘no-one underestimates the risk to the developing fetus of drinking above the recommended safe levels’ (as cited in Lowe & Lee, 2010, p. 305).

Commentaries have raised concerns about minimising the importance of assuming women’s capabilities in interpreting evidence and making an assessment of risk for themselves. The term ‘paternalism’ has been used to describe the removal of that emphasis, noting the tension between this specific policy and the validation of autonomy within women’s healthcare advice more generally (Gavaghan, 2009; O’Brien, 2015). Subsequent policy, however, has further minimised provision of information about uncertainty. The decision made in 2016 was to remove any reference at all to the ‘choice to drink’.

In 2007, advice from the Department of Health read in its second line:

> If they [women] do choose to drink, to minimise risk to the baby, they should not drink more than one to two units of alcohol one or twice or week and should not get drunk.

In 2016, the removal this reference to 'choose to drink', constituted a major change. The UK Chief Medical Officers, in their 'Low Risk Drinking Guidelines', stated:

> If you are pregnant or think you could become pregnant, the safest approach is not to drink alcohol at all, to keep risks to your baby to a minimum. Drinking in pregnancy can lead to long-term harm to the baby, with the more you drink the greater the risk. (Department of Health, 2016)

The justification for the change was twofold. First, it was based on 'some evidence' that the 'current English CMO guidance may have been read as implying a recommendation to drink alcohol at low levels during pregnancy, which was not the intention'. The reference cited for this evidence was an unpublished document 'Alcohol Guidelines Exploratory Research with recent mothers, Summary findings' (Department of Health, 2016, p. 27). Second, the change was justified through a stronger justification of 'precaution', with the Guidelines supporting the need for a 'precautionary approach on low risk drinking where the evidence is not robust enough to be completely conclusive' (Department of Health, 2016, p. 28). Commenting on research published since 2007, the Guidelines state that, 'definitive evidence particularly on the effects of low level consumption remains elusive' (Department of Health, 2016, p. 27), and that 'there is little evidence of harm from low levels of drinking', but despite this:

> It is not possible to say that such drinking carries no risk of harm at all [and] it is plausible scientifically that alcohol, even at such low levels, could cause some harm. (Department of Health, 2016, p. 29)

The explicit inclusion of the term 'precautionary principle' in health advice was a striking development. As Thom and colleagues note, 'Used initially in the context of environmental risk, there is no one definition of the "precautionary principle". It is generally applied in situations where there is uncertainty or lack of clarity regarding the evidence for policy action and is intended to avoid policy stagnation' (2020, p. 66). They note, however, that in the UK, as well as US, Australia, New Zealand, 'the "risk narrative" around drinking in pregnancy and pressures towards adopting the "precautionary principle" have emerged and strengthened over recent decades' (2020, p. 67).

The adoption of the precautionary principle in this area has been subjected to some contestation outside of the policy domain. McCallum and Holland, for example, report research about the media framing of precautionary guidance in Australia, where debate included the concept 'women's rights':

> Consuming alcohol during pregnancy was not constructed primarily as a matter of scientific research or expert opinion but as one of many social practices women negotiate during pregnancy. It foregrounded the rights of women to make their own decision about alcohol consumption. (2018, p. 412)

However, in policy constructs, the case has been accepted that uncertainty regarding the safety of 'low level' drinking means there is no place for the idea that a woman might assess risk for herself and 'have a right' to make 'their own decision'; instead she should be advised to abstain. In the UK, in the second decade of the 21st century, the preexisting discourse that validates abstinence was reconditioned, and a stronger validation of ‘precaution’ in 2016 was justified through reference to unpublished evidence, and through the claim that evidence must be ‘completely conclusive’ for advice to be otherwise.

We now turn to discuss our analysis of SIGN 156, as an example of a guideline developed out of the policy context discussed above, in which a precautionary approach is prioritised, and alcohol abstinence therefore advised. We first outline the approach we took to the analysis of this document, before setting out the main points to emerge from it.

Study design: data selection and method of analysis

‘SIGN 156: Children and young people exposed prenatally to alcohol: A national clinical guideline’, was published in February 2019 by Health Improvement Scotland. As we noted at the outset, such guidelines have been developed for countries other than in the UK, including Canada, Australia and Germany. We make no claim to providing a comprehensive account that considers the variations in guidelines of this sort, and comparative analysis of FASD guidelines and other initiatives based on what we term here ‘post choice’ thinking should be important for research going forwards.

