

# Haldimand and Norfolk Alcohol & Pregnancy Report 2012

Haldimand-Norfolk Health Unit



## Data Sources

Information in this report is presented from the Rapid Risk Factor Surveillance System (RRFSS). RRFSS is an ongoing telephone survey of adults 18 and over who live in private households. Within households, the adult with the most recent birthday is selected to participate in the survey. The residents of Haldimand and Norfolk are interviewed on a monthly basis. Random digit dialling is used to select households. The survey was conducted by the Institute of Social Research (ISR) at York University, on behalf of Haldimand-Norfolk Health Unit.

## Interpretation

### Household Weights

The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn. Household weights were used to any questions related to individuals. Household weights address the problem of over representing adults from one-adult households and under representing adults from households with more adults.

### Confidence Intervals (CI)

A 95% Confidence Interval indicates that if 100 samples were drawn randomly, estimates from 95 of those samples would fall within this  $\pm$  range. A large CI means that there is a large amount of variability or imprecision. CI are presented as either (95%CI) or  $\pm$  in the tables and graphs.

### Statistically Significance

When the CI's do not overlap, estimates are significantly different.



## Key Findings

### Perceived Risk of Drinking Alcohol During Pregnancy

- Over 80% of adults report that there is a risk of drinking alcohol during pregnancy. Of that percentage, 78.3% ( $\pm 3.1$ ) reported that there is a risk of drinking alcohol throughout the pregnancy.
- Of particular interest, 14.4% ( $\pm 2.7$ ) reported that drinking only during the beginning of pregnancy was harmful to an unborn baby.
- The position that there is a risk of drinking alcohol during pregnancy was most commonly held among females, adults with higher education, and younger adults (18-34).
- The percentage of adults who reported that there is a risk of drinking alcohol during pregnancy decreased with age.
- There were no statistical significant differences by sex, income and education levels and the perceived risk of drinking alcohol during pregnancy.
- A statistical difference was observed:
  - There are some statistically significant differences between perceived risk of drinking during pregnancy and age. A significantly higher percentage of young adults 18-34 [88.3% ( $\pm 5.5$ )] reported that there is a risk of drinking alcohol during pregnancy compared to older adults 65+ [75.7% ( $\pm 7.1$ )].

## Coefficient of Variation

Coefficient of Variation (CV) refers to the precision of the estimate.

When the CV is between 16.6 and 33.3 the estimate is unstable and should be interpreted with caution.

This is presented with one asterisk\*.

When the CV is greater than 33.3 there is high variability, and as a result the data is not releasable. This is presented with two asterisks\*\*.

## Limitations

- RRFSS results are self-reported and may not necessarily be recalled accurately.
- Moreover, households without telephone were excluded from the survey which may result in an under-representation of lower income respondents.
- The sample only included adults 18 years of age and older.
- Telephone survey was only conducted in English.

## Reporting on Descriptive Statistics

While some differences in the report were not statistically significant, these differences are worth reporting since it provides information on the perceived risk during pregnancy. In many cases, the sample size was too small to establish statistical significance, which is an apparent limitation in small, rural communities.



## Public's Knowledge of the Potential Effects of Drinking Alcohol during Pregnancy on an Unborn Baby

- Over 70% of adults reported that drinking during pregnancy could cause a baby to be born with alcohol in its system, permanent brain damage, and birth defects/deformities.
- There was no observed pattern for age, education, and income.
- A higher percentage of females reported that there were potential effects of drinking alcohol during pregnancy to an unborn baby.
- Some statistical differences were observed:
  - A significantly higher percentage of younger adults 18-34 [89.1% ( $\pm 5.5$ )] and middle aged adults 35-64 [82.8% ( $\pm 3.6$ )] reported that drinking alcohol during pregnancy could cause the baby to be born with permanent brain damage, compared to older adults 65+ [68.5% ( $\pm 8.3$ )].
  - A significantly higher percentage of younger adults 18-34 [88.7% ( $\pm 5.6$ )] and middle aged adults 35-64 [80.4% ( $\pm 3.8$ )] reported that drinking alcohol during pregnancy could cause the baby to be born with permanent birth defects or deformities, compared to older adults 65+ [61.8% ( $\pm 8.7$ )].
  - A significantly higher percentage of adults with post-secondary education [85.5% ( $\pm 4.0$ )], and high school education or more [77.4% ( $\pm 5.0$ )] reported that drinking alcohol during pregnancy could cause the baby to be born with permanent birth defects or deformities, compared to adults with less than high school education [59.9% ( $\pm 9.8$ )].

## Prevalence of Risk Reduction Strategies

- Over 50% of females of reproductive years (18-49) report discussing the effects of alcohol on an unborn baby with health professionals.
- The preferred method of obtaining information on the effects of alcohol on an unborn baby among adults (18+) and adults of reproductive years (18-49) was by mail.
- There were no statistical significance differences observed by age group and income level and risk reduction strategies.

## Alcohol and Pregnancy

### Why is this Important?

Fetal Alcohol Spectrum Disorder (FASD) is an umbrella term used to describe the range of disabilities (and diagnoses) associated with prenatal alcohol exposure (Public Health Agency of Canada, 2005). These disabilities include physical and intellectual disabilities, as well as problems with behaviour and learning. Health Canada (2006), estimates that there are more than 3,000 babies a year born with FASD, and about 300,000 people currently living with it in Canada.

It is currently not known how much alcohol it takes to cause FASD so no alcohol during pregnancy is the safest and best choice (Public Health Agency of Canada, 2010). Alcohol use during pregnancy is the only cause of FASD so the only way to prevent it is by avoiding alcohol use during pregnancy (Public Health Agency of Canada, 2010). FASD has no cure and has huge public health implications in terms of personal,



societal and economic costs. In a recent Canadian study on FASD, it was reported that the lifetime cost of fetal alcohol spectrum disorders was estimated at \$1 million per case (Stade, Ungar, Stevens, Beyen & Koren, 2007). With an estimated 4000 new cases yearly, this translates to \$4 billion annually (Stade, Ungar, Stevens, Beyen & Koren, 2007).

Results from the survey will assist with program planning to raise awareness and reduce the incidence of FASD.

## Report Structure

This report focuses on the perceived risk of drinking during pregnancy and includes 5 questions:

1. If a woman drank alcohol at any time during her pregnancy, do you think it could be harmful to the unborn baby?
2. If a woman drank alcohol during pregnancy, when do you think it could be most harmful to the unborn baby: at the beginning of the pregnancy, in the middle of the pregnancy, at the end of the pregnancy, or do you think it is harmful throughout pregnancy?
3. In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with alcohol in its system? Could the baby be born with permanent brain damage? Could the baby be born with other permanent birth defects or deformities?

4. Has a doctor, nurse, midwife, social worker, counsellor, or other health professional ever discussed the effects of alcohol on an unborn child with you?
5. If you wanted to get information on the effects of alcohol on an unborn baby, how could your local public health department get this information to you?

This report includes data collected in Haldimand and Norfolk Counties in 2010. Data were collected during the months of August to December 2010 (5 months total). There were 720 people included in the sample. Unless otherwise stated, the findings refer to Haldimand and Norfolk adults 18 years of age and older in 2010. Estimates are presented with error bars representing 95% Confidence Intervals. In text, these error bars are presented with ( $\pm$ ) in brackets.

## Acknowledgements

### Author

**Deanna White, MA**  
*Epidemiologist*  
Haldimand-Norfolk Health Unit  
519-426-6170 Ext. 3215  
[deanna.white@hnhu.org](mailto:deanna.white@hnhu.org)

I would like to thank the following participants for their contributions to the Haldimand and Norfolk Alcohol and Pregnancy Report 2012:

### Reviewers

**Jill Steen, BSc, MHSC, RD**  
*Manager Public Health*  
Haldimand-Norfolk Health Unit

**Patti Moore, RN, BSCN, MPA**  
*General Manager*  
Health & Social Services Department  
Norfolk County

**Malcolm Lock, MD**  
*Medical Officer of Health*  
Haldimand-Norfolk Health Unit

**Jackie Esbaugh, BA, MA**  
*Program Evaluator and Data Analyst*  
Haldimand-Norfolk Health Unit

**Melanie Laundry, RN, BSCN**  
*Program Coordinator,*  
Family Health Team  
Haldimand-Norfolk Health Unit

**Kathy Page, RD, HBSc**  
*Program Coordinator,*  
Population Health  
Haldimand-Norfolk Health Unit

### Contributors

**Lina Hassen, HON. BA, MPH (CANDIDATE)**  
*Health Promoter*  
Substance Misuse Prevention  
Haldimand-Norfolk Health Unit

**Angela Swick, RN, BSCN**  
*Public Health Nurse*  
Family Health Team  
Haldimand-Norfolk Health Unit

### Perceived Risk of Drinking During Pregnancy

#### Rationale

##### Why is this important?

Alcohol is a teratogen or an agent that can disturb the development of an embryo or fetus (Health Canada, 2006). Several factors influence the specific birth defects and the degree of disability including how much, how often and at what stage of the pregnancy alcohol was consumed (Health Canada, 2006). A pregnant woman's state of health also plays a role in this mechanism (Health Canada, 2006).

**There is no safe time during pregnancy to drink any amount of alcohol** (Best Start, 2009).

A baby's brain develops throughout the whole pregnancy (Best Start, 2009). The safest choice during pregnancy is no alcohol at all (Best Start, 2009). In fact, it is best to stop drinking before you get pregnant (Best Start, 2009).



#### Indicator

##### Indicator One: Perceived Risk of Drinking During Pregnancy

**Question:** (1) If a woman drank alcohol at any time during her pregnancy, do you think it could be harmful to the unborn baby?

**Indicator Description:** % of adults (18+) who believe that drinking alcohol during pregnancy is harmful to an unborn baby.

**Indicator Objectives:** (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To access the public's perceived risk of drinking during pregnancy

#### Summary

- In 2010, 83.9% ( $\pm 2.7$ ) of Haldimand

and Norfolk adults reported that drinking during pregnancy is harmful to an unborn baby.

##### Sex

- A higher percentage of females [85.9% ( $\pm 3.5$ )] than males [81.5% ( $\pm 4.2$ )] reported that drinking during pregnancy is harmful to an unborn baby. However, these differences were not statistically significant.

##### Age Group

- The percentage of adults who reported that drinking during pregnancy is harmful to an unborn baby decreased with age.
- Some statistical differences were observed:
  - A statistically significantly higher percentage of adults aged 18-34 [88.3% ( $\pm 5.5$ )] reported that drinking during pregnancy is harmful to

an unborn baby compared to adults 65+ [75.7% ( $\pm 7.1$ )].

##### Income

- The percentage of adults 18 years of age and over who reported that drinking during pregnancy is harmful to an unborn baby was lower among those household incomes less than \$30,000 [76.5% ( $\pm 8.4$ )], compared to higher income groups. However these differences were not statistically significant.

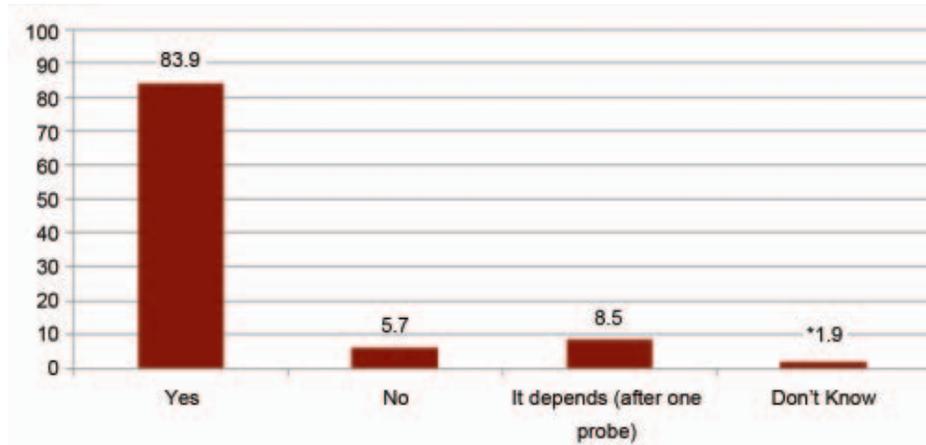
##### Education

- The percentage of adults who reported that drinking during pregnancy is harmful to an unborn baby was lower among adults who had less than high school education [78.2% ( $\pm 7.6$ )], compared adults with higher levels of education. However these differences were not statistically significant.

# Data

## Perceived Risk of Drinking During Pregnancy

Figure 1: Fetal Alcohol Syndrome (FAS), Perceived Risk of Drinking During Pregnancy, 2010



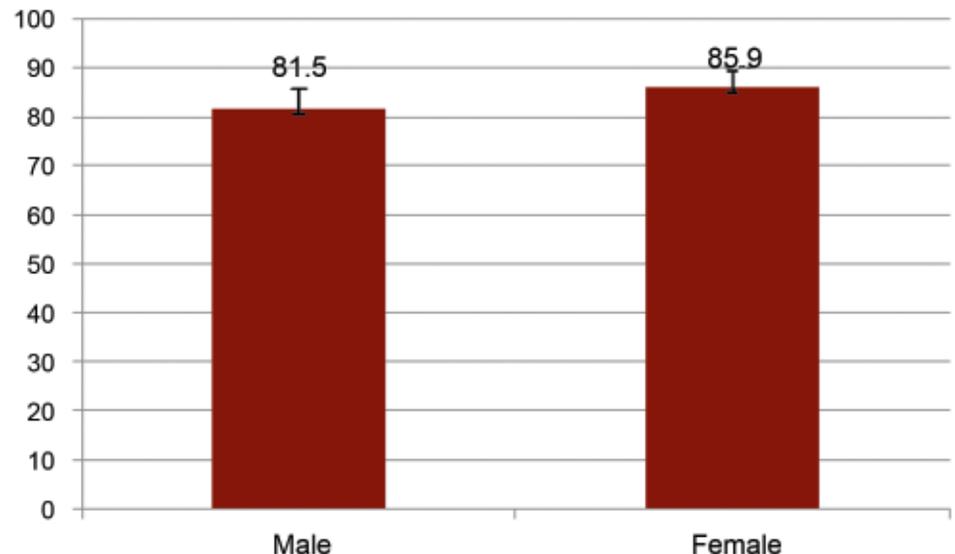
	2010	Number (n)
Risk of Drinking During Pregnancy	83.9% (95%CI 81.2%-86.6%)	604
No Risk of Drinking During Pregnancy	5.7% (95%CI 4.0%-7.4%)	41
It Depends (after one probe)	8.5% (95%CI 6.5%-10.5%)	61
Don't Know	*1.9% (95%CI 0.9%-2.9%)	14
<b>Total</b>	<b>100%</b>	<b>720</b>

Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

Data notes: **Question:** If a woman drank alcohol at any time during her pregnancy, do you think it could be harmful to the unborn baby? **Indicator Description:** % of adults 18 years of age and older who believe that drinking alcohol during pregnancy is harmful to the unborn baby. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's perceived risk of drinking during pregnancy. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population 720. No respondents refused the question.

