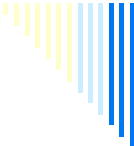


FASD: a public health perspective

CAMHS Conference Dublin 3rd October 2019
Dr Mary T O'Mahony, Consultant in Public Health Medicine, HSE-S maryt.omahony@hse.ie

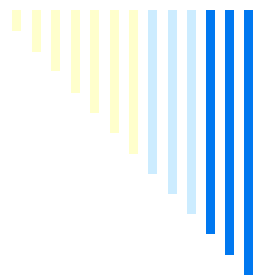
1



Acknowledgement

- ☐ Foster parents and adoptive parents have led the way in raising awareness and in supporting research into FASD
- ☐ Need to move towards a more population based approach
- ☐ Consistent messaging
- ☐ Need to mainstream FASD

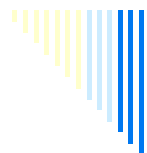
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Prenatal alcohol exposure fulfils causal criteria as a cause of FASD

**Bradford Hill Sir Austin. The Environment and Disease: Association or Causation?
Proceedings of the Royal Society of Medicine,
Section of Occupational Medicine Meeting
January 14 1965.**

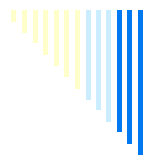
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Prenatal Alcohol Exposure (PAE) & Foetal Alcohol Spectrum Disorders (FASD)

- Alcohol crosses the placenta
 - Complete pathway of exposure
- Foetus swallows and excretes amniotic fluid
 - Cycle of exposure
- It's the social norm to drink including when pregnant
 - Societal factor

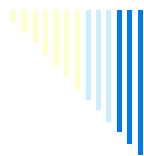
4



Variable outcomes due to biological variability

- Rate of breakdown of alcohol varies
 - Genetic component to risk
- Metabolism of alcohol varies by
 - Speed of intake
 - On an empty stomach, with food, 2 hours after food
 - Body composition
 - Frequency of intake
 - Amount consumed
 - State of health

5



From National Geographic of 1992. Copyright photo used for educational purpose with permission of George Steinmetz (not for further circulation)



FRATERNAL TWIN GIRLS, FIVE MONTHS OLD; FRANCE

Prevention of Foetal Alcohol Spectrum Disorder

6



PAE and FASD: Causal criteria

- Evidence from true experiments in humans: not possible as not ethical
- Association strong. Association consistent from study to study. ✓
- Temporal relationship: cause precedes the effect ✓
- Dose-response gradient ✓
- Does the association make epidemiological sense? As women drink more
- Does the association make biological sense? Alcohol known effects on brain
- Is the association specific? Yes Foetal Alcohol Syndrome
- Is the association analogous to a previously proven causal association? Teratogenicity

7



International evidence

Lancet Jan17; JAMA Pediatr Aug17; BMJ Sep17

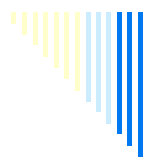
- 1 in 67 who consume alcohol in pregnancy give birth to a baby with FAS, noting ratio of FASD to FAS is 9/10 : 1
- Ireland prevalence estimate 47.5/1000 (95% CI 28.0 - 73.6) 2.8 – 7.3% of the population.
- Ireland featured as one of the five countries with the highest prevalence of FASD
 - South Africa, Croatia, **Ireland**, Italy, Belarus
- This translates into 600 Irish babies are born each year with FAS, and
- that over 40,000 Irish persons are living with the condition.

• Popova S, Lange S, Probst C, Gmel G, Rehm J. Estimation of national, regional, and global prevalence of alcohol use during pregnancy and fetal alcohol syndrome: a systematic review and meta-analysis. Lancet Glob Health 2017; published online Jan 12. [http://dx.doi.org/10.1016/S2214-109X\(17\)30021-9](http://dx.doi.org/10.1016/S2214-109X(17)30021-9)

• Lange S, Probst C, Gmel G, Rehm J, Burd L, Popova S. Global Prevalence of Fetal Alcohol Spectrum Disorder among Children and Youth. A systematic review and meta-analysis JAMA Pediatr 2017. Doi:10.1001/jamapediatrics.2017.1919

