

The Health Index

FETAL ALCOHOL SPECTRUM DISORDER (FASD): ALCOHOL CONSUMPTION DURING PREGNANCY, AWARENESS AND ATTITUDES IN LONDON AND MIDDLESEX COUNTY

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KEY POINTS

- A recent amendment to the Liquor License Act, Sandy's Law, came into effect February 1, 2005, requiring all suppliers or distributors of liquor to display warning signs that drinking alcohol during pregnancy can cause Fetal Alcohol Spectrum Disorder (FASD).
- A large proportion of residents living in London and Middlesex County (82.7% ± 2.1%) believe alcohol consumed at any time during pregnancy could be harmful to the unborn baby.
- Three out of 4 residents agree that alcohol consumed during pregnancy can result in the baby being born with permanent brain damage (76.6% ± 2.6%) and permanent defects or deformities (76.8% ± 2.6%).
- Just under half (46.1% ± 5.6%) of all women between the ages of 18 and 44 years have discussed the effects of alcohol on an unborn child with a health professional.

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BACKGROUND

There is no known safe level of alcohol consumption during pregnancy and no safe time to drink alcohol during pregnancy¹. Yet up to 60% of women worldwide drink alcohol at some point during pregnancy². When a pregnant woman drinks an alcoholic beverage, the alcohol is quickly absorbed into her bloodstream and passes through the

placenta directly to the developing baby. Because of the baby's size and its developing system, the alcohol can be more harmful to the baby than to the mother. Exposure to alcohol at any time in the pregnancy can affect the baby's brain. All drinks that contain alcohol are harmful (e.g. a mixed drink, a wine cooler, a glass of wine or a bottle of beer). Thus it is safest for women who are, or may become, pregnant to abstain from alcohol.

A woman who drinks alcohol during pregnancy risks giving birth to a baby with Fetal Alcohol Spectrum Disorder (FASD). FASD is the umbrella term used to describe the range of defects and disabilities that are caused by prenatal exposure to alcohol. The term FASD includes Fetal Alcohol Syndrome (FAS), Fetal Alcohol Effects (FAE), Alcohol-Related Neurodevelopmental Disorders (ARND), and Alcohol-Related Birth Defects (ARBD)³. The range of birth defects and disabilities caused by a mother's use of alcohol during pregnancy may include any of the following: permanent brain damage, vision and hearing difficulties, physical birth defects and growth deficiencies. While FASD is preventable, it continues to remain one of

the most common causes of brain damage among Canadian children⁴. The impact of FASD is significant for the child and family as well as for society. Challenges continue throughout later life and often include unemployment, and episodes of crime, homelessness and substance abuse⁵.

SANDY'S LAW

Partners, families and friends of pregnant women play an important role in preventing FASD. Increased awareness by the community of the harm caused by alcohol consumption can assist in supporting and encouraging alcohol-free pregnancy. A recent amendment to the Liquor License Act, Bill 43, Sandy's Law, came into effect February 1, 2005⁶. This new law makes it an offence to sell or supply liquor without displaying warning signs approved by the Ontario government warning women that drinking alcohol during pregnancy can cause FASD.

PREVALENCE OF FETAL ALCOHOL SPECTRUM DISORDER (FASD)

While the exact prevalence of FASD is unknown, it is estimated that in Canada nearly 1 in every 100 live births are children born with FASD⁷. Other research has found that between 4% and 40% of women who drink heavily during pregnancy are believed to have babies affected with FASD⁸. Consequently, actions taken to reduce the incidence of FASD are important public health initiatives. Public health is mandated to address FASD through two specific objectives: 1) reduce disability, morbidity, and mortality caused by alcohol and 2) increase the percentage of children and youth who meet physical, cognitive, communicative and psychological development milestones⁹. This Health Index provides an in depth look at City of London and Middlesex County residents':

- perceptions of acceptable levels of alcohol consumption during pregnancy

- perception of risk due to drinking alcohol during pregnancy
- awareness of the effects of alcohol consumption during pregnancy, and
- use of strategies to reduce the risk of drinking alcohol during pregnancy.