SIGN 156 can be considered an appropriate document to focus on, however, as part of the development of the discourse under consideration. Drawing as it does on previously published Canadian guidance, it has acted to diffuse the general policy area to the UK and so constitutes a good case study to explore the spread of conceptual shifts (Béland & Petersen, 2015). It has become a key source and point of reference for further policy development in UK countries. The National Institute of Clinical Excellence (NICE) is developing a Quality Standard for England and Wales about FASD drawing on SIGN 156. A draft Quality Standard was initially published in March 2020, and a consultation period opened. Covid-19 led to its suspension, with the consultation then reopened in August 2020. The outcome of this process is unclear at the time of writing, following public dispute and considerable controversy about the draft, especially around proposals for transferring information about a woman’s consumption of alcohol into her child’s health records (Arkell, 2020). The concepts developed in SIGN 156 also drive Public Health England’s (PHE) designation of the ‘harms caused by alcohol in pregnancy’ as one of its six ‘maternity high impact areas’ in 2020 (Public Health England (PHE), 2020). SIGN 156 is therefore central to the development of guidance across the UK, and consequently significant for research about the diffusion of ‘post choice’ discourse and practices, but has been the subject of little debate or analysis.

SIGN 156 comprises a set of documents, setting out an evidence base in literature review and evaluation that lie behind the guidance document, information sheets for those to whom the guidance is directed, and the main guidance document itself. Within the main document, the approach taken to developing the text is described this way:

> [T]he systematic literature review conducted to inform this guideline identified insufficient relevant evidence of adequate quality to support the development of evidence based recommendations (with the exception of the issue of screening for alcohol consumption during pregnancy) … . After assessment, the group concluded that adaptation of the revised Canadian guideline on diagnosis of FASD offered the best balance of methodological quality and clinical topic coverage. Elements of the Australian guide to the diagnosis of FASD have also been incorporated. (2019, p. 8)

Our assessment of SIGN 156 is based on an analysis of the text of the main document. Our aim was to consider the outcomes of the context we have described so far, in which important discursive steps had been already taken in the social conditioning of the concept 'choice'. Using qualitative discourse analysis, grounded in an ideational approach to social policy research (Béland & Petersen, 2015; Smith, 2013), we identified and agreed initial themes from the literature and policy documents reviewed above. These themes drive the account of our findings.

The first theme focuses on the presence/absence of the words 'choice' and 'woman' in the text. We next discuss 'levels of drinking' (and associated terminology around 'low level' drinking and evidence) and therefore explore the document's interpretation of the precautionary ethos and its account of uncertainty. Third, we consider the way that woman's risk management is framed and presented and discuss the healthcare practices advocated in the text. We particularly focus on 'screening': presented in the Guideline as an alternative to the previous resolution of abstinence advocacy in 'self-surveillance' by the woman herself, which we show is contextualised in SIGN 156 by the absence of reference to 'informed choice'.

Guidance 'after choice': SIGN 156, evidence-based paternalism, and the managed woman: Findings

Theme 1: 'Choice', 'woman', and 'Prenatal Alcohol Exposure'

In SIGN 156, the word 'choice' barely appears, and only in the context of decisions made by professionals. For example, it appears in the sentence: 'The choice of facial features … ' used in discussion of the decisions the authors of SIGN 156 made about diagnostic criteria for FASD (p. 5). The phrase 'the choice to drink' does not appear at all; instead, drinking is described in as 'alcohol use' or 'alcohol consumption', and so is given inherently pathologising connotations. There is also no usage of the term 'informed choice' in relation to service provision, including where the document considers screening women during pregnancy or after birth. This absence of the word 'choice' formed our point of departure for analysis with the aim being to assess the meaning other terms acquire when this concept is absent.

The word 'woman' appears several times, clustered in parts of the text. The far more frequently occurring term, as we discuss below, is 'PAE' (Prenatal Alcohol Exposure). Woman/women is used six times in sentences near the start of the document, in which the problem of alcohol consumption is presented as large, and general, described as a 'significant public health problem' in 'women of childbearing age'. Indeed, the document notes that 'the majority of women still drink some alcohol' (p. 1), thus formulating the problem initially as simply female alcohol consumption.