• Mamluk L, Edwards HB, Savovic J, et al. Low alcohol consumption and pregnancy and childhood outcomes: time to change guidelines indicating apparently 'safe' levels of alcohol during pregnancy? A systematic review and meta-analyses. BMJ Open 2017;7:e015410. doi:10.1136/bmjopen-2016-015410

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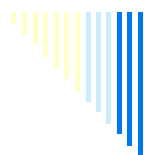
Evidence (Ireland_Sep 2019)

Ireland features among the five countries with the highest prevalence of FASD

The evidence indicates that:

- Four in five of first pregnancies are exposed to alcohol; nearly one in two (45%) are exposed at high-risk levels
- two in five pregnancies are unplanned, increasing the chance they will be exposed to alcohol
- pregnant women do not consistently receive timely maternity care or support for their Alcohol & Drug issues
- health professionals do not consistently provide information on the risks of drinking during pregnancy or routinely screen for alcohol issues
- most clinicians lack the capability to diagnose FASD
- families of people with FASD struggle to access appropriate support and report a lack of understanding from services, professionals and even other family members
- In NZ, FASD affects about 50 percent of children and young people in Child, Youth and Family (CYF) care.

9



Neurodevelopmental disorder gross indicator data_Ireland

- HSE Annual Rep 2018 on use of service
 - CAMHS referral rate (RR) 14.5 /1000 pop aged 0-18
 - CAMHS referrals seen (RS) 8.2 /1000 pop aged 0-18
 - Adult Mental Health RS/RR 7.8/ 1000 pop aged 19+
- NDA profile of school leavers 2016
 - Seeking RT or Day Service (286 CHO4)
 - 20.6% had no ID (56% no/ borderline/ mild ID)
- Dept of Education report on SNA
 - “the SNA scheme currently supports over 34,600 students in primary, post-primary and special settings”.

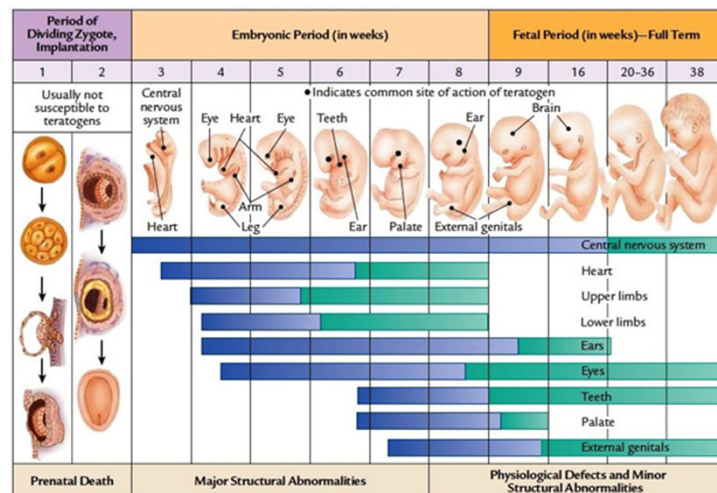
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Public health risk assessment

- Identify the population
 - ♀ earning >\$50,000 (€35,000/£31,000)
 - Students and lower SEG_binge drinking
- Assess the risk
 - 1 in 67 risk of FAS
 - 1 in 13 risk of (non-FAS) FASD
- Recommend measures to remove or mitigate risk
 - Screening & brief intervention (SBI, MECC)
 - Parent child assistance programmes (PCAP)
- Communicate risk to key health & other professionals
- Communicate risk to the public

11

Abstaining from alcohol for the remainder of pregnancy has benefit



12



Women and alcohol

- WHO Global report
- Why women drink in pregnancy
- Irish women on pregnancy experience
- Pathway of care for women who drink
- Inter-generational risk
- At-risk group Vs Population approach
- Irish policy
- Stigma

13



Pregnancy in Ireland 2018

3 focus groups, 2 groups of 8 pregnant women (16) and 1 group of 8 women considering pregnancy



14

Women and alcohol

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- Irish policy
- Stigma

15

top This mother drank while pr... x +

The Washington Post (WP Com... (US) | <https://www.washingtonpost.com/natic> Search

Sections Sign In Subscri

Health & Science

This mother drank while pregnant. Here's what her daughter's like at 43.