## Perceived Risk of Drinking During Pregnancy by Sex

Figure 2: Percent of Adults (18 +), Who Reported That There Is Perceived Risk of Drinking During Pregnancy, By Sex, Haldimand and Norfolk Counties Combined, 2010

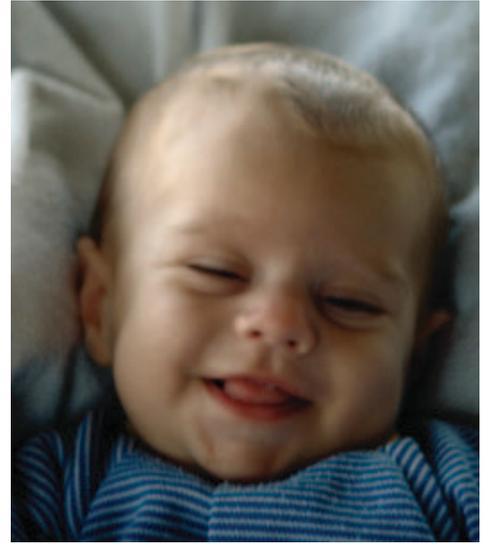
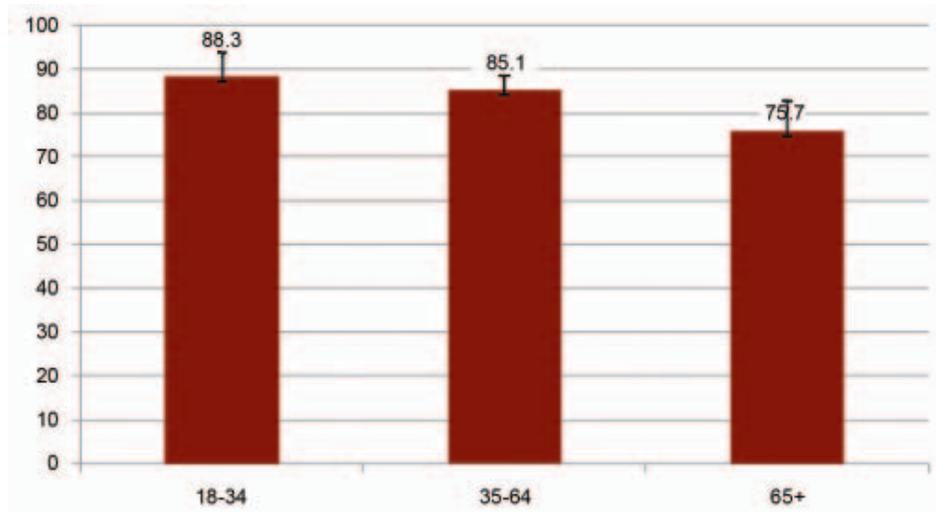


Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

Data notes: **Question:** If a woman drank alcohol at any time during her pregnancy, do you think it could be harmful to the unborn baby? **Indicator Description:** % of adults 18 years of age and older who believe that drinking alcohol during pregnancy is harmful to the unborn baby. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's perceived risk of drinking during pregnancy. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population for males (N=331) and females (N=389) **Statistical Significance:** These differences were not statistically significant.

## Perceived Risk of Drinking During Pregnancy by Age

Figure 3: Percent of Adults (18+), Who Reported That There Is Perceived Risk of Drinking During Pregnancy, By Age, Haldimand and Norfolk Counties Combined, 2010

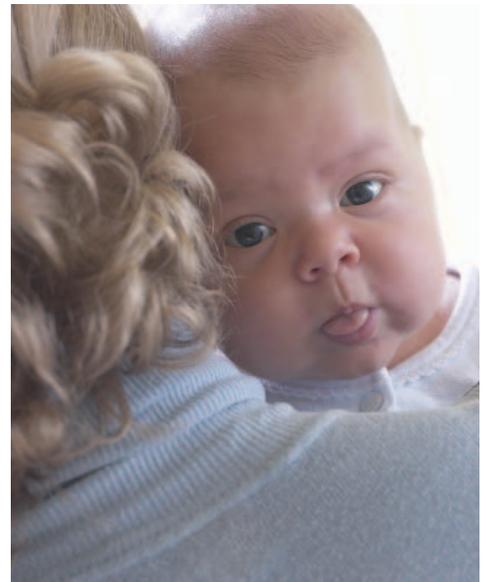
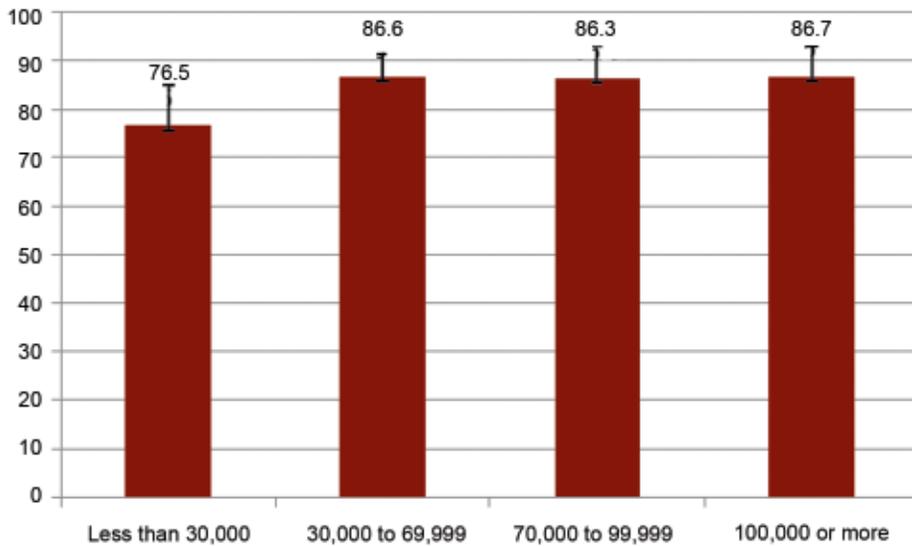


Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

Data notes: Question: If a woman drank alcohol at any time during her pregnancy, do you think it could be harmful to the unborn baby? Indicator Description: % of adults 18 years of age and older who believe that drinking alcohol during pregnancy is harmful to the unborn baby. Indicator Objectives: To reduce disability, morbidity and mortality caused by alcohol. To assess the public's perceived risk of drinking during pregnancy. Sampling Variability: \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. Household Weights: The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (bhuc6). Total weight population for 18-34 (N=133), 35-64 (N=439) and 65 and over (N=142). Statistically Significance: Differences were only statistically significant between adults aged 18-34 [88.3% (±5.5)] and adults aged 65+ [75.7% (±7.1)].

## Perceived Risk of Drinking During Pregnancy by Income

Figure 4: Percent of Adults (18+), Who Reported That There Is Perceived Risk of Drinking During Pregnancy, By Income, Haldimand and Norfolk Counties Combined, 2010

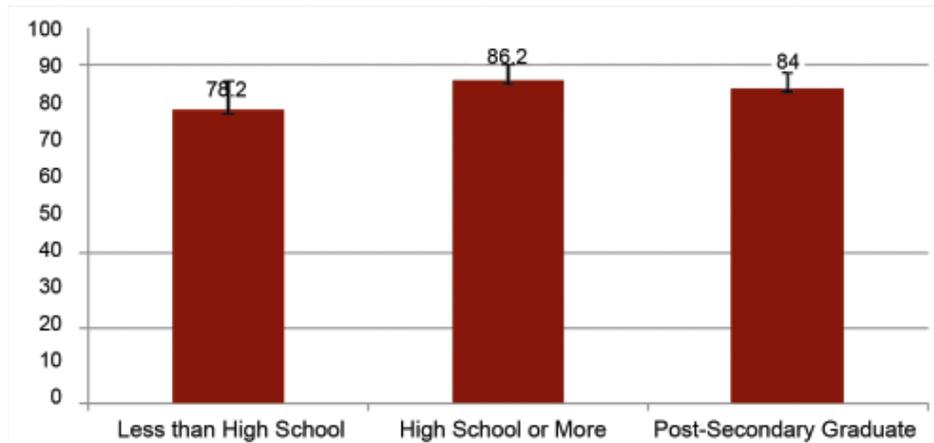


Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

Data notes: Question: If a woman drank alcohol at any time during her pregnancy, do you think it could be harmful to the unborn baby? Indicator Description: % of adults 18 years of age and older who believe that drinking alcohol during pregnancy is harmful to the unborn baby. Indicator Objectives: To reduce disability, morbidity and mortality caused by alcohol. To assess the public's perceived risk of drinking during pregnancy. Sampling Variability: \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. Household Weights: The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (bhuc6). Total weight population for less than \$30,000 (N=98); \$30,000 to \$69,000 (N=206); \$70,000 to \$99,999 (N=110); and \$100,000 or more (N=120). Statistically Significance: These differences were not statistically significant.

## Perceived Risk of Drinking During Pregnancy by Education

Figure 5: Percent of Adults (18+), Who Reported That There Is Perceived Risk of Drinking During Pregnancy, By Education , Haldimand and Norfolk Counties Combined, 2010



**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

**Data notes:** **Question:** If a woman drank alcohol at any time during her pregnancy, do you think it could be harmful to the unborn baby? **Indicator Description:** % of adults 18 years of age and older who believe that drinking alcohol during pregnancy is harmful to the unborn baby. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's perceived risk of drinking during pregnancy. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population for less than high school (N=113); high school or more (N=283); and post secondary graduate (N=319). **Statistically Significance:** These differences were not statistically significant.

# —Ⓜ— Perceived Risk of Drinking During Pregnancy: Timing

## —Ⓜ— Rationale

### Why is this important?

There is no safe time during pregnancy to drink any amount of alcohol (Best Start, 2009). A baby's brain develops throughout the whole pregnancy (Best Start, 2009). The safest choice during pregnancy is no alcohol at all (Best Start, 2009).

## —Ⓜ— Indicator

**Question:** (1) If a woman drank alcohol at any time during her pregnancy, when do you think it could be harmful to the unborn baby: at the beginning of the pregnancy, at the middle of pregnancy, at the end of pregnancy, or do you think it is harmful throughout pregnancy?

**Indicator Description:** % of adults (18+) who believe that drinking alcohol during pregnancy is harmful to an unborn baby, at the beginning of the pregnancy, at the middle of pregnancy, at the end of pregnancy, or throughout pregnancy?

**Indicator Objectives:** (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To access the public's knowledge of when drinking during pregnancy is most harmful to the unborn baby.

## —Ⓜ— Summary

- In 2010, 78.3% ( $\pm 3.1$ ) of Haldimand and Norfolk adults reported that drinking throughout the pregnancy is harmful to an unborn baby.
- However, 14.4% ( $\pm 2.7$ ) reported that drinking only during the beginning of pregnancy was harmful to an unborn baby.

### Sex

- The percentage of adults who reported that drinking throughout the pregnancy is harmful to an unborn baby was



slightly higher among females [78.5% ( $\pm 3.5$ )], compared to males [78.1% ( $\pm 4.7$ )]. However these differences were not statistically significant.

levels of education. However these differences were not statistically significant.

### Income

- In 2010, the percentage of adults who reported that drinking throughout the pregnancy is harmful throughout the pregnancy was lower among higher household incomes of \$100,000 or more [75.7% ( $\pm 8.0$ )], and incomes \$70,000 to \$99,000 [77.8% ( $\pm 8.0$ )], compared to lower income groups. However these differences were not statistically significant.

### Age Group

- The percentage of adults who reported that drinking throughout the pregnancy is harmful throughout the pregnancy decreased with age. However these differences were not statistically significant.