Although all women 'of childbearing age' are included within the scope of concern, comment is also made on patterning of consumption, specifically correlations with measures of social deprivation. The document observes, 'Women in the *least deprived* areas are *most* likely to drink and those in the *most deprived* areas are *least* likely to drink' and continues, '*those living in deprivation* who do drink are *more likely to drink heavily'* (p.1, our emphasis). The observation referred to, that drinking alcohol is correlated *negatively* with social deprivation, is widely noted in investigations that consider child development, which also show correlations between alcohol consumption and *higher* child IQ (and other developmental advantages in children). Indeed, the fact that children born to women who abstain from alcohol (the 'least likely to drink' who also live 'in the most deprived areas') do the *worst* in measures of child development is also commented on in the literature (Lee et al., 2016), as is the association between heavy drinking (as an aspect of substance misuse) and 'living in deprivation'.

In their thoughtful review of the 'matrix' of 'biological, social and ethical processes' that are embedded in diagnosing FASD, Meurk and colleagues note the 'puzzling mismatches between reported patterns of maternal alcohol consumption during pregnancy and the incidence of FASD in groups of different socioeconomic status' (2014, p. 338). They refer back to the seminal research on FAS and the proposition that 'FAS is not an equal opportunity birth defect', and observe:

> Studies of maternal alcohol consumption in OECD countries suggest that women from upper socio-economic groups are more likely to drink alcohol during pregnancy but have significantly lower rates of FASD than women on lower socioeconomic groups. (2014, p. 339)

Meurk and colleagues suggest there are research avenues indicated by this puzzle, regarding the 'protective effect' of higher socio-economic status, which are sublimated by the growing focus on the causal weight of alcohol alone.

In SIGN 156, however, there is no further discussion of this patterning or associations between social deprivation and patterns of consumption. Rather, the text comments:

> While no woman wishes to intentionally harm her unborn child, this preventable cause to damage to the fetus continues to occur for a variety of reasons. (2019, p. 1)

The movement, in this short opening section, is therefore from undeveloped observations about patterning of women's drinking, to the individual woman and her intentions. There is no 'choice to drink' – nor is there a discussion of the 'reasons' that might influence a woman's 'unintentional harming' of the 'unborn child', aside from a list provided in Section 2 that states:

> A variety of factors can impact a woman's consumption of alcohol during pregnancy, including a prior history of alcohol consumption, a family background of alcohol use, a history of inpatient treatment for problematic alcohol and/or substance use and/or a history of mental health problems, the previous birth of a child with FASD, lack of contraception/unplanned pregnancy, a history of physical/emotional/sexual/abuse, low income and/or limited access to healthcare. (p. 10)

There is no elaboration of the implications of this 'variety of factors', or distinctions made about how to consider them and what conclusions might be drawn regarding healthcare provision. The 'booking in visit' (when a pregnant woman has her first appointment with a midwife, ideally at around 10 weeks' gestation) is discussed as 'one opportunity to ask questions sensitively about alcohol' but no indication is given as to how best to assist a woman with a history of mental health problems, or of abuse. Commentary is limited to stating that importance should be placed on:

> [P]aying due attention to potential risk factors such as high social class and experience of violence and abuse. (p. 13)

This statement appears to make equivalent the social patterning of alcohol consumption referred to previously, with ‘experience of violence and abuse’. This equivalence makes sense only from a perspective in which identification of any alcohol consumption for any reason becomes the driver for the paying of ‘due attention’ by health professionals.

In the brief discussion in SIGN 156 of the history of the naming of birth defects as alcohol-related (that is, the terminology of FAS and FASD), the word ‘woman’ is replaced by the term ‘PAE’: the acronym for ‘Prenatal Alcohol Exposure’. It is stated at the outset, in the document’s discussion of this history, that ‘PAE is one of the commonest preventable causes of impairment’ (p. 1), and this term becomes the concept that drives further discussion. Since the woman does not choose, she appears instead as the depersonalised vector for the foetus’s ‘exposure’ to the substance ‘alcohol’ ‘prenatally’. The focus is then on measuring the extent and effects of this exposure, and discussion around how to prevent it. This effacing of the woman is also apparent from the start in discussion of the ‘patient perspective’. Although the pregnant woman is to be subject to a range of interventions including ‘screening’, she is not defined as the ‘patient’; rather the patient is the child to whom she gives birth. Thus, the concept ‘informed choice’ becomes redundant in later discussions in the text.