Karli Schrider is 43 years old, but she has the developmental age of a first-grader. Her mother drank while pregnant, unaware of the risk of fetal alcohol syndrome. (Bonnie Jo Mount/The Washington Post)

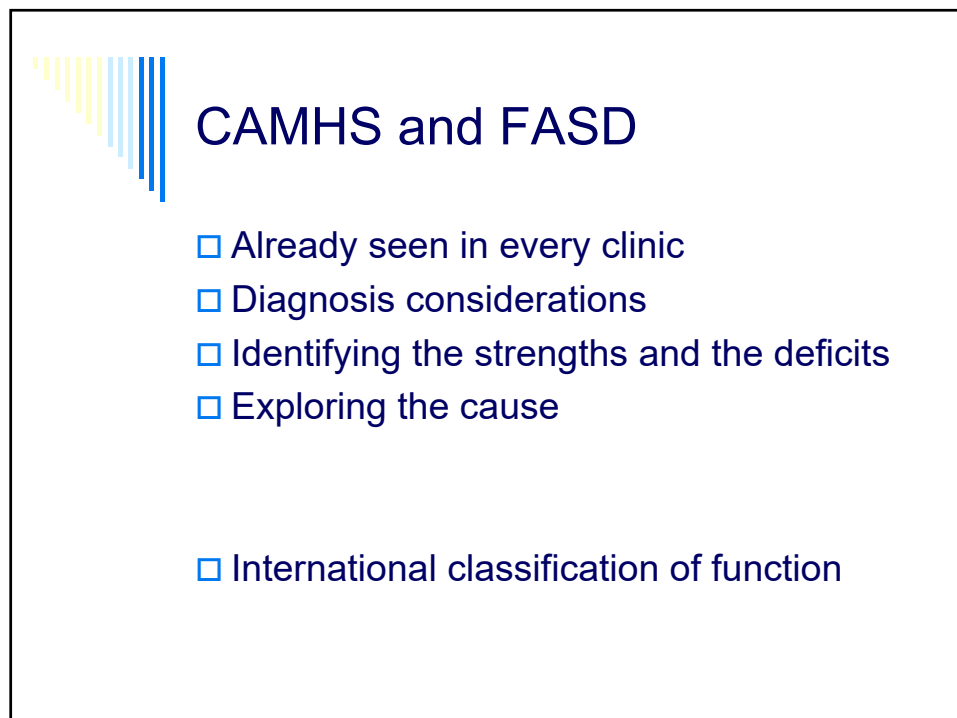
Most Read

- 1 'Learn your manners,' a white man wrote to his black neighbor. This was the response.
- 2 Nancy O'Dell: Even the locker room no excuse for Trump
- 3 'I was just reading a book': Canadian cops called on black man reading C.S. Lewis in his car
- 4 Medical school can be

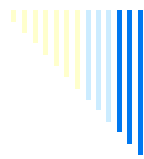
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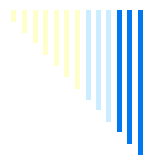


Economic perspective

Economic impact – Alberta Canada 2008
10 Strategic Plan to prevent FASD

- Pop 3.6m (2013), 36000 with FASD (estimate 1%); 450 FASD babies born/a
- **Lifetime cost to state per child with FASD estimated: \$1.1m (£680K/€760K)**
- Prevention of 10 cases p.a. covers cost of comprehensive services
- Alberta FASD Services- Estimated to save \$20m p.a. in reduced demand for services – 2013 Year 5 Evaluation

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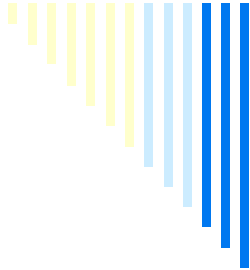
Societal perspective

- “Children with FASD fill our Foster Care places.
- Adults with FASD fill our jails.”

Lange S, Shield K, Rehm J, Popova S. Prevalence of fetal alcohol spectrum disorders in child care settings: a meta-analysis. *Pediatrics*. 2013 Oct;132(4):e980-995.

Popova S, Lange S, Bekmuradov D, Mihic A, Rehm J. Fetal alcohol spectrum disorder prevalence estimates in correctional systems: a systematic literature review. *Can J Public Health Rev Can Sante Publique*. 2011 Oct;102(5):336–40.

20



It's a big problem

Alcohol is the cause of FASD