### Education

- In 2010, the percentage of adults who reported that drinking during pregnancy is harmful throughout the pregnancy was lower among adults who had less than high school education [72.4% ( $\pm 8.9$ )], compared adults with higher

# Data

## Perceived Risk of Drinking During Pregnancy: Timing

**Table 1: Percent of Adults (18+) who Feel that Drinking Alcohol During Pregnancy is Most Harmful to an Unborn Baby in the Beginning, Middle, End, or Throughout the Pregnancy, Haldimand and Norfolk Counties Combined, 2010**

	2010	Number (n)
Beginning	14.4% (95%CI 11.7%-17.1%)	95
Middle	**	**
End	*1.9% (95%CI 0.9%-2.9%)	13
Throughout	78.3% (95%CI 75.2%-81.4%)	519
Don't Know	*4.2% (95%CI 2.7%-5.7%)	28
<b>Total</b>	<b>NC</b>	<b>NC</b>

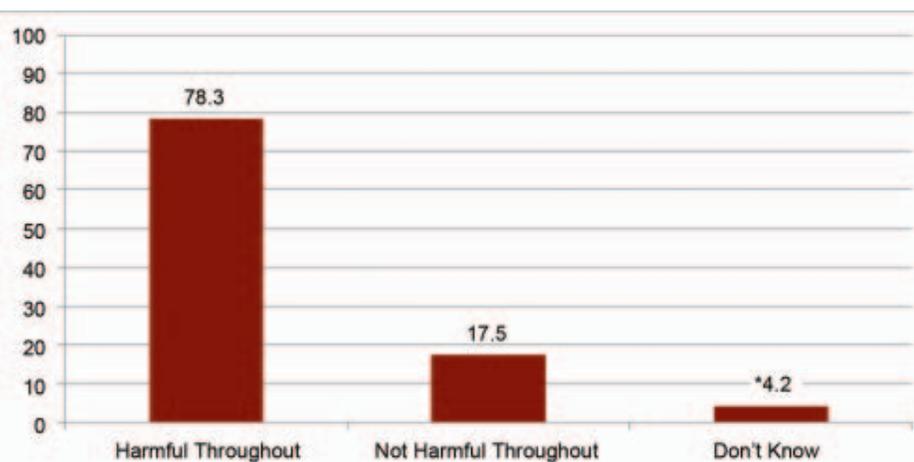


*Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.*

*Data notes: Question: If a woman drank alcohol during pregnancy, do you think it is harmful throughout the pregnancy? Indicator Description: % of adults 18 years of age and older who believe that drinking alcohol at the beginning, middle, end, or throughout the pregnancy is harmful to the unborn baby. Indicator Objectives: To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of when drinking alcohol during pregnancy is most harmful to the unborn baby. Sampling Variability: \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. Household Weights: The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population 663. Limitations: Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7). Refuse was excluded from the analysis (fas\_2 ≠7 or fas\_2 ≠9).*

## Perceived Risk of Drinking Throughout Pregnancy

**Figure 6: Percent of Adults (18+), who Reported Perceived Risk of Drinking Throughout Pregnancy, Haldimand and Norfolk Counties Combined, 2010**



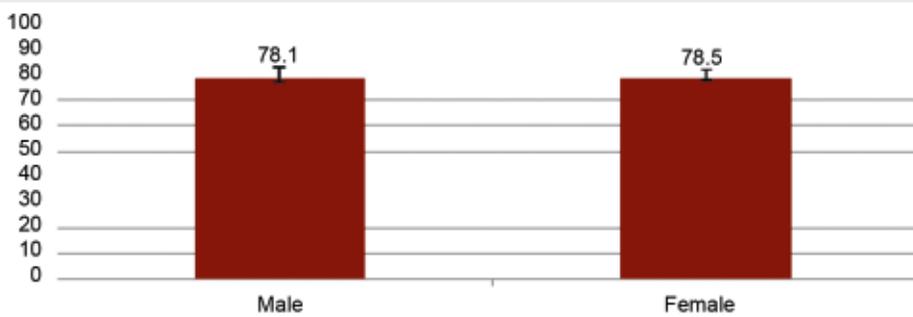
	2010	Number (n)
Drinking is Harmful Throughout the Pregnancy	78.3% (95%CI 75.2%-81.4%)	519
Drinking is Not Harmful Throughout the Pregnancy	17.5% (95%CI 14.6%-20.4%)	116
Don't Know	*4.2% (95%CI 2.7%-5.7%)	28
<b>Total</b>	<b>100%</b>	<b>663</b>

*Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.*

*Data notes: Question: If a woman drank alcohol during pregnancy, do you think it is harmful throughout the pregnancy? Indicator Description: % of adults 18 years of age and older who believe that drinking alcohol throughout the pregnancy is harmful to the unborn baby. Indicator Objectives: To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of when drinking alcohol during pregnancy is most harmful to the unborn baby. Sampling Variability: \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. Household Weights: The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population 663. Limitations: Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7). Refuse was excluded from the analysis (fas\_2 ≠7 or fas\_2 ≠9).*

## Perceived Risk of Drinking Throughout Pregnancy by Sex

Figure 7: Percent of Adults (18+) who Believe that Drinking Alcohol Throughout the Pregnancy Could Harm the Unborn Baby, by Sex, Haldimand and Norfolk Counties Combined, 2010

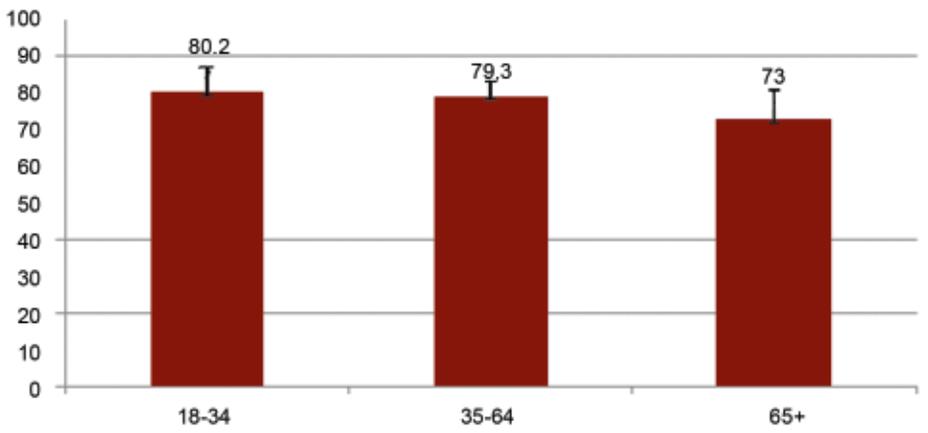


**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

**Data notes:** **Question:** If a woman drank alcohol during pregnancy, do you think it is harmful throughout the pregnancy? **Indicator Description:** % of adults 18 years of age and older who believe that drinking alcohol throughout the pregnancy is harmful to the unborn baby. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of when drinking alcohol during pregnancy is most harmful to the unborn baby. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (bhuc6). Total weight population for males (N=298) and females (N=366). **Statistical Significance:** These differences were not statistically significant. **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7). Refuse was excluded from the analysis (fas\_2 ≠7 or fas\_2 ≠9).

## Perceived Risk of Drinking Throughout Pregnancy by Age

Figure 8: Percent of Adults (18+) who Believe that Drinking Alcohol Throughout the Pregnancy Could Harm the Unborn Baby, by Age, Haldimand and Norfolk Counties Combined, 2010

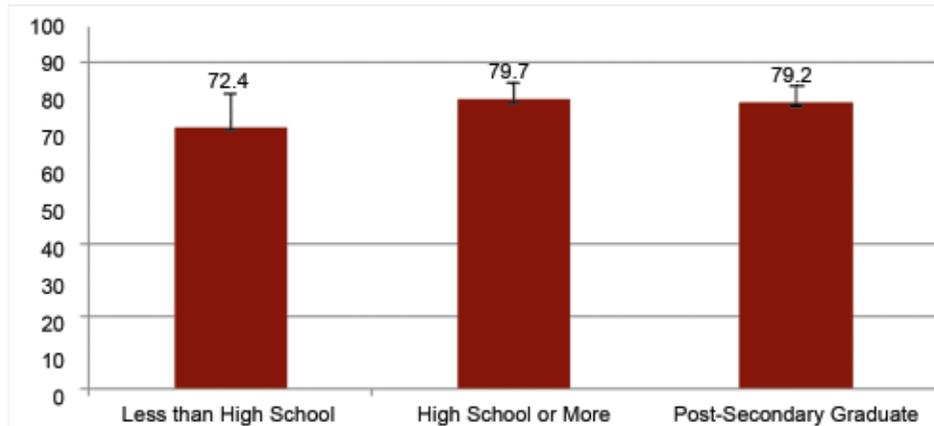


**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

**Data notes:** **Question:** If a woman drank alcohol during pregnancy, do you think it is harmful throughout the pregnancy? **Indicator Description:** % of adults 18 years of age and older who believe that drinking alcohol throughout the pregnancy is harmful to the unborn baby. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of when drinking alcohol during pregnancy is most harmful to the unborn baby. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (bhuc6). Total weight population for 18-34 (N=124); 35-64 (N=412); and 65 and over (N= 121). **Statistical Significance:** These differences were not statistically significant. **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7). Refuse was excluded from the analysis (fas\_2 ≠7 or fas\_2 ≠9).

## Perceived Risk of Drinking Throughout Pregnancy by Education

Figure 9: Percent of Adults (18+) who Believe that Drinking Alcohol Throughout the Pregnancy Could Harm the Unborn Baby, by Education, Haldimand and Norfolk Counties Combined, 2010

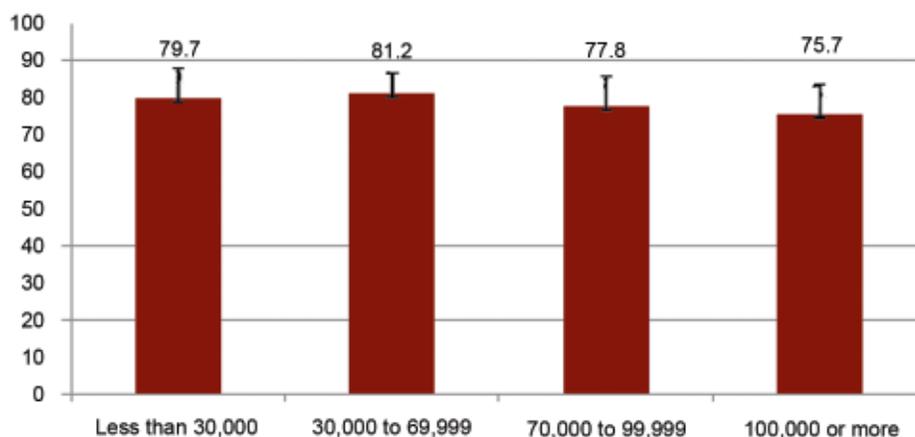


**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

**Data notes:** **Question:** If a woman drank alcohol during pregnancy, do you think it is harmful throughout the pregnancy? **Indicator Description:** % of adults 18 years of age and older who believe that drinking alcohol throughout the pregnancy is harmful to the unborn baby. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of when drinking alcohol during pregnancy is most harmful to the unborn baby. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population for less than is high school (N=96); high school or more (N=269); and post-secondary graduate (N=294). **Statistically Significance:** These differences were not statistically significant. **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7). Refuse was excluded from the analysis(fas\_2 ≠7 or fas\_2 ≠9)

## Perceived Risk of Drinking Throughout Pregnancy by Income

Figure 10: Percent of Adults (18+) Who Believe that Drinking Alcohol Throughout the Pregnancy Could Harm the Unborn Baby, by Income, Haldimand and Norfolk Counties Combined, 2010



**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

**Data notes:** **Question:** If a woman drank alcohol during pregnancy, do you think it is harmful throughout the pregnancy? **Indicator Description:** % of adults 18 years of age and older who believe that drinking alcohol throughout the pregnancy is harmful to the unborn baby. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of when drinking alcohol during pregnancy is most harmful to the unborn baby. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population for less than \$30,000 (N=89); \$30,000-\$69,000 (N=195); \$70,000-\$99,999 (N=104); \$100,000 or more (N=111). **Statistically Significance:** These differences were not statistically significant. **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7). Refuse was excluded from the analysis(fas\_2 ≠7 or fas\_2 ≠9)

## Section Two:

### *Public's Knowledge of the Potential Effects of Drinking Alcohol During Pregnancy on an Unborn Child*

## Drinking During Pregnancy: Baby Born with Alcohol in its System

### Rationale

#### Why is this important?

If a woman drank alcohol during pregnancy, the alcohol passes through the placenta and can disturb the development of the embryo or fetus (Motherisk, 2012). So it is safest to avoid alcohol during pregnancy and while planning to get pregnant (Motherisk, 2012).

### Indicator

**Question:** (1) In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with alcohol in its system?

**Indicator Description:** % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with alcohol in its system.

**Indicator Objectives:** (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child.

### Summary

- In 2010, 71.3% ( $\pm 3.4$ ) of Haldimand and Norfolk adults thought that if a woman drank alcohol during pregnancy that the baby could be born with alcohol in its system.

#### Sex

- A higher percentage of females [75.1% ( $\pm 3.5$ )], thought that if a woman drank alcohol during pregnancy, that the baby could be born with alcohol in its system, compared to males [66.8% ( $\pm 5.3$ )]. How-



ever these differences were not statistically significant.

#### Age Group

- The percentage of adults who thought that if a woman drank alcohol during pregnancy, that the baby could be born with alcohol in its system was lowest among persons age 18-34 [66.1% ( $\pm 8.3$ )], compared to the higher age groups. However these differences were not statistically significant.

#### Income

- The percentage of adults who thought that if a woman drank alcohol during pregnancy, that the baby could be born

with alcohol in its system was lowest among household incomes of \$70,000 to \$99,000 [67.1% ( $\pm 9.0$ )] and households incomes of \$100,000 or more [69.8% ( $\pm 8.5$ )], compared to lower income groups. However these differences were not statistically significant.

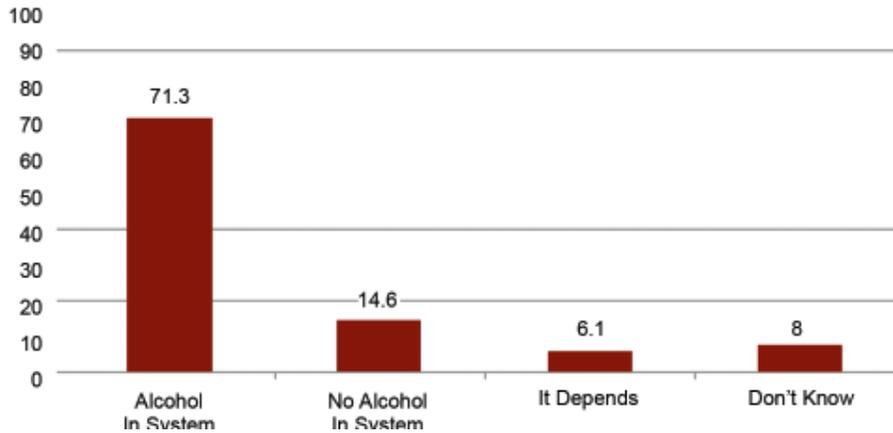
#### Education

- The percentage of adults who thought that if a woman drank alcohol during pregnancy, that the baby could be born with alcohol in its system was lowest among adults with less than high school education [70.3% ( $\pm 9.1$ )]. However these differences were not statistically significant.

