Alcohol Consumption During Pregnancy

Jit Cheung and Jason Timmins

18 September 2015

http://www.superu.govt.nz/alcoholandpregnancy
The context

- 71% of expectant mothers drank alcohol before they knew they were pregnant. Among them, 2/3 stopped once they knew they were pregnant.

- But the story doesn’t end there ...
  - We looked at those expectant mothers who stopped drinking and those who didn’t.
  - We identified main patterns of alcohol consumption during pregnancy based on when women drink and how much they drink.
  - We developed profile of women fitting the different patterns.
In 2010, more than 6,800 expectant mothers taking part in the GUiNZ study were asked to recall how much alcohol they consumed per week during three time periods.

TIME PERIOD 1: Before becoming pregnant or before they were aware they were pregnant.

TIME PERIOD 2: In the first three months of pregnancy.

TIME PERIOD 3: After the first three months of pregnancy.

INTERVIEW
Most women stopped or reduced drinking

LEVEL OF ALCOHOL CONSUMPTION BEFORE AND DURING PREGNANCY

PRIOR TO AWARENESS OF PREGNANCY
FIRST TRIMESTER
AFTER FIRST TRIMESTER

DRINKS PER WEEK

- (4 or more)
- (1-3)
- (Less than 1)
Patterns of drinking behaviour, women whose pregnancy was planned or unplanned
### Who stopped drinking, who didn’t? Multivariate statistical modelling

<table>
<thead>
<tr>
<th></th>
<th>Before awareness</th>
<th>First trimester</th>
<th>After first trimester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
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<td><strong>^</strong></td>
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<tr>
<td><strong>Ethnicity</strong></td>
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</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td>*</td>
<td>* ^</td>
</tr>
<tr>
<td><strong>Household income</strong></td>
<td>***</td>
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<td>*</td>
</tr>
<tr>
<td><strong>Current smoker</strong></td>
<td>***</td>
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<td>***</td>
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<tr>
<td><strong>Planned pregnancy</strong></td>
<td>***</td>
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<tr>
<td><strong>Parity</strong></td>
<td>***</td>
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</tbody>
</table>

Comparison group = 35+ / Asian / bachelor or higher / low HH income / non smoker / planned pregnancy / subsequent birth

*** P<0.001; ** P<0.01; * P<0.05
^ denotes an inverse relationship
How much did the women drink, what are their behaviour pathways?

5 main patterns in alcohol consumption behaviour

- 29% DID NOT DRINK
- 43% STOPPED DRINKING EARLY
- 16% STOPPED DRINKING LATER
- 9% STOPPED / RE-STARTED DRINKING
- 2% DID NOT STOP DRINKING
Stopped drinking early (43%)

Level of drinking at different stages of pregnancy:

- Prior to awareness: 34%
- First trimester: 35%
- After first trimester: 31%

There are no bars for the first trimester and after the first trimester indicating no drinking during this time.
Stopped drinking later (16%)

**Level of drinking at different stages of pregnancy**

- **Prior to awareness**: 57%
  - 14% (4 or more drinks a week)
  - 29% (1-3 drinks a week)
  - 5% (<1 drink a week)

- **First trimester**: 33%
  - 34% (4 or more drinks a week)
  - 33% (1-3 drinks a week)
  - 8% (<1 drink a week)

- **After first trimester**: 33%
  - 33% (4 or more drinks a week)
  - 33% (1-3 drinks a week)
  - 8% (<1 drink a week)
... is made up of two sub-groups

**Slow changers**

Prior to awareness  
Did not drink  
<1 drink a week  
1–3 drinks a week  
4 or more drinks a week

In first trimester  
Did not drink  
<1 drink a week  
1–3 drinks a week  
4 or more drinks a week

After first trimester  
Did not drink  
<1 drink a week  
1–3 drinks a week  
4 or more drinks a week

**Very slow changers**

Prior to awareness  
Did not drink  
<1 drink a week  
1–3 drinks a week  
4 or more drinks a week