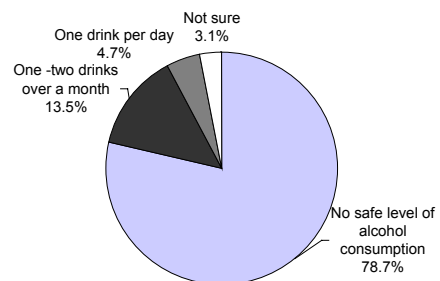
RRFSS is an ongoing population health survey that collects approximately 100 telephone responses for the MLHU area in monthly increments (waves). The system is currently used for population health behaviour surveillance by 24 of the 36 health units in Ontario. RRFSS surveyed 1209 residents from the City of London and Middlesex County in 2002 and 1184 residents from January through December 2004. Further information on RRFSS is provided in the "Methods and Definitions" section.

ACCEPTED LEVELS OF ALCOHOL CONSUMPTION

Approximately eight out of ten residents in Middlesex-London (78.7% ± 2.3%) correctly believe there is no safe level of alcohol consumption for women during pregnancy. Another 13.5% (± 1.9%) of residents believe that one to two drinks per month is a safe level of alcohol consumption, 4.7% (± 1.2%) feel that one drink a day is a safe level of alcohol consumption for women during pregnancy and 3.1% (± 1.0%) were not sure (Figure 1).

Figure 1: Accepted Levels of Alcohol Consumption During Pregnancy

Percent of Adult Population (18+ Years)
City of London and Middlesex County, January-December 2002



Source: RRFSS, Waves 13-24, 2002.

Of the 20% of respondents who indicated there were safe levels of alcohol consumption during pregnancy, 20.2% ($\pm 4.9\%$) indicated that it was “okay for a pregnant woman to have two or more drinks on one occasion”. Ten percent ($10.1\% \pm 3.7\%$) were “not sure” whether it was “okay” and 69.8% ($\pm 5.6\%$) felt it was “never okay” for a pregnant woman to have two or more drinks on one occasion.

No significant differences in accepted levels of alcohol consumption during pregnancy were observed between City of London and Middlesex County residents, nor were differences observed between men and women, by age group, level of household income, level of education or language spoken in the home (i.e. Anglophone or Allophone).

PERCEIVED RISK OF DRINKING

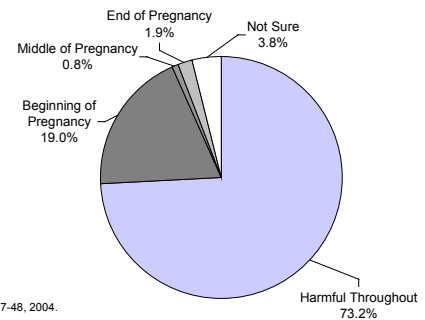
To determine the public’s perceived risk of drinking during pregnancy, City of London and Middlesex County residents were asked whether drinking alcohol at any time during pregnancy could be harmful to the unborn baby. Over eighty percent of residents ($82.7\% \pm 2.1\%$) believe if a woman drank alcohol at any time during her pregnancy it could be harmful to the unborn baby. Younger adults between the ages of 18 and 24 years were most aware of the harmful effects of alcohol during pregnancy ($90.9\% \pm 4.4\%$) compared to adults 25 through 44 years of age ($82.3\% \pm 3.6\%$), 45 through 64 years of age ($82.8\% \pm 3.7\%$) and 65 years or older ($76.8\% \pm 6.1\%$).

Of the over 80% of residents who felt that drinking alcohol during pregnancy could harm the unborn baby, three quarters of residents ($73.2\% \pm 2.7\%$) indicated that alcohol consumption was most harmful anytime during a pregnancy; that there is no safe time to drink alcohol during pregnancy. Just under 20% ($19.0\% \pm 2.4\%$) of residents felt that alcohol consumed at the beginning of the pregnancy would be most harmful; 2% (\pm

0.8%) felt that the middle of the pregnancy would be the most harmful and another 2% ($\pm 0.8\%$) felt that alcohol consumption at the end of pregnancy would be most harmful (Figure 2). Compared to men ($16.3\% \pm 3.3\%$) more women ($21.1\% \pm 3.3\%$) felt that alcohol consumption at the beginning of pregnancy would be most harmful.