# Data

## Drinking During Pregnancy Could Cause the Baby to be Born with Alcohol in its System

**Figure 11: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Alcohol in its System, Haldimand and Norfolk Counties Combined, 2010**

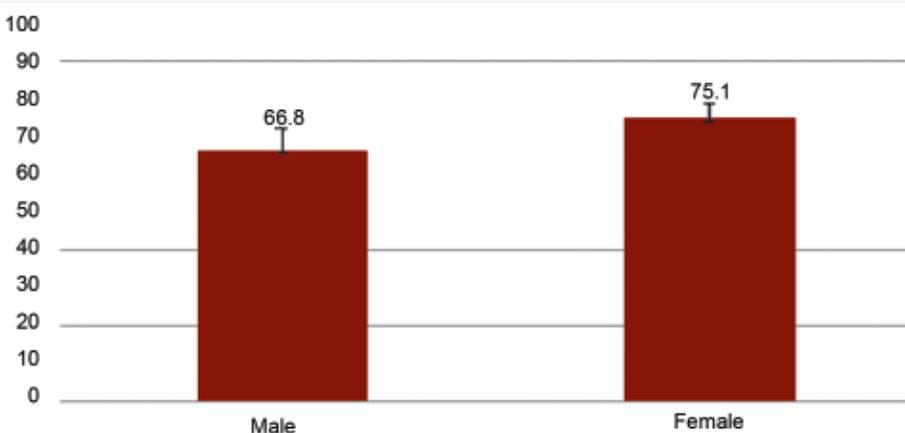


**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6. **Data notes:** **Question:** In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with alcohol in its system? **Indicator Description:** % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with alcohol in its system. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To access the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hhuc6). Total weight population 661, as stated in the data dictionary. **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). Refuse was excluded from the analysis(fas\_3a ≠9).

	2010	Number (n)
Drinking During Pregnancy could cause the Baby to be Born with Alcohol in its System	71.3% (95%CI 67.9%-74.7%)	472
Drinking During Pregnancy could not cause the Baby to be Born with Alcohol in its System	14.6% (95%CI 11.9%-17.3%)	96
It Depends	6.1% (95%CI 4.3%-7.9%)	40
Don't Know	8.0% (95%CI 5.9%-10.1%)	53
<b>Total</b>	<b>100%</b>	<b>661</b>

## Drinking During Pregnancy Could Cause the Baby to be Born with Alcohol in its System, by Sex

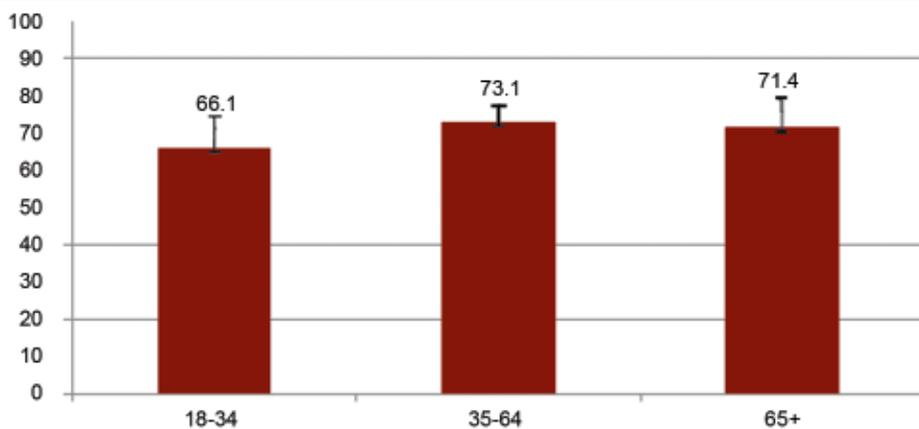
**Figure 12: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Alcohol in its System, by Sex, Haldimand and Norfolk Counties Combined, 2010**



**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6. **Data notes:** **Question:** In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with alcohol in its system? **Indicator Description:** % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with alcohol in its system. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To access the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hhuc6). Total weight population for males (N=298) and females (N=364). **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). Refuse was excluded from the analysis(fas\_3a ≠9), this decreased the denominator to include residents who believed that alcohol during pregnancy could harm the unborn baby. **Statistically Significance:** These differences were not statistically significant.

## Drinking During Pregnancy Could Cause the Baby to be Born with Alcohol in its System, by Age

Figure 13: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Alcohol in its System, by Age, Haldimand and Norfolk Counties Combined, 2010

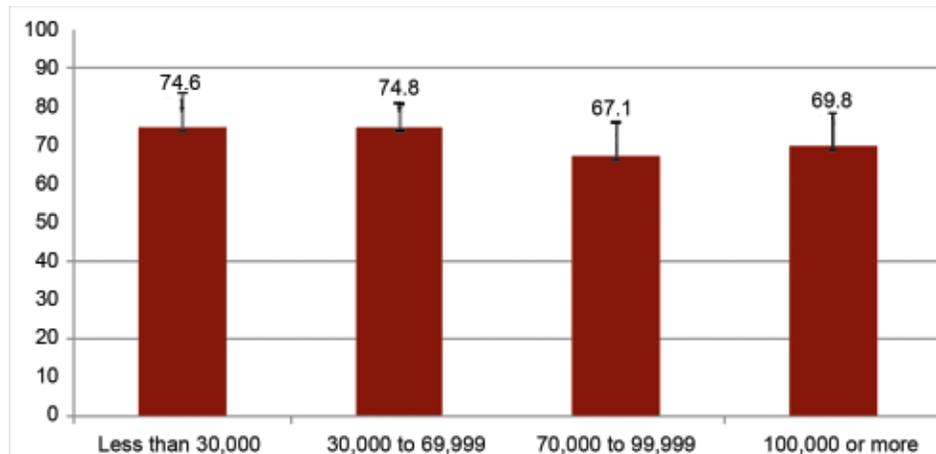


Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

Data notes: **Question:** In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with alcohol in its system? **Indicator Description:** % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with alcohol in its system. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population for 18-34 (N=124); 35-64 (N=410); and 65+ (N=121). **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). Refuse was excluded from the analysis (fas\_3a ≠9), this decreased the denominator to include residents who believed that alcohol during pregnancy could harm the unborn baby. **Statistically Significance:** These differences were not statistically significant.

## Drinking During Pregnancy Could Cause the Baby to be Born with Alcohol in its System, by Income

Figure 14: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Alcohol in its System, by Income, Haldimand and Norfolk Counties Combined, 2010

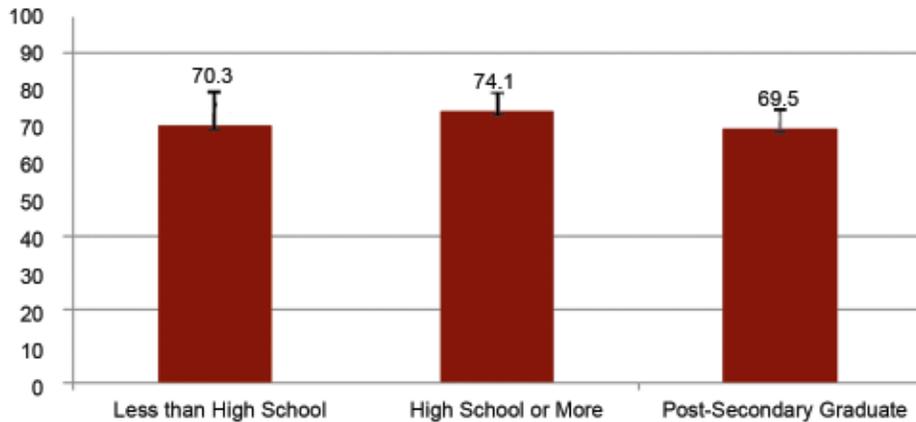


Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

Data notes: **Question:** In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with alcohol in its system? **Indicator Description:** % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with alcohol in its system. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population for less than \$30,000 (N=89); \$30,000-\$69,000 (N=195); \$70,000-99,999 (N=104); and \$100,000 or more (N=111). **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). Refuse was excluded from the analysis (fas\_3a ≠9), this decreased the denominator to include residents who believed that alcohol during pregnancy could harm the unborn baby. **Statistically Significance:** These differences were not statistically significant.

## Drinking During Pregnancy Could Cause the Baby to be Born with Alcohol in its System, by Education

Figure 15: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Alcohol in its System, by Education, Haldimand and Norfolk Counties Combined, 2010



**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

**Data notes:** **Question:** In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with alcohol in its system? **Indicator Description:** % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with alcohol in its system. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population for less than high school (N=96); High school or more (N=269); and Post-secondary graduate (N=293). **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). Refuse was excluded from the analysis (fas\_3a ≠9), this decreased the denominator to include residents who believed that alcohol during pregnancy could harm the unborn baby. **Statistically Significance:** These differences were not statistically significant.



# Drinking During Pregnancy: Baby Born with Permanent Brain Damage

## Rationale

### Why is this important?

If a woman drank alcohol during pregnancy, the baby could be born with a number of disabilities and birth defects including brain damage, vision and hearing difficulties, organ damage, learning difficulties, behaviour problems, and slow growth (Hamilton FASD Community Initiative, 2011). These disabilities do not go away. FASD is a lifelong problem (Hamilton FASD Community Initiative, 2011).

## Indicator

**Question:** (1) In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with permanent brain damage?

**Indicator Description:** % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with permanent brain damage.

**Indicator Objectives:** (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child.

## Summary

- Overall, 81.2% ( $\pm 3.0$ ) of adults thought that if a woman drank alcohol during pregnancy, that the baby could be born with permanent brain damage.

## Sex

- A higher percentage of females [82.3% ( $\pm 3.5$ )], thought that if a woman drank alcohol during pregnancy, that the baby could be born with permanent brain damage, compared to males [79.8% ( $\pm 4.6$ )]. However these differences were not statistically significant.



## Age Group

- The percentage of adults who thought that if a woman drank alcohol during pregnancy, that the baby could be born with permanent brain damage decreased with age.
- A statistical difference was observed:
  - A statistically significantly lower percentage of adults aged 65+ [68.5% ( $\pm 8.3$ )], thought if a woman drank alcohol during pregnancy, that the baby could be born with permanent brain damage, compared to adults 18-34 [89.1% ( $\pm 5.5$ )] and adults 35-64 years of age [82.8% ( $\pm 3.6$ )].

## Income

- The percentage of adults who thought that if a woman drank alcohol during pregnancy, that the baby could be born with permanent brain damage was lowest among household incomes of less than \$30,000 [75.7% ( $\pm 8.9$ )] compared

to higher income groups. However these differences were not statistically significant.

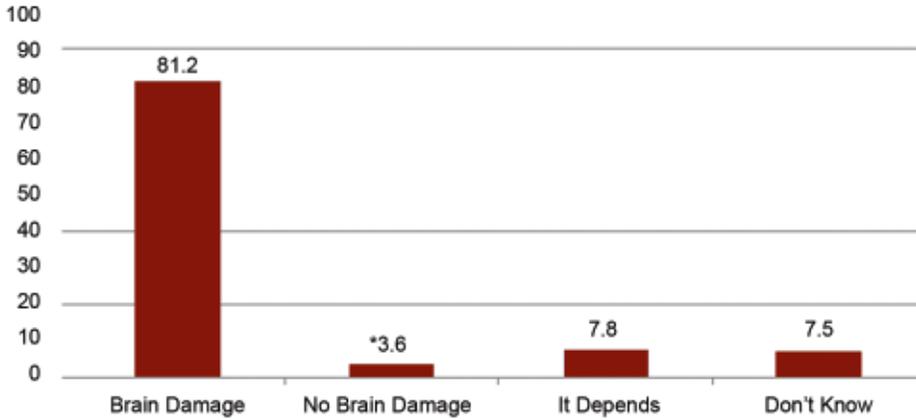
## Education

- The percentage of adults who thought that if a woman drank alcohol during pregnancy, that the baby could be born with permanent brain damage increased with education level.
- A statistical difference was observed:
  - A statistically significantly lower percentage of adults with less than high school education [63.5% ( $\pm 9.6$ )] thought if a woman drank alcohol during pregnancy, that the baby could be born with permanent brain damage, compared to adults with high school education or more [81.9% ( $\pm 4.6$ )] and adults with post-secondary education [86.5% ( $\pm 3.9$ )].

# Data

## Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Brain Damage

Figure 16: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Brain Damage, Haldimand and Norfolk Counties Combined, 2010

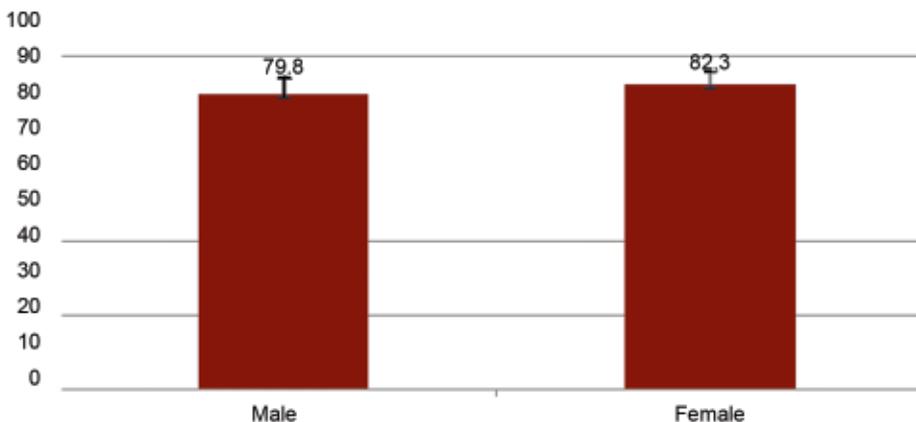


**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6. **Data notes:** **Question:** In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with permanent brain damage? **Indicator Description:** % of adults (18+) who believe that if a woman drank alcohol during pregnancy, her baby could be born with permanent brain damage. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hhuc6). Total weight population 664, as stated in the data dictionary. **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9).