Theme 2: The precautionary ethos, ‘low level drinking’, and uncertainty

From their research into guidance to women, Thom and colleagues note that ‘All sources acknowledge that the impact of low-level drinking on the foetus is generally unknown or believed to be limited’ but they ‘nevertheless’ advise women against drinking alcohol at all (2020, p. 71). As we have noted, in 2016 this approach based on the ‘unknown’ led to a reformulation of advice from the UK’s Chief Medical Officers, removing the reference to ‘a choice to drink’. This forms the starting point for discussion of alcohol consumption in SIGN 156, and we now move to consider how ‘low level drinking’ is presented in the document.

The innovation in SIGN 156 is in its development of this case about hypothetical harm and the benefits of ‘clarity and simplicity in providing helpful advice for women and the uncertainties that exist about any completely safe level’ (p. 10). These aspects of the precautionary approach are reinterpreted:

> There is no known safe level of alcohol consumption during pregnancy. Even low to moderate levels of PAE can negatively impact a fetus and these adverse consequences can persist into adulthood. (p. 11)

Uncertainty is, in this formulation, no longer only described with reference to ‘no known safe level’. Additionally, the likelihood of the possibility of ‘adverse consequences’ which ‘persist into adulthood’ are described as outcomes that ‘low to moderate levels of PAE’ ‘can’ lead to. The interpretation of ‘uncertainty’ in SIGN 156 is, in this way, considerably more ‘certain’ about the ‘adverse consequences’ of all and any alcohol consumed in pregnancy than that found in the CMOs’ guidance.

In revising the original Canadian guidance that it draws on, SIGN 156 also removes any reference to ‘an estimated dose [of alcohol] associated with neurodevelopmental effect’, used to describe a threshold of alcohol consumption for confirmation of ‘PAE’. The result is that, in contrast with the Canadian guidance, SIGN 156 presents *any* amount of alcohol consumed as constituting *confirmed ‘PAE’* – in turn, actioning the offer of further intervention during pregnancy, and creating the potential for future referral and diagnosis of FASD after birth based on the 'at risk' designation.

The document is, from this point of departure, then concerned with 'uncertainties' of other sorts, that the stated policy proposals aim to address. The key 'uncertainty' is not whether all 'PAE' is detrimental, as that is taken as certain. Rather, uncertainty is presented as pertaining to the failure to go far enough in 'identifying' 'PAE', leaving the extent of prenatal exposure unknown. The Introduction to the document thus drives the subsequent commentary, in stating that:

> In Scotland, many fewer children than predicted … are identified as having been affected by PAE suggesting we are failing to identify, and therefore adequately support, these children. (p. 1)

The evidence around uncertainty that concerns the SIGN 156 authors is therefore of a different sort than that which was the focus of prior guidance to women. For example, attention is drawn to what is not known (and is said to be underestimated) in how much alcohol is drunk during pregnancy, not whether this behaviour harms foetal development:

> As most of the published data relating to drinking alcohol during pregnancy are collected from mothers either prospectively or retrospectively, they may be inherently flawed. Studies show that women tend to under-report (or not report) their alcohol consumption during pregnancy. (p. 11)

The focus of the certainty that drives SIGN 156, around the harm of any drinking, crystallises around 'exposure' and measurement of it; in the 'identification of children at risk of FASD'. The recommendation arising from the account of certainty of the harm of 'PAE', but uncertainty in the identification of the detail of this harm, is that:

> All pregnant and postpartum women should be screened for alcohol use with validated measurement tools by service providers who have received appropriate training in their use. All women should be advised not to consume alcohol in pregnancy; additionally those women drinking above the low-risk guideline for the general population should be offered early, brief intervention (ie counselling and/or other services). (p. 11)

As noted above, following a few early uses of the term 'woman', it is otherwise found in SIGN 156 in the part of the document where interventions in response to the problem of 'PAE' are discussed. These actions to be taken – screening, advice and counselling – drive the rest of the Guideline.