In first trimester  
Did not drink  
<1 drink a week  
1–3 drinks a week  
4 or more drinks a week

After first trimester  
Did not drink  
<1 drink a week  
1–3 drinks a week  
4 or more drinks a week
Stopping/re-starting drinking (9%)
... is made up of two sub-groups

**Drifters**

<table>
<thead>
<tr>
<th>Prior to awareness</th>
<th>In first trimester</th>
<th>After first trimester</th>
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</thead>
<tbody>
<tr>
<td>Did not drink</td>
<td>&lt;1 drink a week</td>
<td>Did not drink</td>
</tr>
<tr>
<td>1–3 drinks a week</td>
<td>4 or more drinks a week</td>
<td>&lt;1 drink a week</td>
</tr>
<tr>
<td>4 or more drinks a week</td>
<td>1–3 drinks a week</td>
<td>4 or more drinks a week</td>
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</tbody>
</table>

**Regressors**

<table>
<thead>
<tr>
<th>Prior to awareness</th>
<th>In first trimester</th>
<th>After first trimester</th>
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</thead>
<tbody>
<tr>
<td>Did not drink</td>
<td>&lt;1 drink a week</td>
<td>Did not drink</td>
</tr>
<tr>
<td>1–3 drinks a week</td>
<td>4 or more drinks a week</td>
<td>&lt;1 drink a week</td>
</tr>
<tr>
<td>4 or more drinks a week</td>
<td>1–3 drinks a week</td>
<td>4 or more drinks a week</td>
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</tbody>
</table>
Did not Stop drinking (2%)

Level of drinking at different stages of pregnancy:

- **Prior to awareness**: 88%
  - (4 or more drinks a week): 12%
  - (1-3 drinks a week): 53%
  - (<1 drink a week): 29%

- **First trimester**: 47%

- **After first trimester**: 71%
### Profile

**Did not drink (29%)**

<table>
<thead>
<tr>
<th>Age</th>
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<table>
<thead>
<tr>
<th>Ethnicity</th>
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<tbody>
<tr>
<td>Pacific 26%</td>
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<tr>
<td>15%</td>
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<tr>
<td>Asian 35%</td>
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<td>15%</td>
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</table>

<table>
<thead>
<tr>
<th>Household income</th>
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<tbody>
<tr>
<td>Low &lt;$30k 15%</td>
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<tr>
<td>10%</td>
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</table>

<table>
<thead>
<tr>
<th>Highest qualification</th>
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<table>
<thead>
<tr>
<th>Current smoking status</th>
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</thead>
<tbody>
<tr>
<td>Non smoker 95%</td>
</tr>
<tr>
<td>89%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Planned or unplanned pregnancy</th>
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Social Policy Evaluation and Research Unit
# Profile

<table>
<thead>
<tr>
<th></th>
<th>Stopped early (43%)</th>
<th>Stopped later (16%)</th>
<th>Stopped/restarted (9%)</th>
<th>Did not stop (2%)</th>
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</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
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<tr>
<td>&lt; 20 years</td>
<td>11% (5%)</td>
<td>35+ years</td>
<td>35+ years</td>
<td>33% (25%)</td>
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<tr>
<td>35+ years</td>
<td>38% (25%)</td>
<td>(25%)</td>
<td>(25%)</td>
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<tr>
<td><strong>Ethnicity</strong></td>
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</tr>
<tr>
<td>European</td>
<td>66% (55%)</td>
<td>Māori</td>
<td>European</td>
<td>Māori</td>
</tr>
<tr>
<td>Māori</td>
<td>25% (14%)</td>
<td>84% (55%)</td>
<td>37% (14%)</td>
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<tr>
<td><strong>Household income</strong></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>High, &gt;$100k</td>
<td>43% (36%)</td>
<td>High, &gt;$100k</td>
<td>Low, &lt;$30k</td>
<td></td>
</tr>
<tr>
<td>Low, &lt;$30k</td>
<td>58% (36%)</td>
<td>(36%)</td>
<td>22% (10%)</td>
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<tr>
<td><strong>Highest qualification</strong></td>
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<tr>
<td>No secondary qual.</td>
<td>12% (7%)</td>
<td>University qual.</td>
<td>No secondary qual.</td>
<td></td>
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<tr>
<td>University qual.</td>
<td>55% (39%)</td>
<td>(39%)</td>
<td>23% (7%)</td>
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<tr>
<td><strong>Current smoking status</strong></td>
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<td></td>
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<tr>
<td>Current smoker</td>
<td>19% (11%)</td>
<td>Current smoker</td>
<td>Current smoker</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>55% (39%)</td>
<td>42% (11%)</td>
<td></td>
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<tr>
<td><strong>Planned or unplanned pregnancy</strong></td>
<td></td>
<td></td>
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<tr>
<td>Planned</td>
<td>67% (60%)</td>
<td>Unplanned</td>
<td>Planned</td>
<td>Unplanned</td>
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<tr>
<td></td>
<td></td>
<td>(40%)</td>
<td>(60%)</td>
<td>(40%)</td>
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... in summary