	2010	Number (n)
Drinking During Pregnancy could cause the Baby to be Born with Permanent Brain Damage	81.2% (95%CI 78.2%-84.2%)	538
Drinking During Pregnancy could not cause the Baby to be Born with Permanent Brain Damage	*3.6% (95%CI 2.2%-5.0%)	24
It Depends	7.8% (95%CI 5.8%-9.8%)	52
Don't Know	7.5% (95%CI 5.5%-9.5%)	50
<b>Total</b>	<b>100%</b>	<b>664</b>

## Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Brain Damage, by Sex

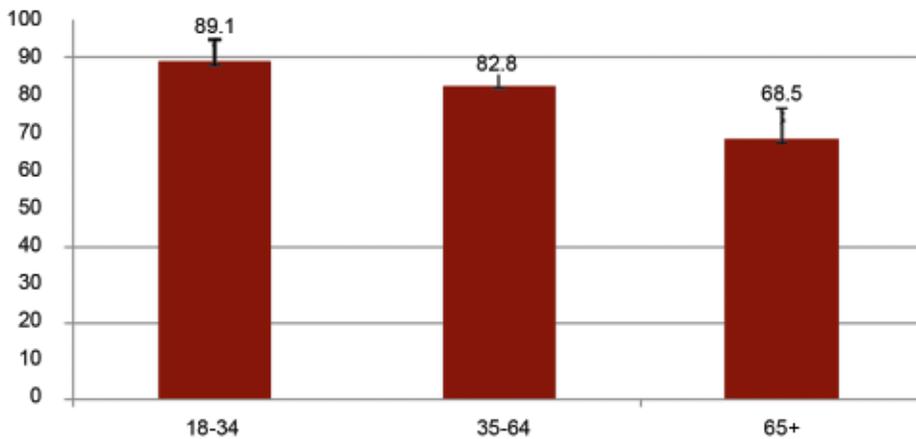
Figure 17: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Brain Damage, by Sex, Haldimand and Norfolk Counties Combined, 2010



**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6. **Data notes:** **Question:** In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with permanent brain damage? **Indicator Description:** % of adults (18+) who believe that if a woman drank alcohol during pregnancy, her baby could be born with permanent brain damage. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hhuc6). Total weight population for males (N=298) and females (N=366). **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). **Statistical Significance:** These differences were not statistically significant.

## Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Brain Damage, by Age

Figure 18: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Brain Damage, by Age, Haldimand and Norfolk Counties Combined, 2010

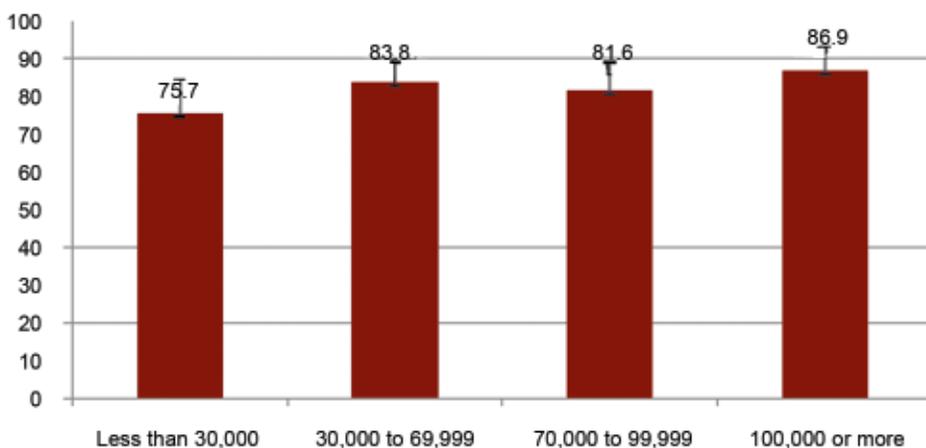


Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

Data notes: Question: In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with permanent brain damage? Indicator Description: % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with permanent brain damage. Indicator Objectives: To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child. Sampling Variability: \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. Household Weights: The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population for 18-34 (N=124); 35-64 (N=412); and 65 and over (N=121). Limitations: Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). Statistically Significance: However differences were only statistically significant between adults aged 65+ [68.5% (±8.3)] and 18-34 [89.1% (±5.5)] or 65+ [68.5% (±8.3)] and 35-64 [82.8% (±3.6)].

## Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Brain Damage, by Income

Figure 19: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Brain Damage, by Income, Haldimand and Norfolk Counties Combined, 2010

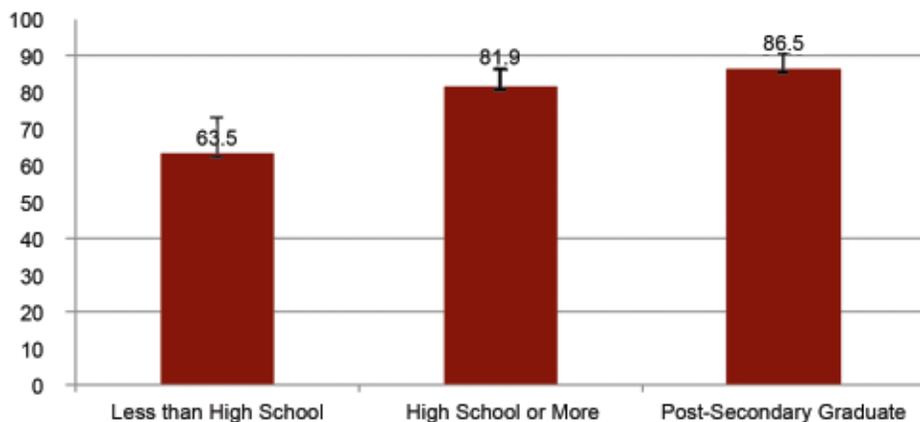


Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

Data notes: Question: In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with permanent brain damage? Indicator Description: % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with permanent brain damage. Indicator Objectives: To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child. Sampling Variability: \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. Household Weights: The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population for less than \$30,000 (N=89); \$30,000-\$69,999 (N=195); \$70,000-\$99,999 (N=104); and \$100,000 or more (N=111). Limitations: Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). Statistically Significance: These differences were not statistically significant.

## Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Brain Damage, by Education

Figure 20: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Brain Damage, by Education Level, Haldimand and Norfolk Counties Combined, 2010



**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

**Data notes:** **Question:** In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with permanent brain damage? **Indicator Description:** % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with permanent brain damage. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population for less than high school (N=95); High school or more (N=269); and Post-secondary graduate (N=294). **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 or fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). **Statistically Significance:** However these differences were only statistically significant between adults who have less than high school education [63.5% ( $\pm 9.6$ )] and high school education or more [81.9% ( $\pm 4.6$ )] or less than high school education [63.5% ( $\pm 9.6$ )] and post-secondary graduate [86.5% ( $\pm 3.9$ )].

# — Drinking During Pregnancy: Baby Born with Permanent Birth Defects/Deformities

## — Rationale

### Why is this important?

If a woman drank alcohol during pregnancy, the baby could be born with a number of disabilities and birth defects including brain damage, vision and hearing difficulties, organ damage, learning difficulties, behaviour problems, and slow growth (Hamilton FASD Community Initiative, 2011). These disabilities don't go away. FASD is a lifelong problem (Hamilton FASD Community Initiative, 2011).

## — Indicator

**Question:** (1) In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with permanent birth defects and deformities?

**Indicator Description:** % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with permanent birth defects and deformities.

**Indicator Objectives:** (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child.

## — Summary

- Overall, 78.4% ( $\pm 3.1$ ) of adults over thought that if a woman drank alcohol during pregnancy, that the baby could be born with permanent birth defects or deformities.

### Sex

- A slightly higher percentage of females [78.9% ( $\pm 3.5$ )], thought that if a woman drank alcohol during pregnancy, that the baby could be born with permanent birth defects or deformities, compared to males [77.7% ( $\pm 4.7$ )]. However these differences were not statistically significantly different.



### Age Group

- The percentage of adults who thought that if a woman drank alcohol during pregnancy, that the baby could be born with permanent birth defects or deformities decreased with age.
- A statistical difference was observed:
  - A statistically significantly lower percentage of adults aged 65+ [61.8% ( $\pm 8.7$ )], thought if a woman drank alcohol during pregnancy, that the baby could be born with permanent birth defects or deformities, compared to adults 18-34 [88.7% ( $\pm 5.6$ )] and adults 35-64 years of age [80.4% ( $\pm 3.8$ )].

### Income

- The percentage of adults who thought that if a woman drank alcohol during pregnancy, that the baby could be born with permanent birth defects or deformities was highest among household of \$100,000 or more [87.4% ( $\pm 6.2$ )]

compared to lower income groups. However these differences were not statistically significantly different.

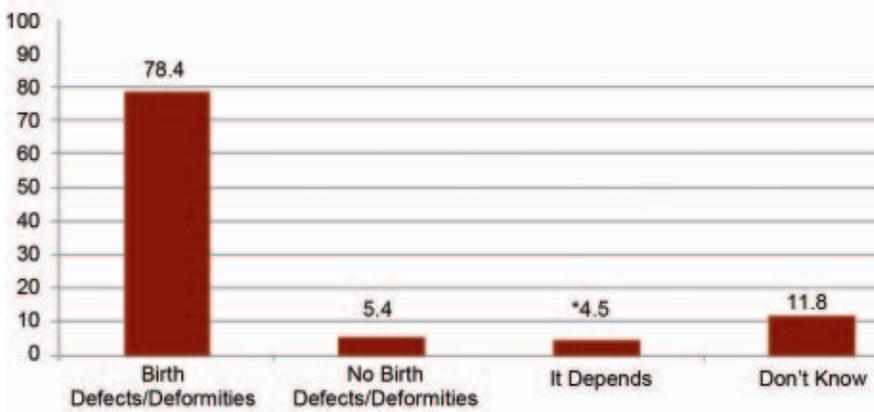
### Education

- The percentage of adults who thought that if a woman drank alcohol during pregnancy, that the baby could be born with permanent birth defects or deformities increased with education level.
- A statistical difference was observed:
  - A statistically significantly lower percentage of adults with less than high school education [59.9% ( $\pm 9.8$ )] thought that if a woman drank alcohol during pregnancy, that the baby could be born with permanent birth defects or deformities compared to adults with high school education or more [77.4% ( $\pm 5.0$ )] and post-secondary graduate [85.5% ( $\pm 4.0$ )].

# Data

## Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Birth Defects or Deformities

Figure 21: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Birth Defects or Deformities, Haldimand and Norfolk Counties Combined, 2010

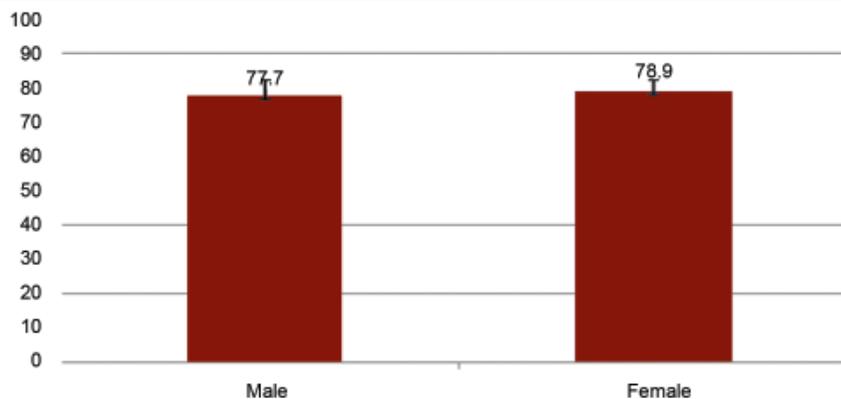


**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.  
**Data notes:** **Question:** In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with permanent birth defects or deformities?  
**Indicator Description:** % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with permanent birth defects or deformities. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hhuc6). Total weight population 664. **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9).

	2010	Number (n)
Drinking During Pregnancy could cause the Baby to be Born with Permanent Birth Defects/Deformities	78.4% (95%CI 75.3%-81.5%)	520
Drinking During Pregnancy could not cause the Baby to be Born with Permanent Birth Defects/Deformities	5.4% (95%CI 3.7%-7.1%)	36
It Depends	*4.5% (95%CI 2.9%-6.1%)	30
Don't Know	11.8% (95%CI 9.3%-14.3%)	78
<b>Total</b>	<b>100%</b>	<b>664</b>

## Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Birth Defects or Deformities, by Sex

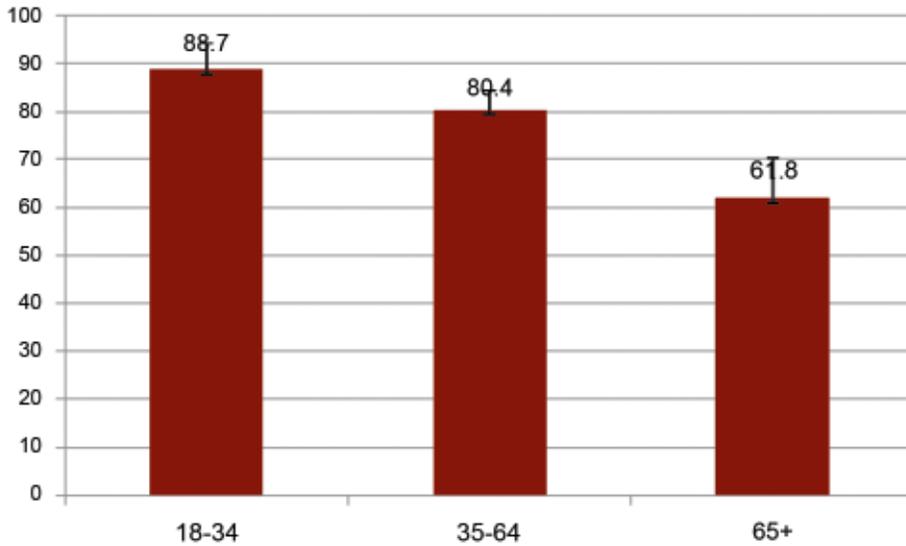
Figure 22: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Birth Defects or Deformities, by Sex, Haldimand and Norfolk Counties Combined, 2010



**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.  
**Data notes:** **Question:** In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with permanent birth defects or deformities?  
**Indicator Description:** % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with permanent birth defects or deformities. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hhuc6). Total weight population for males (N=298) and females (N=366). **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). **Statistically Significance:** These differences were not statistically significant.

## Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Birth Defects or Deformities, by Age

**Figure 23: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Birth Defects or Deformities, by Age Group, Haldimand and Norfolk Counties Combined, 2010**

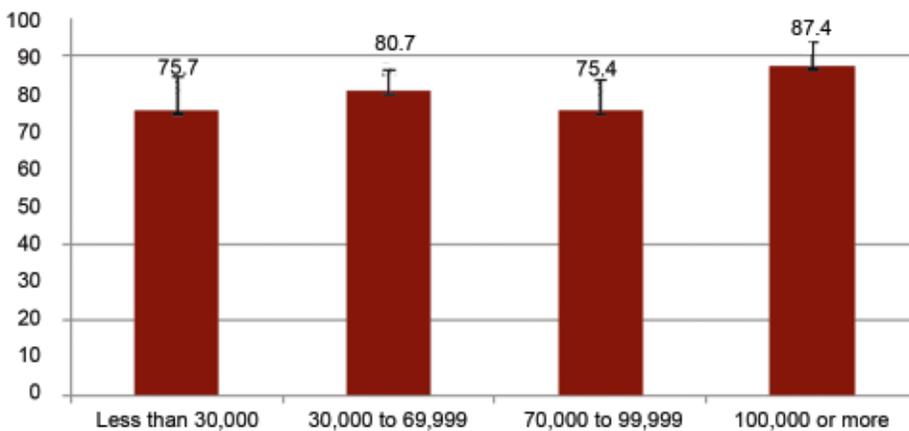


*Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.*

*Data notes: Question: In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with permanent birth defects or deformities? Indicator Description: % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with permanent birth defects or deformities. Indicator Objectives: To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child Sampling Variability: \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. Household Weights: The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population for 18-34 (N=124); 35-64 (N=412); and 65 and over (N=121). Total weight population 657, as stated in the data dictionary. Limitations: Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). Statistically Significance: However differences were only statistically significant between adults aged 65+ [61.8% (±8.7)] and 18-34 [88.7% (±5.6)] or 65+ [61.8% (±8.7)] and 35-64 [80.4% (±3.8)].*

## Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Birth Defects or Deformities, by Income

**Figure 24: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Birth Defects or Deformities, by Income, Haldimand and Norfolk Counties Combined, 2010**

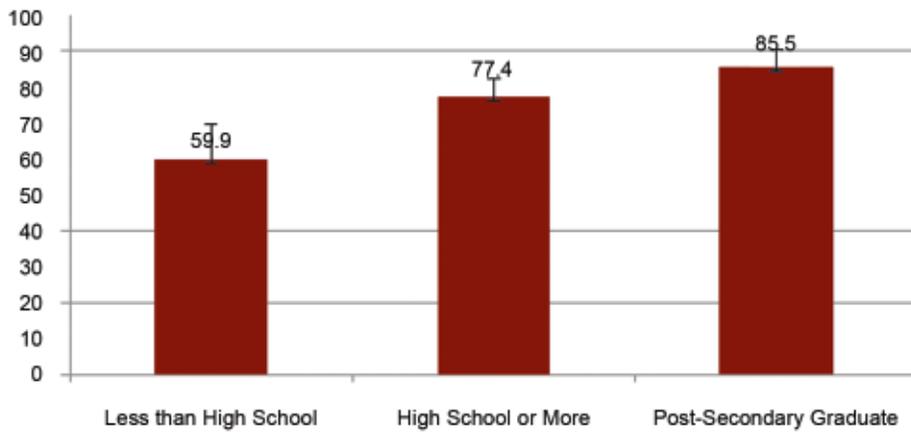


*Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.*

*Data notes: Question: In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with permanent birth defects or deformities? Indicator Description: % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with permanent birth defects or deformities. Indicator Objectives: To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child Sampling Variability: \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. Household Weights: The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hbuc6). Total weight population for less than \$30,000 (N=89); \$30,000-\$69,999 (N=195); \$70,000-\$99,999 (N=104); and \$100,000 or more (N=111). Limitations: Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 of fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). Statistically Significance: These differences were not statistically significant.*

## Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Birth Defects or Deformities, by Education

Figure 25: Percent of Adults (18+) Who Believe that Drinking During Pregnancy Could Cause the Baby to be Born with Permanent Birth Defects or Deformities, by Education Level, Haldimand and Norfolk Counties Combined, 2010



**Data Source:** Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

**Data notes:** **Question:** In your opinion, if a woman drank alcohol during pregnancy, could the baby be born with permanent birth defects or deformities? **Indicator Description:** % of adults (18+) who believe that if a woman drank during pregnancy, her baby could be born with permanent birth defects or deformities. **Indicator Objectives:** To reduce disability, morbidity and mortality caused by alcohol. To assess the public's knowledge of the potential effects of drinking alcohol during pregnancy on an unborn child **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hhuc6). Total weight population for less than high school (N=96); High school or more (N=269); and Post-secondary graduate (N=294). **Limitations:** Asked only of respondents who believed that alcohol during pregnancy could harm the unborn baby (fas\_1=1 or fas\_1=7) and (fas\_2=1 or fas\_2=2 or fas\_2=3 or fas\_2=4 or fas\_2=8 or fas\_2=9). **Statistically Significance:** However these differences were only statistically significant between adults who have less than high school education [59.9% (±9.8)] and high school education or more [77.4% (±5.0)] or high school education [59.9% (±9.8)] and post-secondary graduate [85.5% (±4.0)].

## — Discussed Effect of Alcohol on Unborn Baby With Healthcare Provider

### — Rationale

#### Why is this important?

The results could provide insight into whether health professionals are screening for alcohol use during pregnancy and providing the message about the harmful effects of alcohol use during pregnancy.

### — Indicator

**Question:** (1) Has a doctor, nurse, midwife, social worker, counsellor, or other health professional ever discussed the effects of alcohol on an unborn child with you?

**Indicator Description:** % of adults (18+) who report having discussed the effects of alcohol on an unborn child with health professionals.

**Indicator Objectives:** (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assess the prevalence of a strategy (discussing the effects of alcohol with a health professional) to reduce the risk of drinking alcohol during pregnancy.

### — Summary

- In 2010, [51.1% ( $\pm 7.8$ )] females of reproductive years (18-49) report having discussed the effects of alcohol on an unborn child with health professionals.

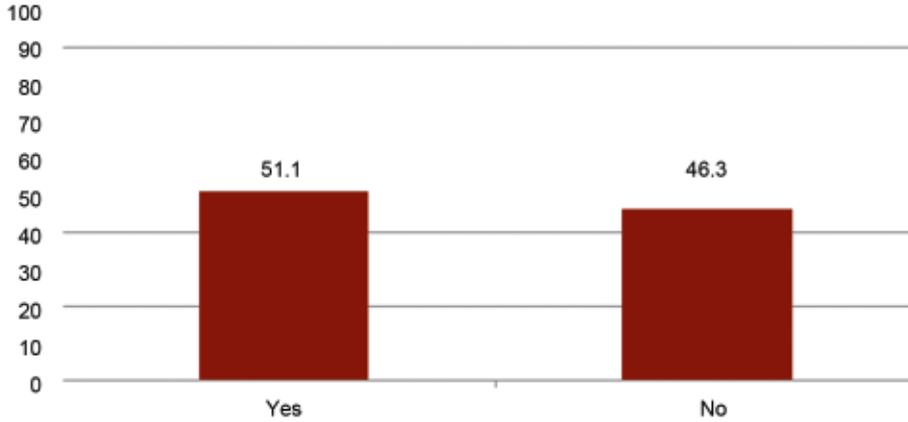
#### Age Group

- the percentage of females of reproductive years (18-49), who report having discussed the effects of alcohol on an unborn child with health professionals was lowest among older females age 35-49 [46.5% ( $\pm 10.1$ )] compared to younger age groups. However these differences were not statistically significant.



## Discussed Effect of Alcohol on the Unborn Baby with Healthcare Provider

**Figure 26: Discussed Effect of Alcohol on the Unborn Baby with Healthcare Provider, Females of Reproductive Years (18-49), Haldimand and Norfolk Counties Combined, 2010**



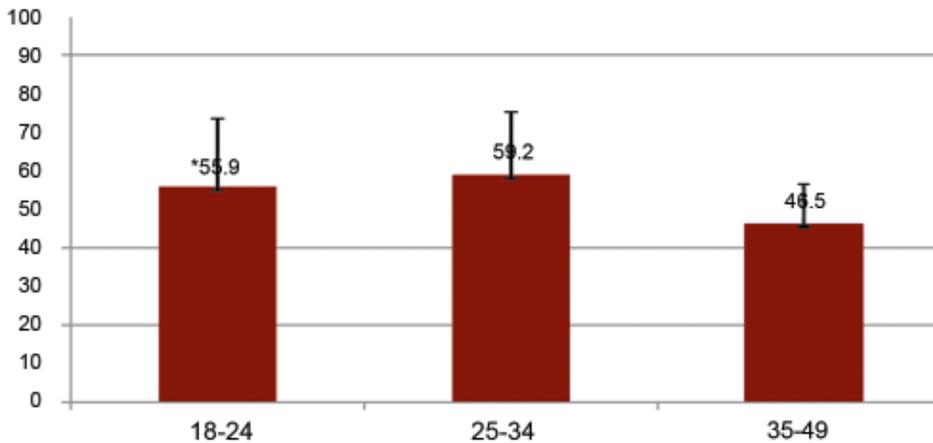
	2010	Number (n)
Yes	51.1% (95%CI 43.3%-58.9%)	81
No	46.3% (95%CI 38.5%-54.1%)	73
Don't Know	**	**
Total	NC	NC

*Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.*

**Data notes:** **Question:** Has a doctor, nurse, midwife, social worker, counsellor, or other health professional ever discussed the effects of alcohol on an unborn child with you? **Indicator Description:** % of adults (18+) who report having discussed the effects of alcohol on an unborn child with health professionals. **Indicator Objectives:** (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assess the prevalence of a strategy (discussing the effects of alcohol with a health professional) to reduce the risk of drinking alcohol during pregnancy. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (bhuc6). Total weight population 158. **NC:** Not able to compute.

## Discussed Effect of Alcohol on the Unborn Baby with Healthcare Provider, by Age Group

**Figure 27: Discussed Effect of Alcohol on the Unborn Baby with Healthcare Provider, Females of Reproductive Years (18-49), by Age Group, Haldimand and Norfolk Counties Combined, 2010**



*Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.*

**Data notes:** **Question:** Has a doctor, nurse, midwife, social worker, counsellor, or other health professional ever discussed the effects of alcohol on an unborn child with you? **Indicator Description:** % of adults (18+) who report having discussed the effects of alcohol on an unborn child with health professionals.

**Indicator Objectives:** (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assess the prevalence of a strategy (discussing the effects of alcohol with a health professional) to reduce the risk of drinking alcohol during pregnancy. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (bhuc6). Total weight population for 18-24 (N=30); 25-34 (N=36); and 35-49 (N=93). **Statistically Significance:** These differences were not statistically significant.

# Message from HealthCare Providers: Do Not Drink During Pregnancy

## Rationale

### Why is this important?

Universal screening for alcohol consumption should be done periodically for all pregnant women and women of child-bearing age. Ideally, at risk drinking could be identified before pregnancy (SOGC, 2010).

The results will provide the following information:

- If health professionals are screening all pregnant women and women of child-bearing age about alcohol use during pregnancy;
- If health professionals are providing standard and consistent messaging regarding alcohol use during pregnancy; and
- If health professionals require more education and training.

## Indicator

**Question:** (1) I am going to read you a list of things that the health professional might have said. Please tell me which of the following four statements best describes what the health professional said to you?

1. For a pregnant woman to have 1 to 2 drinks over the course of a month is fine
2. A woman should reduce the amount of alcohol consumed when pregnant
3. A woman should not drink any alcohol at all when pregnant
4. A pregnant woman who does not drink alcohol should continue not drinking

**Indicator Description:** % of adults (18+) who recall being told by a healthcare provider that a woman should not drink any alcohol during pregnancy.



**Indicator Objectives:** (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assess the prevalence of a specific risk reduction message: women should not drink any alcohol during pregnancy.

## Summary

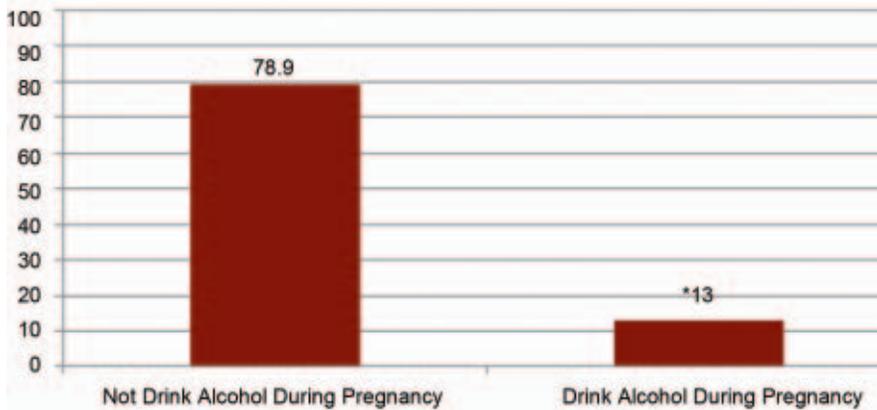
- Overall, [78.9% ( $\pm 8.9$ )] of Haldimand and Norfolk females of reproductive years (18-49) report having discussed with a Health Care Provider that a woman should not drink alcohol during pregnancy. On the other hand, 13% ( $\pm 7.3$ ) of women of reproductive years (18-49) reported being told by a healthcare provider that a pregnant woman can have 1 to 2 drinks of alcohol over a course of a month or that a female should reduce the amount of alcohol consumed.

## Age Group

- The percentage of females of reproductive years (18-49), who report having been told by health professionals that a woman should not drink any alcohol during pregnancy decreased with age. However these differences were not statistically significantly different.