Theme 3: Surveillance and screening

The emphasis on any 'PAE', and the problem of uncertainty in the extent and detail of it, comprises the basis for innovations in healthcare provision. Section 2 sets out the three-part approach of 'Assessing likely Prenatal Alcohol Exposure', 'Recording the pattern of alcohol consumption', and 'Screening for alcohol exposure'. Taken together, these constitute a distinctive form of monitoring pregnant women's drinking.

In discussing 'Assessing likely Prenatal Alcohol Exposure' (p. 11), the authors state it is not necessary to take action to confirm whether a woman consumed alcohol when 'all three facial features' that define Foetal Alcohol Syndrome (FAS) are present. This refers to the approach taken in other Guidelines about FASD, which take the presence of particular facial features considered characteristic of FAS (described as sentinel) as sufficient alone to comprise the basis for diagnosis of the condition. However other Guidelines (for example, the Canadian guidance discussed above) state there must be evidence of a threshold of alcohol consumption, and of at least three types of impairment, for FASD to be diagnosed, without the presence of sentinel facial features. SIGN 156 revises this part of the Canadian Guideline on which it is based, effectively removing a lower threshold of alcohol consumption. The Recommendations around diagnosis therefore centre on the woman, not the child. It is her consumption of *any* alcohol that becomes the single focus, as this is considered the best 'screening tool' for FASD. Thus, there is no discussion of 'informed choice' included when procedures for screening to confirm PAE are outlined: their perceived necessity overrides consideration of the usual requirements in the provision of screening.

'Confirmation of PAE' is to be made through documentation showing 'that the biological mother consumed alcohol during the index pregnancy', and generating this documentation is the purpose of this 'screening'. The authors list possible sources of this documentation, comprising 'medical records', 'alcohol treatment', 'self report or report by a reliable sources' and 'reliable clinical observation' (p. 11). Scrutiny of the woman's life, as documented in existing records is, however, presented as best extended by health services, generating further information about all pregnant woman who present themselves to maternity care.

In recommending 'recording the pattern of alcohol consumption' in maternity care, SIGN 156 states that, 'The number of types(s) of alcoholic beverages consumed (dose), the pattern of drinking and the frequency of drinking' should all be documented. This is to be 'routinely recorded by the midwife in antenatal notes' and also, 'communicated to the GP and Health Visitor in Transfer of Care documentation'. This is to ensure the 'PAE information' 'will be more easily accessed and remain within the child's health records'.

Specific procedures for 'Screening for Prenatal Alcohol Exposure' are discussed in some detail. There is consideration of the 'evidence base' for screening of this sort and a description of this evidence that states, 'Three systematic reviews were identified that included evidence which addressed parts of the key question. The reviews were heterogeneous and addressed different research questions' (p. 12). Different sorts of 'screening', as assessed by these reviews, are then each considered which are: questionnaires asking women about drinking (T-ACE, TWEAK and AUDIT); 'blood biomarkers' (obtained by taking blood); and 'biomarkers of prenatal alcohol exposure'. Of the latter, it is stated that eight such biomarkers were discussed in the reviews considered (including meconium, the first faecal matter excreted by a newborn baby).

'Screening' is therefore defined very broadly, with support offered in principle to variations of it that obtain information from women verbally or in writing, or that assess bodily substances of various sorts taken from the woman or her baby. 'Caution' is referred to about effectiveness, particularly of screening using biomarkers, and 'concern' is raised about the language used, and by those who administer 'screening tools'. It is also stated, 'the group concluded that there are risks associated with not asking pregnant women about their alcohol use' (p. 13), but there is no mention of the question of her right refuse them, or about what she must be told about the use of the information obtained from screening. As noted previously, 'informed choice' is not mentioned, and neither is 'informed consent'.

