

Abstract

Pre-natal alcohol exposure is a determinant of public health. It is necessary to increase awareness and provide women with a consistent message that pregnancy needs to be alcohol free to prevent Fetal Alcohol Spectrum Disorders (FASD). Health education is insufficient. Women need to be asked about alcohol in pregnancy. Prenatal alcohol exposure screen by maternal urine test for ethyl glucuronide (optional), if positive, can enable brief intervention. Screening and brief intervention is effective in reducing alcohol intake in adults. A positive screen provides more information to the pregnant woman to promote abstinence.

The IMO AGM 2018 carried the motion *That the Irish Medical Organisation (IMO) supports screening for alcohol in pregnancy*. The institution of screening for alcohol in pregnancy for women in Ireland is recommended.

Introduction

Pre-natal alcohol exposure (PAE), cause of Neurodevelopmental disorder- prenatal alcohol exposure and Fetal Alcohol Spectrum Disorders (FASD), is a major adverse determinant of public health. International studies confirm that the country prevalence of FASD is related to population alcohol consumption. The association between prenatal alcohol exposure and FASD is strong. This association is consistent from study to study, in all countries, nationalities, ethnic and socio-economic groups. The temporal relationship is correct. The cause precedes the effect. A dose-response gradient has been found. The association makes epidemiological sense. As women drink more, the prevalence of FASD has increased. The association makes biological sense. Alcohol has an adverse effect on the developing brain, and on body organs. The association is specific. Prenatal alcohol exposure is the only known cause of Fetal Alcohol Syndrome (FAS). The association is analogous to a previously proven causal association. The occurrence of teratogenicity was first realised with the Thalidomide tragedy. Alcohol crosses the placenta and is a proven teratogen.

FASD diagnosis requires documented PAE. This limits ascertainment. Antenatal clinics do not test for alcohol.

The alcohol metabolite ethyl glucuronide urine test can detect alcohol intake up to 80 hours after ingestion. A woman has a right to be informed. This screening proposal, stands up to scrutiny when evaluated by standard screening programme pre-requisite criteria.

Method and Results

A programme to ask about alcohol in pregnancy, with optional screen for prenatal alcohol exposure by antenatal urine test; followed by intervention to promote abstinence in pregnancy, supported by patient care pathways; was evaluated against established criteria for population based cancer screening programmes.

Prenatal alcohol exposure is an important health condition with known epidemiology and outcome. Any positive urine test for ethyl glucuronide in pregnancy is significant. Women accept urine testing during pregnancy but whether testing for alcohol is acceptable needs confirmation. Screening and brief intervention is effective in reducing alcohol intake in adults. Agreed patient pathways for harmful and dependent alcohol use are inadequately resourced. Resources released through the prevention of even a modest number of cases of FASD would cover the cost of screening and patient follow-up.

Results

Screening for alcohol in pregnancy by National Cancer Forum Screening criteria: population based screening programme

Parameter	Criterion	Assessment	Meets criterion
Condition: Prenatal Alcohol Exposure	Important health problem	Determinant of public health: personal (FASD) & societal	Yes
	Epidemiology and natural history understood	Risk 1: 67 Only known cause of Fetal Alcohol Spectrum Disorders	Yes
	All cost-effective primary prevention interventions implemented	Public Health Alcohol Act Hidden Harm strategic statement and practice guide	No Yes
Test: Urine test for ethyl glucuronide	Simple, safe, precise, validated	*Validation needed in pregnancy	Yes*
	Expected test values known	Not applicable Any positive result	Yes
	Acceptable	Not known	No
	Protocol for investigation and follow-up	Services for women are inadequate. Patient information leaflet and for significant others	No Yes
Treatment: Abstinence for pregnancy	Effective treatment or intervention	S&BI – effective in at risk drinker Parent child assistance programmes	Yes Yes
	Agreed evidence-based policies	Ireland_SAOR Initiative	Yes
	All treatment optimised	Alcohol Liaison Midwives	No
Screening programme: Evidence of effectiveness	Opportunity cost	Versus cost of child with FASD (Canadian Health Economic Assessment)	Yes
	RCT evidence of effectiveness	RCT not ethical Early adopters Vs. Late adopters Child outcomes pre- and post- intervention	No
	Acceptable	Women want to know	Yes
	Benefit outweighs harm	Prevention of FASD Versus harm to women	Yes
	Programme quality assured	Yes To do	Yes
	Adequate resources	Released through prevention of FASD cases	Yes
	All other options considered	Screening & Brief Intervention Education Legislation (Child Care and Protection)	Yes

Option appraisal

World Health Organisation STEEEP (social, technical & scientific, environmental, economic, ethical, political& policy) **criteria**

Option 1: status quo is not tenable for social, economic or ethical reasons.