**Message from Health Care Provider: Do Not Drink During Pregnancy**

**Figure 28: Message from Health Care Provider: Do Not Drink During Pregnancy, Females of Reproductive Years (18-49), Haldimand and Norfolk Counties Combined, 2010**

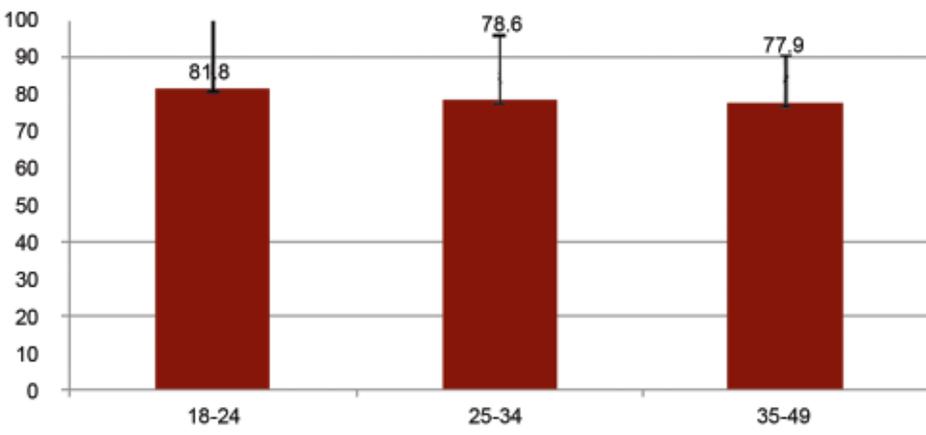


*Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.*  
*Data notes: Question: I am going to read you a list of things that the health professional might have said. Please tell me which of the following four statements best describes what the health professional said to you? (see question above for more details). Indicator Description: % of adults (18+) who recall being told by a healthcare provider that a woman should not drink any alcohol during pregnancy. Indicator Objectives: (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assess the prevalence of a specific risk reduction message: women should not drink any alcohol during pregnancy. Sampling Variability: \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. NC: Not able to compute. Household Weights: The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (bbuc6). Total weight population 81. Limitations: Asked only of respondents who have discussed the effects of alcohol on an unborn child (fas\_4a=1).*

	2010	Number (n)
For a pregnant woman to have 1 to 2 drinks over the course of a month is fine (drink alcohol)	*11.2% (95%CI 4.3%-18.1%)	9
A woman should reduce the amount of alcohol consumed when pregnant (drink alcohol)	**	**
A woman should not drink any alcohol at all when pregnant (no alcohol)	68.3% (95%CI 58.2%-78.4%)	55
A pregnant woman who does not drink alcohol should continue not drinking (no alcohol)	*10.6% (95%CI 3.9%-17.3%)	9
Don't Know	**	**
<b>Total</b>	<b>NC</b>	<b>81</b>

**Message from Health Care Provider: Do Not Drink During Pregnancy, by Age**

**Figure 29: Message from Health Care Provider: Do Not Drink During Pregnancy, Females of Reproductive Years (18-49), by Age Group, Haldimand and Norfolk Counties Combined, 2010**



*Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.*  
*Data notes: Question: I am going to read you a list of things that the health professional might have said. Please tell me which of the following four statements best describes what the health professional said to you? (see question above for more details). Indicator Description: % of adults (18+) who recall being told by a healthcare provider that a woman should not drink any alcohol during pregnancy. Indicator Objectives: (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assess the prevalence of a specific risk reduction message: women should not drink any alcohol during pregnancy. Sampling Variability: \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. NC: Not able to compute. Household Weights: The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (bbuc6). Total weight population for 18-24 (N=17); 25-34 (N=21); and 35-39 (N=43). Total weight population 81. Limitations: Asked only of respondents who have discussed the effects of alcohol on an unborn child (fas\_4a=1). Statistically Significance: These differences were not statistically significant.*

# — Messaging About the Effects on Unborn Babies: Preferred Method

## — Rationale

### Why is this important?

The results will show the most effective way for health units to get the message out to the public about the effects of alcohol on an unborn baby.

## — Indicator

**Indicator Eight:** Messaging About the Effects on Unborn Babies: Preferred Method

**Question:** (1) If you wanted to get information on the effects of alcohol on an unborn baby, how could your local health department get this information to you?

**Indicator Description:** % of adults (18+) by preferred method of obtaining information on the effects of alcohol on an unborn baby.

**Indicator Objectives:** (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assist in program planning by assessing the preferred method of obtaining the information on the effects of alcohol on an unborn baby.

## — Summary

- A greater percentage of adults preferred to receive information by:
  - mail [38.9% ( $\pm 3.6$ )];
  - internet/health department website [24.1% ( $\pm 3.1$ )];
  - and other methods not listed [23.8% ( $\pm 3.1$ )].
- A lower percentage of adults preferred to receive information by:
  - pamphlets/brochures/flyers [18.1% ( $\pm 2.8$ )];
  - telephone information help line [8.2% ( $\pm 2.0$ )];
  - or prenatal classes/information sessions [3.0% ( $\pm 1.2$ )].

### Age Group (18-49)

- A greater percentage of females of reproductive years (18-49), preferred to



receive information by:

- mail [33.8% ( $\pm 7.4$ )];
- internet/health department website [31.2% ( $\pm 7.2$ )];
- and other methods not listed [30.2% ( $\pm 7.2$ )].

- A greater percentage of females 18-34, preferred to receive information by other methods not listed [ $*36.8\%(\pm 11.7)$ ];
- A greater percentage of females aged 35-49 preferred to receive information by internet/website [31.7% ( $\pm 9.5$ )].
- However, there was no statistically significant differences found for the preferred method of communication, by age group.

### Education

- A greater percentage of females 18-49, with high school education or more preferred to receive information by mail [42.2% ( $\pm 12.8$ )], compared to other communication methods.
- A greater percentage of females with post-secondary education reported that they would prefer to receive information by other methods not listed [31.7%

( $\pm 9.1$ )] or by the internet/health department website [31.7% ( $\pm 9.1$ )].

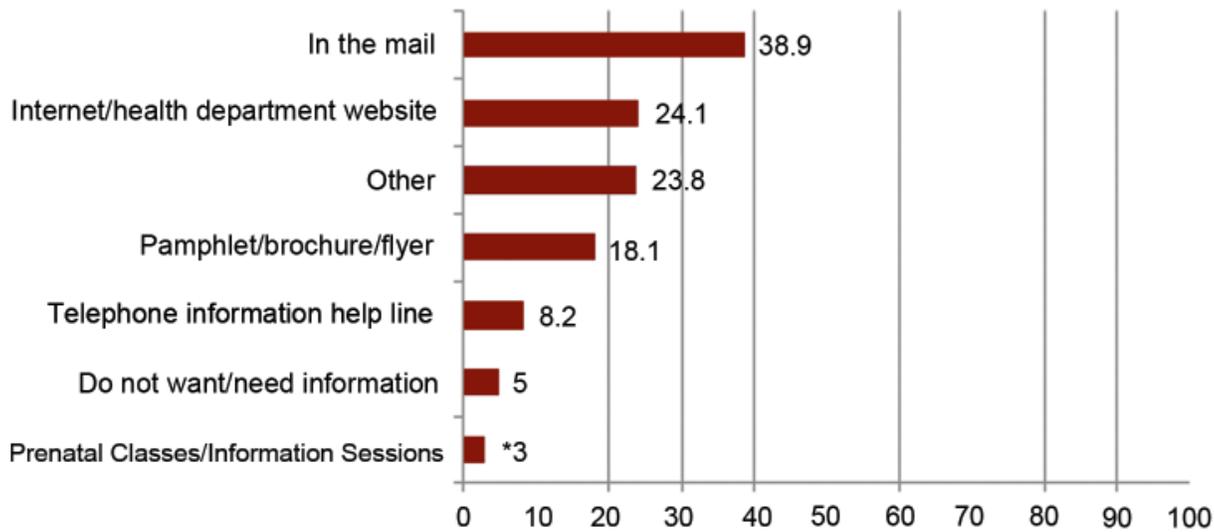
- However, there were no statistically significant differences found for the preferred method of communication, by education level.

### Income

- By household income level, a greater percentage of females 18-49 preferred method of communication is as follows:
  - Less than \$40,000 reported was by mail [ $*37.5\%(\pm 17.6)$ ];
  - \$40,000-\$69,000 was also by mail [ $*37.9\%(\pm 16.6)$ ];
  - \$70,000-\$99,000 was by the internet/health unit website [ $*38.7\%(\pm 17.1)$ ] and other methods not listed on the survey [ $*38.7\%(\pm 17.1)$ ]; and
  - \$100,000 or more was other methods not listed on the survey [38.5% ( $\pm 16.6$ )].
- However, there were no statistically significant differences found for the preferred method of communication, by income level.

## Preferred Method of Messaging About Alcohol Effects on Unborn Babies

**Figure 30: Percent of Adults (18+) who Report Preferred Method of Messaging About Alcohol Effects on Unborn Babies, Haldimand and Norfolk Counties Combined, 2010**



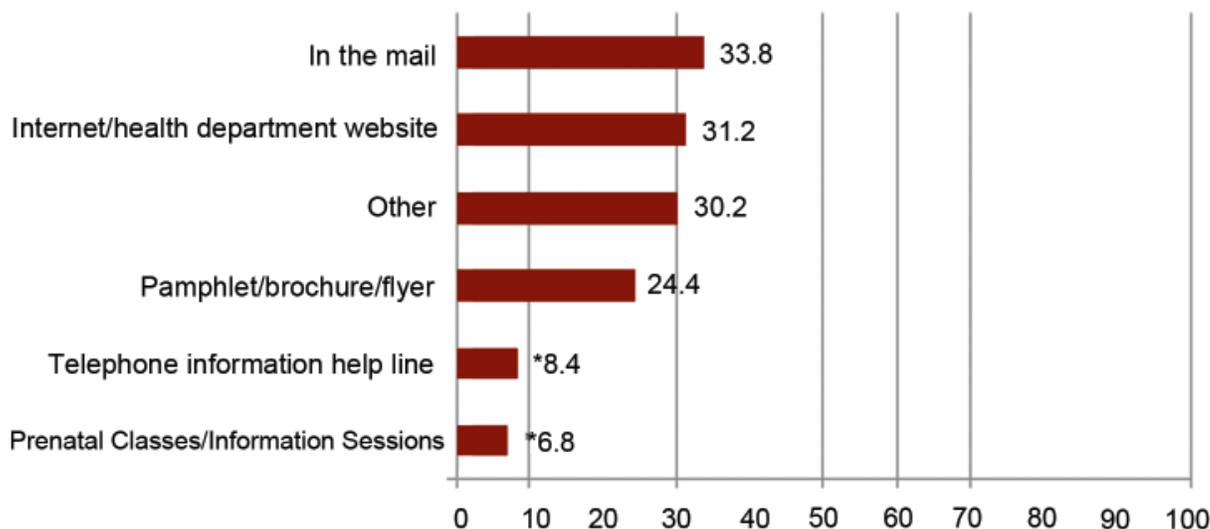
	2010	Number (n)
In the mail	38.9% (95%CI 35.3%-42.5%)	259
Internet/health department website	24.1% (95%CI 21.0%-27.2%)	161
Other	23.8% (95%CI 20.7%-26.9%)	159
Pamphlet/brochure/flyer	18.1% (95%CI 15.3%-20.9%)	121
Telephone information help line	8.2% (95%CI 6.2%-10.2%)	55
Do not want/need information	5.0% (95%CI 3.4%-6.6%)	36
Prenatal Classes/information session	*3.0% (95%CI 1.8%-4.2%)	20

*Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.*

*Data notes: Question: If you wanted to get information on the effects of alcohol on an unborn baby, how could your local health department get this information to you? Indicator Description: % of adults (18+) by preferred method of obtaining information on the effects of alcohol on an unborn baby. Indicator Objectives: (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assist in program planning by assessing the preferred method of obtaining the information on the effects of alcohol on an unborn baby. Sampling Variability: \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. NC: Not able to compute. Household Weights: The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (bbuc6). Total weight population 720. Multiple Responses: Can have multiple responses, therefore percentages do not add up to 100%. Included Refuse for variable "Do not want/need information". Refuse was not reported for other variables.*

## Preferred Method of Messaging About Alcohol Effects on Unborn Babies, 18-49

Figure 31: Preferred Method of Messaging about Alcohol Effects on Unborn Babies, Females of Reproductive Years (18-49), Haldimand and Norfolk Counties Combined, 2010



Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

Data notes: **Question:** If you wanted to get information on the effects of alcohol on an unborn baby, how could your local health department get this information to you? **Indicator Description:** % of adults (18+) by preferred method of obtaining information on the effects of alcohol on an unborn baby. **Indicator Objectives:** (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assist in program planning by assessing the preferred method of obtaining the information on the effects of alcohol on an unborn baby. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **NC:** Not able to compute. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hhuc6). Total weight population 158. **Multiple Responses:** Can have multiple responses, therefore percentages do not add up to 100%.

Table 2: Preferred Method of Messaging about Alcohol Effects on Unborn Babies, Females of Reproductive Years (18-49), Haldimand and Norfolk Counties Combined, 2010

		In the Mail	Internet/Health Department Website	Other	Pamphlet/Brochure/Flyer	Telephone Information Help Line	Prenatal Classes/Information Sessions
<b>Age Group</b>	18-34	*29.6% (±11.1)	*30.4% (±11.2)	*36.8% (±11.7)	*22.4% (±10.1)	**	**
	35-49	36.6% (±9.8)	31.7% (±9.5)	25.7% (±16.8)	*25.7% (±8.9)	*9.8% (±6.0)	**
<b>Education Level</b>	Less than High School or High School Education or More	42.2% (±12.8)	*30.3% (±11.9)	*27.5% (±11.6)	*22.9% (±10.9)	**	**
	Post Secondary Graduate	29.1% (±8.9)	31.7% (±9.1)	31.7% (±9.1)	*25.1% (±8.5)	*10.1% (±5.9)	*9.0% (±5.6)
<b>Income Level</b>	Less than \$40,000	*37.5% (±17.6)	**	**	**	**	**
	\$40,000-\$69,000	*37.9% (±16.6)	*28.8% (±15.5)	*36.4% (±16.4)	*33.3% (±16.1)	**	**
	\$70,000-\$99,000	*27.4% (±15.7)	*38.7% (±17.1)	*38.7% (±17.1)	**	**	**
	\$100,000 or more	*29.2% (±15.5)	*36.9% (±16.5)	*38.5% (±16.6)	**	**	**

Data Source: Rapid Risk Factor Surveillance System (RRFSS), Cycle 6.

Data notes: **Question:** If you wanted to get information on the effects of alcohol on an unborn baby, how could your local health department get this information to you? **Indicator Description:** % of adults (18+) by preferred method of obtaining information on the effects of alcohol on an unborn baby. **Indicator Objectives:** (1) To reduce disability, morbidity and mortality caused by alcohol. (2) To assist in program planning by assessing the preferred method of obtaining the information on the effects of alcohol on an unborn baby. **Sampling Variability:** \* High sampling variability, interpret with caution. \*\* High sampling variability data is not releasable. **NC:** Not able to compute. **Household Weights:** The sample was weighed to reflect household size of the respondents, not the population from which the sample was drawn (hhuc6). **Multiple Responses:** Can have multiple responses, therefore percentages do not add up to 100%. **Statistically Significance:** These differences were not statistically significant.