In the discussion of biomarkers, it is noted that use of 'particular forms of biomarkers' should be considered (p. 13) despite the problems identified in literature review. In discussion of one assessment of biomedical screening, ‘the authors concluded that the evidence reviewed was insufficient to support the use of objective measures of prenatal alcohol exposure in practice’. Reference is also made to ‘inconsistency in the systematic reviews’ and the limitations of ‘meconium and placental tissue’, despite these being ‘objective measures with the most promise’ (p. 13). These latter ‘objective’ measures are considered presently lacking in sufficient ‘evidence’ regarding their efficacy. The conclusion drawn, however, is not that their use should be abandoned for these reasons, but that efficacy should ideally be established. For example, the authors recommend, ‘Further feasibility studies on the use of meconium and placental biomarkers using large-scale population- based methods’ (p. 38). The recommendation is, therefore, that ‘use of particular biomarkers’ together with ‘brief screening questionnaires’ should be considered (p. 13). This validation of novel and varied forms of screening, without ‘informed choice’ as part of their use, constitutes the most distinctive aspect of the resolution of how monitoring of women should develop as we now discuss further, as part of our final comments.

Discussion

> There are two different meanings of risk … risk as danger and threat and risk as probability … . Increasingly, in risk society, the two meanings of risk … are conflated: risk implies the probability of threat or danger. The underlying assumption is that risk is pervasive, ubiquitous. (Ruhl, 1999, p. 101)

Twenty years before the publication of SIGN 156, Ruhl explained that a probabilistic assessment of risk had merged with an alarmist one; risk had come to signal widespread threat and danger. As she demonstrated, this was already particularly marked in policy and media discourses about alcohol and pregnancy. As discussed above, the relevant literature assessing messages about pregnancy and alcohol has confirmed Ruhl’s observation that risk (meaning danger) is ‘pervasive’. It has been articulated in the 21st century in the focus on ‘low level drinking’ and the absence of evidence about its safety. Uncertainty, interpreted to mean the ‘unknown’ in regard to evidence, is included as part of ubiquitous risk, and is used to justify a policy of alcohol abstinence directed specifically at women.

Some analyses have suggested that the diffusion of the precautionary approach to policy about pregnancy and alcohol can be explained by wider trends in society and policy making. These are the general concern with ‘excessive’ alcohol consumption (Yeomans, 2013) and presumptions about life-chances being determined by ‘parenting’ (Herrero-Arias et al., 2020) taken to begin even before a conception has occurred (Budds, 2020; Lee, 2014). The literature has also shown, however, that the outcomes of this general discursive context can vary. Generally, it has led to the spread of abstinence advice for women, but the literature acknowledges areas of resistance based on the idea that women can make a choice. It also suggests a norm of self-surveillance in official advice, but attention has been drawn to examples of involvement by more or less coercive third parties.

Our analysis of SIGN 156 indicates innovations in policy and practices about alcohol and pregnancy based on this understanding of risk. There are inevitable limitations to an analysis of a single aspect of a larger policy field. We acknowledge the pitfalls of considering the approach taken by SIGN 156 as either an inevitable outcome of precautionary thinking about alcohol and pregnancy, or as the only or dominant one. We have not been able here to discuss explanations for why Scotland is the first UK country to develop guidance of this sort. In line with SIGN 156's emphasis on the need for 'sound knowledge and understanding of the Scottish Government's practice models' (p. 14) including Getting It Right For Every Child (GIRFEC), this could situate SIGN 156 as part of the wider development of an interventionist approach to parenting in Scotland (Waiton, 2016). We also recognise the challenges of an analysis that seeks, following Smith (2013), to tell a story about the fortunes of an idea – in this case 'choice' – using a combination of a reading of a general, international literature, alongside national policy documents of different sorts. We suggest, however, that there are valid insights that emerge from our investigation, which further work can usefully take forwards.

We have drawn attention to three sorts of innovation. The first is in developing the meaning of the 'precautionary principle'. The central 'unknown', in the approach taken in SIGN 156, is no longer the dangers of 'low-level drinking', since these are taken to be acknowledged and accepted; rather, it is the unknown number of children affected by 'Prenatal Alcohol Exposure', which remains uncertain due the lack of monitoring of any drinking in pregnancy hitherto. The possibility – though framed as probability – of widespread, unrecognised and undiagnosed disability is the primary driver for the revision of healthcare practices the document outlines. The implicit proposition – that there is no longer any debate to be had about the evidence of harm caused by low-level drinking – is an important (and contestable) one.