Option 2: Screening (AUDIT C) & Brief Intervention effective but at risk drinkers only. There is no low risk drinking in pregnancy, only lesser risk.

Option 3: as above + screen urine for Ethyl glucuronide. Effectiveness, validity and reliability not tested in pregnancy. Ethical. Socially acceptable? Health services not ready & resourced? Cost effectiveness likely.

Option 4: Option 3 + enforcement for child protection— a step too far and not acceptable from the human rights, social, ethical, political and policy perspective

Discussion

Pregnancy to be alcohol free to prevent FASD. The proposed screening is additional to population preventative measures to reduce alcohol consumption and harm. Ireland's alcohol per capita (APC) needs to reduce. The risk of harm from alcohol is particularly high during pregnancy warranting special additional attention.

Health Promotion involves health education to raise awareness e.g. Alcohol in Pregnancy information included in MyChild pack for each pregnant woman in Ireland; preventative services e.g. screening and brief intervention; and enabling policy& legislation (minimum unit price; product separation; label warning; limit advertising).

It's a common social norm to drink alcohol including drinking alcohol during pregnancy. It requires whole of society response and commitment to make it an easier choice for pregnant women and those planning a pregnancy to abstain from alcohol.

Women are health aware during pregnancy.

Conclusions

There is no low risk alcohol during pregnancy, only lower risk. The risk is high. Prenatal alcohol exposure, as a cause of brain damage, fulfils all the criteria to prove cause and effect. Screening for alcohol in pregnancy can fulfil screening programme criteria. Providing a sample of urine for analysis is a standard antenatal routine. It is of benefit to stop alcohol intake at any stage of pregnancy. The adult brain can show signs towards recovery during alcohol free periods. This provides substance for hope for the fetal brain also to recover during alcohol free remainder pregnancy. PAE-neurodevelopmental disorder is a whole of society issue. It's alcohol that harms the baby. No race is immune to the harmful effects of alcohol. FASD, including Fetal Alcohol Syndrome (FAS), are preventable. Minimum: ask about alcohol in pregnancy.

Healthy Ireland: Making Every Contact Count (MECC)



Figure 1. Ireland's Make Every Contact Count.

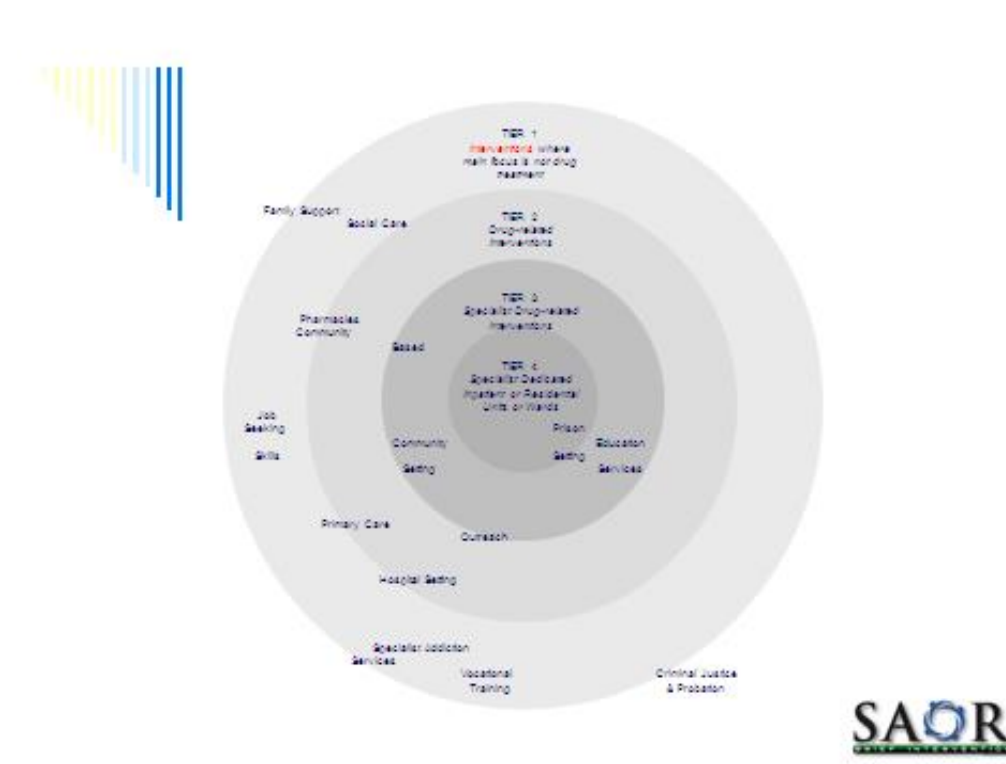


Figure 2. SAOR (Support, Ask & Assess, Offer Assistance & Referral)

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