- High proportion of women who drink before pregnancy, but most stopped during pregnancy
- But the story doesn’t end there ...
  - Alcohol consumption is not confined to any one sub-group
    - European and Maori ethnic groups
    - Low and high household income
    - No secondary qualification and university qualification
    - Current smokers
  - We found five main patterns of alcohol consumption
    - 29% did not drink
    - 43% stopped drinking early
    - 16% stopped drinking later
    - 9% stopped / re-started drinking
    - 2% did not stop drinking
- The socio-demographic profiles combine with the pathways of behavioural changes provide insights to constructing and targeting public health messages.
Cath Edmondson
Manager of Policy and Advice
Commentary

Why is HPA interested?
How this research helps us
How are we responding
Challenges/Flags...

- Targeting with constraints
- Cut through to influence behaviour change
  - Very slow changers
  - Drifters and regressors
- Support for hardy drinkers
- Planned pregnancy and drinking
Alcohol & Pregnancy Prog

HPA focus

Reduce harms related to antenatal alcohol exposure for New Zealand children, their families and whānau

PREVENTION & EARLY INTERVENTION:
Reduce prevalence of antenatal alcohol exposure

Increase the percentage of pregnant women who do not drink alcohol at any time during pregnancy

DIAGNOSIS & MANAGEMENT:
Reduce impact of antenatal alcohol exposure on children, their families and whānau

Increase effective identification, management and support for children and families affected by antenatal alcohol

Marketing and communications:
To increase public awareness and understanding of the risks of drinking alcohol during pregnancy and the importance of not drinking any alcohol during pregnancy

Health professional advice and support:
To increase routine, consistent and effective health professional advice and support regarding alcohol and pregnancy

Policy and advice:
To strengthen the system response for women who need support to stop drinking during pregnancy

RESEARCH, EVALUATION & MONITORING
Key message

There is no known safe level of alcohol consumption during pregnancy.

Stop drinking alcohol if you could be pregnant, are pregnant or are trying to get pregnant.
Marketing and Comms

- Targeted national campaign

  • Focus on women aged 18-30yr who drink
  • Increase % who would stop drinking if they thought there was a chance they could be pregnant
Supporting health professionals

- Routine provision of consistent, effective advice and support around alcohol and pregnancy for women of child bearing age

- HPA looking at …
  - Tools and resources
  - Training / education
  - Promotion of alcohol & pregnancy practice and tools and resources
ABC Alcohol for Pregnancy – A guide for health professionals

There is no known safe level of alcohol use in pregnancy. Women are advised to stop drinking if they could be pregnant, are pregnant or are trying to get pregnant.

All women of childbearing age, whether they are pregnant or not, should be routinely asked about alcohol use, advised on the consequences of alcohol use during pregnancy and supported to stop drinking alcohol when pregnant or planning pregnancy. ABC Alcohol for Pregnancy provides a practical guide to help primary care health professionals address alcohol use in pregnancy.