Figure 2: Timing of Perceived Risk of Drinking During Pregnancy

Percent of Adult Population (18+ Years) who felt that drinking alcohol during pregnancy could harm the unborn baby
City of London and Middlesex County, January-December 2004



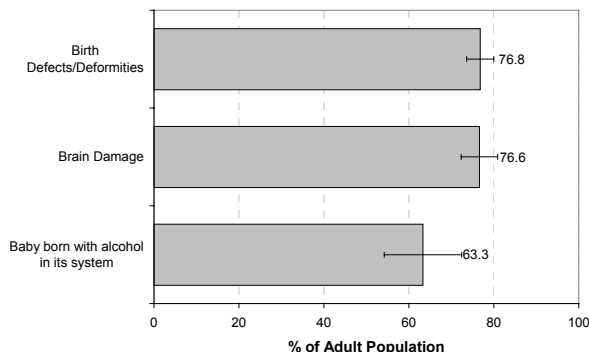
Source: RRFSS, Waves 37-48, 2004.

AWARENESS OF THE EFFECTS OF ALCOHOL CONSUMED

City of London and Middlesex County residents were asked about potential effects of drinking alcohol during pregnancy on an unborn child. Overall, three out of four residents felt that as a result of alcohol consumption during pregnancy a baby could be born with permanent brain damage ($76.6\% \pm 2.6\%$). Similarly $76.8\% (\pm 2.6\%)$ felt that a baby could also be born with other permanent birth defects or deformities. Two thirds of residents ($63.3\% \pm 2.9\%$) felt that a baby could be born with alcohol in its system if a woman drank during pregnancy (Figure 3).

Figure 3: Knowledge of the Potential Effects of Alcohol on an Unborn Child

Percent of Adult Population (18+ Years)
City of London and Middlesex County, January-December 2004

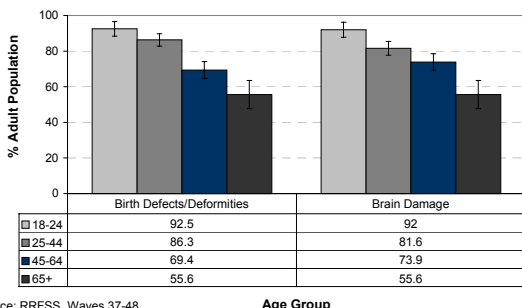


Source: RRFSS, Waves 37-48, 2004

Younger adults were more aware that a baby could be born with permanent brain damage (18-24 years: 92% ± 4.2%; 25-44 years: 81.6% ± 3.9%) and other permanent birth defects or deformities (18-24 years: 92.5% ± 4.1%; 25-44 years: 86.3% ± 3.5%) as a result of alcohol consumption as compared to older age groups (Figure 4). Awareness significantly decreased with advancing age; only half of respondents aged 65 years or older were aware of these potential effects of drinking alcohol during pregnancy.

Figure 4: Knowledge of the Potential Effects of Alcohol on an Unborn Child by Age Group

Percent of Adult Population (18+ Years)
City of London and Middlesex County, January – December 2004



Source: RRFSS, Waves 37-48,

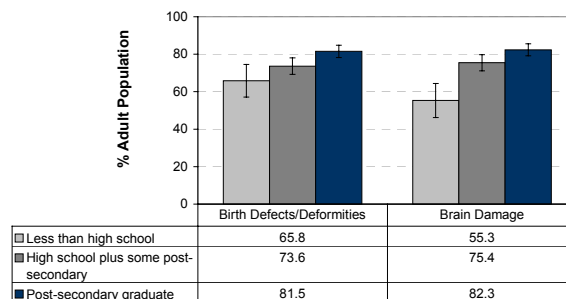
Age Group

Level of education attained was also associated with awareness of the effects of alcohol consumption during pregnancy. Residents having completed post-secondary education were most aware of permanent brain damage (82.3% ± 3.2%) and other permanent birth defects or deformities (81.5% ± 3.3%) resulting from alcohol consumption during pregnancy. Residents not having completed high school were the least aware

of the effects of alcohol consumption on an unborn child (Figure 5).