## Highlights

### Perceived Risk of Drinking During Pregnancy

- 83.9% ( $\pm 2.7$ ) of adults (18+) believe that drinking alcohol during pregnancy is harmful to an unborn baby.
- 78.3% ( $\pm 3.1$ ) of adults (18+) believe that drinking alcohol during pregnancy is most harmful to an unborn baby throughout the pregnancy.
- Position that there is a risk of drinking during pregnancy was most commonly held among females compared to males; younger adults (18-34) compared to older adults; and adults with higher education compared to adults with lower education. The perceived risk of drinking during pregnancy decreased with age.
- There is no observed pattern for income.
- There was no statistically significant differences between perceived risk of drinking during pregnancy, by sex, education and income levels.
- There was some statistically significant differences between perceived risk of drinking during pregnancy by age group (see summary table, page 32).

### Public's Knowledge of the Potential Effects of Drinking During Pregnancy

- A higher percentage of adults (18+) believe that if a woman drank alcohol during pregnancy, her baby could be born with permanent brain damage 81.2% ( $\pm 3.0$ ) compared to a baby being born with permanent brain defects/deformities (78.4% ( $\pm 3.1$ )) and alcohol in its system (71.3% ( $\pm 3.4$ )).
- Position that there are potential effects of drinking alcohol during pregnancy of an unborn child was most commonly held among females compared to males; and adults with higher education compared to adults with lower education.
- There is no observed pattern for income.
- There were no statistically significant differences between the public's knowledge of the potential effects of drinking during pregnancy by income level.
- There were some statistically significant differences between the public's knowledge of the potential effects of drinking during pregnancy by age group and education level (see summary table, page 32).

### Prevalence of Specific Risk Reduction Strategies

- 51.1% ( $\pm 7.8$ ) of females of reproductive years (18-49) report discussing the effects of alcohol on an unborn child with health professionals. Of that percentage, 78.9% ( $\pm 8.9$ ) recall being told by a healthcare provider that a woman should not drink any alcohol during pregnancy.
- The percent of adults of reproductive years (18-49) who report having discussed the effects of alcohol on an unborn child with health professionals and recall being told by a healthcare provider that a woman should not drink any alcohol during pregnancy was higher among adults age 18-34, compared to older adults 35-49.
- The preferred method of obtaining information on the effects of alcohol on an unborn baby:
  - Among females (18+) of reproductive years (18-49) was by mail;
  - females 18-34 was other methods not listed on the survey;
  - 35-49 was internet/health department website;
  - low education and low income was mail; and
  - high education and high income was internet/health department website and other methods not listed on the survey.
- No statistical significance differences between risk reduction strategies by age group and income levels.

**Table 3: Fetal Alcohol Syndrome Summary Table, Haldimand and Norfolk Counties Combined, 2010**

Indicator	Data	Sex	Age	Education	Household Income
<b>Perceived Risk of Drinking During Pregnancy</b>					
% of adults (18+) who believe that drinking alcohol during pregnancy is harmful to an unborn baby	83.9% (±2.7)	Position was more commonly held among females than males	Position was more commonly held among younger adults (18-34) than older respondents.  % of adults who believe that drinking alcohol during pregnancy is harmful to an unborn baby decreased with age.  *Only statistically significant among adults age 18-34 compared to 65 years of age and older	Position was more commonly held among adults with high school education or more or post secondary graduate than among adults with less than high school education.	Position was more commonly held among adults with a household income of \$30,000 or higher, compared to household incomes less than \$30,000.
% of adults (18+) who believe that drinking alcohol during pregnancy is most harmful to an unborn baby throughout the pregnancy	78.3% (±3.1)  However, 14.4% (±2.7) reported that drinking only during the beginning of pregnancy was harmful to an unborn baby.	Position was more commonly held among females than males. However, these differences were very small.	Position was more commonly held among younger adults (18-34) than older respondents.  % of adults who believe that drinking alcohol during pregnancy is most harmful to an unborn baby throughout the pregnancy decreased with age.	Position was more commonly held among adults with high school education or more or post secondary graduate than among adults with less than high school education.	Position was more commonly held among adults with household incomes \$30,000 to \$69,000 and less than \$30,000 compared to households with higher incomes (\$70,000 +). However, there is no observed linear pattern.
<b>Public's Knowledge of the Perceived Risk of Drinking During Pregnancy</b>					
% of adults (18+) who believe that if a woman drank alcohol during pregnancy, her baby could be born with alcohol in its system	71.3% (±3.4)	Position was more commonly held among females than males.	Position was more commonly held among adults 35-64, and 65 years of age and older compared to younger age groups (18-34) However, there is no observed linear pattern.	Position was more commonly held among adults with high school education or more compared to other education levels. There is no observed linear pattern.	Position was more commonly held among adults with lower household incomes (0-\$69,999) compared to households with higher incomes (\$70,000 +). However, there is no observed linear pattern.
% of adults (18+) who believe that if a woman drank alcohol during pregnancy, her baby could be born with permanent brain damage	81.2% (±3.0)	Position was more commonly held among females than males.	Position was more commonly held among younger adults (18-34) than older respondents.  % of adults (18+) who believe that if a woman drank alcohol during pregnancy, her baby could be born with permanent brain defects/ deformities decreased with age.  *Only statistically significant among adults age 65 and over compared to 18-34 or 35 to 64.	Position was more commonly held among adults with post secondary graduate and high school education or more, compared to less than high school education.  % of adults (18+) who believe that if a woman drank alcohol during pregnancy, her baby could be born with permanent brain defects/deformities increased with education.  *Only statistically significant among adults with less than high school education and high school or more or post secondary graduate.	Position was more commonly held among adults with household incomes of \$100,000 or more, \$30-\$69,000 and \$70-\$99,000 compared to lower income groups (less than \$30,000) However, there is no observed linear pattern.

Indicator	Data	Sex	Age	Education	Household Income
% of adults (18+) who believe that if a woman drank alcohol during pregnancy, her baby could be born with permanent brain defects/ deformities	78.4% ( $\pm 3.1$ )	Position was more commonly held among females than males. However, these differences were very small.	Position was more commonly held among younger adults (18-34) than older respondents.  % of adults (18+) who believe that if a woman drank alcohol during pregnancy, her baby could be born with permanent brain defects/deformities decreased with age  *Only statistically significant among adults age 65 and over compared to 18-34 or 35 to 64.	Position was more commonly held among adults with post secondary graduate and high school education or more, compared to less than high school education.  % of adults (18+) who believe that if a woman drank alcohol during pregnancy, her baby could be born with permanent brain defects/deformities increased with education.	Position was more commonly held among adults with household incomes of \$100,000 or more compared to other income groups.

### Prevalence of Specific Risk Reduction Strategies

% of females of reproductive years (18-49) who report having discussed the effects of alcohol on an unborn child with health professionals	51.1% ( $\pm 7.8$ )	NA	Position was more commonly held among adults (25-34) than other age groups. However, there is no observed linear pattern.	NA	NA
% of females of reproductive years (18-49) who report having discussed the effects of alcohol on an unborn child with health professionals recall being told by a healthcare provider that a women should not drink any alcohol during pregnancy	78.9% ( $\pm 8.9$ )	NA	Position was more commonly held among younger adults (18-24) than other age groups.  % of females of reproductive years (18-49) who report having discussed the effects of alcohol on an unborn child with health professionals recall being told by a healthcare provider that a women should not drink any alcohol during pregnancy decreased with age.	NA	NA
% of adults (18+) by preferred method of obtaining information on the effects of alcohol on an unborn baby	The preferred method is mail (38.9% $\pm 3.6$ )	NA	NA	NA	NA
% of females of reproductive years (18-49) by preferred method of obtaining information on the effects of alcohol on an unborn baby	The preferred method is mail (33.8% $\pm 7.4$ )	NA	Preferred method among females 18-34 was other methods not listed on the survey.  Preferred method among females 35-49 was internet/health department website.	Preferred method for females with lower education (less than high school or high school education or more) was mail  Preferred method for females with higher education (post-secondary graduate) was internet/health department website and other methods not listed on the survey	Preferred method for females with household incomes (\$0-\$69,000) was mail.  Preferred method for females with higher household incomes was the internet/health unit website and other methods not listed on the survey.

Data Notes: NA: Non-Applicable

## FASD Services and Supports

- **Fetal Alcohol Spectrum Disorder (FASD) Caregiver Support Group**

This group provides a safe environment for families or caregivers of individuals with FASD to discuss experiences; develop skills to manage their needs, support other community members, and share resources. For information call Michelle Wingrove at 519-587-2441 Ext. 285. The group meets the first Tuesday of the month from 7 to 9 p.m. at Haldimand-Norfolk Reach, 101 Nanticoke Creek Parkway, Townsend.

- Motherisk  
1-877-FAS-INFO  
(1-877-327-4636) or  
[www.motherisk.org/women/index.jsp](http://www.motherisk.org/women/index.jsp)
- CAMHS, Starting Point Program  
at 1-877-909-4357 or  
[www.camhs.ca/addiction.html](http://www.camhs.ca/addiction.html)
- Best Start at 1-800-397-9567 or  
[www.beststart.org/](http://www.beststart.org/)
- Telehealth Ontario at  
1-866-797-0000 or  
[www.health.gov.on.ca/en/public/programs/telehealth/](http://www.health.gov.on.ca/en/public/programs/telehealth/)
- Haldimand-Norfolk Health Unit  
[info@hnhu.org](mailto:info@hnhu.org)  
519.426.6170 or 905.318.6623  
[www.hnhu.org](http://www.hnhu.org)

## Case Study

Dr. Gideon Koren is a paediatrician and scientist in Toronto who has written numerous books on the fate of children he has encountered in his career. This story is from Dr. Koren's book *Children of Neverland*. Neverland, in the context of his book is a place where children will reside permanently, unable to reach their full potential. Joey is a boy who has Fetal Alcohol Spectrum Disorder. Joey's diagnosis was too late resulting in a long journey for him and his family.

### Excerpt from **Children of Neverland: The Silent Human Disaster**

by Dr. Gideon Koren

The telephone rang at the Martin home. It was Alice the social worker that Jim and Sally had hired to try to find them a child to adopt. Alice sounded excited. "It is a cute healthy boy of 8 months who has been doing very well with the foster family. The biological mother is a young girl. As far as I know she is healthy, although she lived life in the fast lane. No, as far as she says she did not use drugs, but she used to party a lot. "But listen: the proof is the child himself. He is doing very well for his age. All the doctors say so too".

She was right. Joey was adorable. He was good looking, smiling, sociable, and he did all the things a baby of 8 months is expected to do. The baby was a real delight for the

Martin's. He smiled a lot, communicated well and everyone loved to be with him. He walked at 12 months, spoke, and his teeth gradually erupted. He did everything Dr. Spoke said he would do.

Sally became first suspicious when the daycare workers thought he was a little bit hyperactive. However, her paediatrician thought it was too early to make such a diagnosis. Over the next two years Joey had become more clearly hyperactive, aggressive, and difficult to control. Joey was six when he was put on Ritalin, but his aggressiveness towards other children was not settled and it also became apparent that he had other learning difficulties.

At that stage, Jim and Sally were shattered, not only by Joey's problems but also by the fact that their friends and Joey's teacher gave them the feeling that the child's problems reflected a parenting failure. They knew by then that discipline and a hard hand were useless, because Joey did not appear to perceive causation the way normal children do and he did not make the connection between his acts and the ensuing punishment.

By the age of 12 Joey had stolen more than 1000 dollars from his parents and had many occasions with the law. He was expelled from school and not welcomed back due to his behaviours. Joey was institutionalized until the age of 18.

*Koren, G. (1997). The children of neverland: The silent human disaster. Toronto, ON: Hospital for Sick Children.*

## What Can We Do About It?

1. Health Care providers are consistently identified as one of the most important sources of information about alcohol use in pregnancy. The results from the survey showed that only about 51.1% of females of reproductive years (18-49) reported discussing the effects of alcohol on an unborn child with health professionals. Therefore there is a need to educate physicians regarding the use of the Society of Obstetricians and Gynaecologists of Canada (SOGC) Alcohol Use and Pregnancy Consensus Clinical Guidelines (2010), which advises that all pregnant women and women of childbearing years need to be screened for alcohol use.
2. Target education and awareness campaigns to lower income and less educated residents of Haldimand and Norfolk counties about the harms of alcohol use during pregnancy.
3. According to the 2009 Canadian Community Health Survey, a higher percentage (82.3%) of Haldimand and Norfolk residents 12 and over reported drinking alcohol in the past 12 months, compared to Ontario (73.3%). Therefore, the Haldimand-Norfolk Health Unit will continue to raise awareness about the negative effects of alcohol use during pregnancy.

## What is Next in Haldimand and Norfolk?

1. To write a detailed report of alcohol use in Haldimand and Norfolk, and the potential health effects associated with alcohol misuse.
2. To evaluate the Alcohol-free Pregnancy campaign to determine its effectiveness.
3. To advocate for more FASD prevention policies as well as a provincial alcohol strategy.
4. Work with the Fetal Alcohol Spectrum Disorder Ontario experts (FASDOne) and the Public Health Agency of Canada on a prevention and framework towards a provincial strategy.

## Recommended Further Reading

- Best Start (2009). Implications for Ontario: Awareness of FASD in 2009. Retrieved from [www.beststart.org/resources/pdfs/implications\\_report\\_09.pdf](http://www.beststart.org/resources/pdfs/implications_report_09.pdf)

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Leaders in Rural Health  
[www.hnhu.org](http://www.hnhu.org) • [info@nhu.org](mailto:info@nhu.org)

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○ **Simcoe** | 12 Gilbertson Dr.,  
P.O. Box 247, Simcoe ON N3Y 4L1  
**T:** 519.426.6170 or 905.318.6623  
**F:** 519.426.9974

○ **Caledonia** | 282 Argyle St., S.,  
Caledonia ON N3W 1K7  
**T:** 905.318.5367  
**F:** 905.765.8905