The second is in the account of the woman, as the vector of harm. The primary term used in place of 'woman' is 'PAE'. The woman, as a woman who experiences, acts or chooses, is absent in SIGN 156. Insofar as she appears other than in the form of the vector for exposure to alcohol, it is through the underdeveloped references to patterns of alcohol consumption that raise more questions than they resolve. The assessment that uncertainty regarding the safety of 'low level' drinking should mean 'don't drink' means, as we have shown, that there is no longer any space for the idea that a woman might assess risk for herself and make a credible choice. We suggest (following helpful comments from a reviewer) that the term 'evidence-based paternalism' could be an appropriate one, going forwards, to describe this approach in policy. The tensions that arise here with the ethos of patient-centred care should form an ongoing important area for debate: not least because, as indicated in the case discussed here, such an approach can become dominant even where firm evidence is lacking.

We have shown, thirdly, how through the focus on 'PAE', SIGN 156 provides its major practice innovation, which is in routine screening for alcohol consumption throughout pregnancy. This advocacy of 'routine screening' in healthcare relies on the idea that something unknown to or not admitted by the woman herself (how much alcohol she has drunk) will be assessed and revealed to her continually, and ongoing action developed on this basis. Her 'informed choice' to be screened is not a consideration. We acknowledge that screening for alcohol and drug use as part of prenatal care has been widely promoted for some time in some contexts, for example, the US, and that evidence suggests the problems and outcomes of this approach are insufficiently discussed and recognised (Roberts & Nuru-Jeter, 2010). Relatively cursory attention is paid to these issues in the text of SIGN 156, including for screening using biomarkers, raising important questions given the significance of the ethic of informed choice (Arkell, 2020; Benjamin, 2016; Bennett, 2007).

The relation between risk and uncertainty, and screening in pregnancy to inform future parents about possible disability, has been discussed extensively in the literature.

Attention has been drawn to the nature of the decision-making that arises by merit of screening, as it raises complex and difficult issues as future parents attempt to calibrate and make sense of risk (Hammer & Burton-Jeangros, 2013). In turn the relation between informed choice whenever screening is offered, provision of information throughout in a way that can most facilitate this, and the offer of termination of pregnancy as part of discussion of outcomes, are all considered vital matters. In the version of routine screening set out in SIGN 156, however, these aspects are all are absent from discussion in the document. This is because *a priori* the usual relations between risk and uncertainty, choice and screening have been disrupted. The type of screening at issue, due to it being advocated out of a post-choice context is therefore of an atypical type. It falls outside of any of the practices or ethical frameworks otherwise associated with screening.

Conclusion

In conclusion, in formalising a rupture between risk and its management, and choice-making by women, SIGN 156 can be interpreted as one example of guidance that both reconditions choice socially and solves the ‘problematic’ that ‘choice’ presents in a novel way. This is through beginning to establish a type of surveillance of a new sort. The type of surveillance proposed is clearly not that discussed in the literature, which looks to the woman to self-monitor her alcohol consumption, as doing so is ruled out via the concept ‘PAE’. Once ‘PAE’ becomes the driver for healthcare provision, the woman is no longer a manager of risk, and management must happen through third party action. What is proposed does also not conform to an explicitly punitive model, where the woman is held accountable in criminal law for her actions in abusing or harming the unborn child; again where a woman is not considered to be the agent, she cannot be punished. It may be that these new healthcare practices can be considered more akin to religious rituals of encouragement of confession and support-seeking that have been analysed as part of many encounters between patients and professionals (refs here please), than as those in line with practices built on the norm of individual autonomy and decision-making.

Where the woman gives birth to a child who others deem affected by ‘PAE’, punitive action may follow, but by and large the purpose is to save her from this outcome. This means the collectivity of those who have the required awareness that ‘no drinking is safe’ work to ensure she does not act against this imperative. They do so through mechanisms that rely on the idea that she, herself, will not be able to fully see or understand the importance of not drinking. The supporters in healthcare who surround the woman, the professionals who screen, and take action on basis of outcomes, might for this reason suggest that they are not infringing women’s autonomy, but instead use the language of empowerment. The question of what power means, and how it operates through guidance such as SIGN 156, should be central to further research; there are inevitable consequences for women who confess to alcohol consumption, and who become the subject of ongoing monitoring and recording practices, and it is the midwife who is purportedly caring for the woman who oversees this surveillance. It is important that research about risk and the governance of pregnancy pays due attention to how this form of guidance, and its effects, unfold.

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