Figure 5: Knowledge of the Potential Effects of Alcohol on an Unborn Child by Level of Education

Percent of Adult Population (18+ Years)
City of London and Middlesex County, January – December 2004



Source: RRFSS, Waves 37-48, 2004

STRATEGIES TO REDUCE THE RISK OF DRINKING ALCOHOL

The Canadian Paediatric Society recommends that the primary prevention of FASD include early recognition and treatment of at risk women, that healthcare providers ask women about their drinking habits and whether or not they are pregnant¹⁰. Just under half (46.1% ± 5.6%) of all women between the ages of 18 and 44 years have discussed the effects of alcohol on an unborn child with a health professional (doctor, nurse, midwife, social worker, counselor or other health professional). Only slight differences were observed by level of household income; residents with reported annual household incomes between \$70,000 and \$100,000 were the most likely to have discussed the effects of alcohol consumption during pregnancy on an unborn child. Due to the small sample of respondents who reported having had a child in the previous five years, estimates for this group were not considered stable and comparisons have not been made.

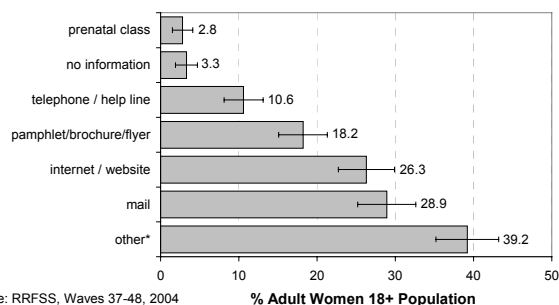
Of the women 18 through 44 years of age who discussed the effects of alcohol with a health professional, two-thirds (65.7% ± 5.7%) recalled being told that a woman should not drink any alcohol during pregnancy. This proportion includes both

those women who responded that they were told not to drink any alcohol at all during pregnancy (52.5% ± 8.2%) as well as those who were told that pregnant women who do not drink should continue to not drink (13.5% ± 5.6%). Younger women, aged 18 through 24 years (86.8% ± 10.8%), were the most likely to be told that a woman should not drink any alcohol during pregnancy compared to women aged 25 through 44 years (57.8% ± 9.6%). Again, the size of the sample did not permit a direct comparison between women who reported having had a child in the last five years compared to those who had not.

Women aged 18 years and older were asked about their preferred method of obtaining information about the effects of alcohol on an unborn baby. More than a third of women (39.2% ± 4.0%) indicated that they would prefer to receive this information from their doctor, the hospital, through word of mouth, or from such sources as the newspaper, television or library; these were all captured and included under the “Other” category. After “Other”, receiving information by mail (28.9% ± 3.7%), via the internet (26.3% ± 3.6%) or in a pamphlet (18.2% ± 3.1%) were the three most preferred sources. Ten percent (10.6% ± 2.5%) of women indicated they would prefer to receive information from a telephone helpline, while only a very small proportion (2.8% ± 1.3%) indicated they would be interested in receiving information on the effects of alcohol on an unborn baby from prenatal classes. Three percent of women (3.3% ± 1.4%) were not interested in receiving any information on the effects of alcohol on an unborn baby (Figure 6).

Figure 6: Preferred Sources for Receiving Information on the Effects of Alcohol on an Unborn Baby

Percent of Adult Women (18+ Years)
City of London and Middlesex County, January – December 2004



Source: RRFSS, Waves 37-48, 2004

*includes: information from doctor, hospital, newspaper, television, word of mouth, and library

SUMMARY AND IMPLICATIONS

This Health Index provides baseline information on the public’s perceived risk and knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child. The results indicated that a large majority of residents residing in London and Middlesex County are aware of the harmful effects of alcohol consumption during pregnancy. Eight out of ten residents are aware that there is no safe level of alcohol consumption during pregnancy and three-quarters are aware of the effects of alcohol on an unborn baby.

Younger adults aged 18-24 years are most aware of the effects of alcohol consumption during pregnancy on an unborn child. This was an encouraging finding given that this age group comprises those adults expected to soon be entering their childbearing years. While adults 45 years and older may have passed their own period of childbearing, ongoing efforts to increase awareness in this older age group would ensure greater support and encouragement for friends and family members to have alcohol free pregnancies. Initiatives such as Sandy’s Law will assist in increasing community awareness through warning notices that drinking alcohol during pregnancy can cause FASD.