ABC Alcohol for Pregnancy involves the following three steps:

A. Ask all women of childbearing age and pregnant women about their alcohol use and reasons regularly. It is good practice to routinely ask all women about their alcohol use to enable advice and intervention, where needed.

For women who are pregnant: Alcohol use should be assessed at the initial visit and routinely thereafter. Women may not reveal their alcohol use the first time they are asked and they may not stop drinking straight away so it is important to have this conversation more than once.

For women:

- Use a non-judgemental, empathetic approach to create a safe environment for women to disclose alcohol use.
- Use a validated screening tool such as Alcohol Use Disorders Identification Test - Consumption (AUDIT-C) for a quick assessment of how much and how often a woman is drinking.
- Use a standard drinks guide to assist with accurate recall of the number of alcoholic drinks consumed.
- Record information obtained about a woman’s alcohol use before and during pregnancy. This helps prompt follow-up conversations and may at a later date support accurate diagnosis of fetal alcohol spectrum disorders (FASD) if there are any concerns with a child.

B. Give brief advice to women of childbearing age and pregnant women that it is important to stop drinking alcohol if they are pregnant or trying to get pregnant and explain why.

Key messages:

- There is no known safe time to drink alcohol during pregnancy. Alcohol can affect the development of a baby’s brain and central nervous system throughout pregnancy, including around the time of conception.
- There is no known safe amount of alcohol that can be drunk in pregnancy. Frequent heavy drinking is known to harm a developing baby but it is not known how much alcohol it takes to cause damage.
- A baby is not protected from alcohol by the placenta. Alcohol passes freely through the placenta and reaches concentrations in the baby’s blood that can be as high as three times in the mother.
- The consequences of a woman drinking alcohol while pregnant can include miscarriage, stillbirth, preterm birth, low birthweight and a child being born with lifelong mental, physical, behavioural and learning disabilities (FASD).

C. Provide Fetal alcohol spectrum disorders (FASD)

Fetal alcohol spectrum disorders (FASD) are a spectrum of disorders that can occur in children when alcohol is consumed by the mother during pregnancy. There is no known safe amount of alcohol that can be consumed during pregnancy. The risks of FASD increase with the amount of alcohol consumed during pregnancy.

In New Zealand, regular alcohol consumption has contributed to increasing in particular young women. Risky drinking prior to pregnancy can lead to FASD in offspring.

Fetal alcohol spectrum disorders (FASD) are a spectrum of disorders that can occur in children when alcohol is consumed by the mother during pregnancy. There is no known safe amount of alcohol that can be consumed during pregnancy. The risks of FASD increase with the amount of alcohol consumed during pregnancy.

In New Zealand, regular alcohol consumption has contributed to increasing in particular young women. Risky drinking prior to pregnancy can lead to FASD in offspring.
Resources for health professionals

Health professionals have an important role in advising women about the consequences of alcohol use in pregnancy and supporting them to stop drinking when pregnant or planning pregnancy. The following tools and resources are intended to support health professionals in this role.

**ABC Alcohol for Pregnancy** provides a practical, three-step guide to help primary care health professionals address alcohol use in pregnancy in their conversations with women.

**Pregnant? Trying? Don’t drink.** is a short pamphlet health professionals can give to women as part of a conversation about alcohol use in pregnancy.

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[alcoholpregnancy.org.nz](http://alcoholpregnancy.org.nz)
Challenges and Flags

– Targeting with constraints
– Cut through to influence behaviour change
  • Very slow changers
  • Drifters and regressors
– Support for hardy drinkers
– Planned pregnancy and drinking
What’s coming up next...

- **29 September**
  - Release of publication
  - *What Works: Services for families with complex needs*

- **23 October**
  - Seminar
  - *Ministry of Justice Victimisation Survey: Interpersonal Violence*
  - Nau Mai Room, Te Puni Kokiri House, Wellington
  - 10am - 11am

www.superu.govt.nz/alcoholandpregnancy