Women in London and Middlesex County identified a number of sources through which

they would prefer to receive information about the effects of alcohol consumption during pregnancy. Receiving information from either their doctor or the hospital were among the most popular choices along with receiving information through the mail. Receiving information through a pre-natal class was the least popular choice. RRFSS results for the City of London and Middlesex County also indicated that only half of women of childbearing age (ages 18 through 44 years) reported discussions with health professionals about the effects of alcohol during pregnancy on an unborn baby. Future educational strategies that target health professionals to increase discussions with women residents (notably those between the ages of 18 through 44 years) about the harmful effects of alcohol consumption during pregnancy should be considered. Despite relatively high levels of knowledge there continues to be a minority of residents that seem unaware of the impact of drinking alcohol during pregnancy and the health effects on an unborn child. Efforts to further understand and monitor health risk behaviours and other societal issues associated with alcohol consumption during pregnancy should be continued.

METHODS AND DEFINITIONS

The data presented in this Health Index are from the Rapid Risk Factor Surveillance System (RRFSS). RRFSS helps to monitor public awareness of a range of public health issues. This survey data is collected for the Middlesex-London Health Unit (MLHU) by the Institute of Social Research, York University. RRFSS data was collected in a series of monthly telephone surveys (waves) with approximately 100 Middlesex-London respondents interviewed per month.

Households were selected at random from a list of households with telephones in London and Middlesex County. Respondents aged 18 and older were systematically selected from within each household for the adult that had the next birthday. Every effort was made

to interview the appropriate respondent. Although on average five calls were made in order to complete the interview, as many as 15 attempts was standard practice.

The RRFSS results were drawn from responses to multiple choice questions that were intended to:

- Assess public acceptance of alcohol use during pregnancy (2002 RRFSS Data)
- Determine the public's perceived risk of drinking during pregnancy (2004 RRFSS Data)
- Assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child (2004 RRFSS Data)
- Assess the prevalence of specific risk reduction strategies (2004 RRFSS Data).

The samples were weighted to account for each respondent's probability of being selected within households of different sizes. Questions were analysed by age group, gender, annual household income bracket, education level, residence (Middlesex County or City of London), and language spoken in the home (Anglophone or Allophone). The four age groups included in the analysis were:

- 18-24 years,
- 25-44 years,
- 45 through 64 years and
- 65 years and older.

It was not possible to look at individual levels of alcohol consumption as this was not asked of respondents in waves 13 through 24 (January through December 2002) or waves 37 through 48 (January through December 2004).

All percentages were provided with 95% confidence intervals. Difference in proportions were considered significant at $p < 0.05$. Where possible bar charts included error bars illustrating 95% confidence intervals. Results were considered unstable and subject to suppression if any one of the

following conditions existed: denominator of a rate was less than 30, numerator was less than 5 or coefficient of variation was greater than 33.3.

2002 RRFSS Data: All participating women and men 18 years or older were asked questions about accepted levels of alcohol consumption during pregnancy. Data from 949 and 260 households from London and Middlesex County respectively were collected over the period between January and December 2002 (waves 13 to 24).

Accepted level of drinking during pregnancy =
$$\frac{\# \text{ adults}(18+) \text{ who believe that there is no safe level of alcohol consumption during pregnancy}}{\text{all adults } (18+)}$$

2004 RRFSS Data: Women and men, 18 years or older were asked about i) their perceived risk of drinking during pregnancy ii) the effects of alcohol consumed during pregnancy and iii) specific risk reduction strategies. The household sample (unweighted) consisted of 898 and 286 households from London and Middlesex County respectively surveyed during January 2004 through December of the same year.

Perceived risk of drinking during pregnancy =
$$\frac{\# \text{ adults}(18+) \text{ who believe that drinking during pregnancy is harmful to the unborn child}}{\text{all adults } (18+)}$$

Awareness of effects of drinking during pregnancy =
$$\frac{\# \text{ adults}(18+) \text{ who believe drinking during pregnancy results in child born with effects}}{\text{all adults } (18+)}$$

Discussed effect of alcohol on unborn child with healthcare provider =
$$\frac{\# \text{ women } (18 - 44 \text{ years}) \text{ who have discussed the effects of alcohol on unborn child with provider}}{\text{all women } (18- 44 \text{ years})}$$

Preferred information source re: alcohol effects on unborn child =
$$\frac{\# \text{ women } (18+) \text{ who prefer information on alcohol effects on unborn child by source}}{\text{all women } (18+)}$$

Further details in addition to a copy of the complete RRFSS questionnaire are available at www.rrfss.on.ca.

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