

HEALTHY CHOICES IN PREGNANCY:
RESULTS FROM THE COMMUNITY HEALTH
EDUCATION AND SOCIAL SERVICES
OMNIBUS SURVEY IN BRITISH COLUMBIA

APRIL 2008 TO MARCH 2009

FINAL REPORT



BCStats



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1. Introduction

1.1 Women and Alcohol Use

Drinking alcohol is a common social activity. Of the women surveyed in the Canadian Addiction Survey in 2008, 76 % reported drinking in the past year.¹ There are possible risks associated with alcohol use and those risks are different for women and men. Women's vulnerability to the effects of alcohol is influenced by body size and composition, age, genetics, and previous and current life circumstances and stressors.²

In Canadian and global public health agendas, there has been increasing concern about women's use of alcohol in child-bearing years and during pregnancy. Preventing the personal and social costs associated with Fetal Alcohol Spectrum Disorder (FASD) is a key rationale for undertaking alcohol interventions with women. However, a singular emphasis on the prenatal period may not give due attention to other windows of opportunity for reducing risks associated with drinking alcohol in other periods of women's lives.³

Pregnant women's use of alcohol cannot be separated from other issues in their lives, such as violence, trauma history, isolation and socioeconomic status. Limited data exists on alcohol use during pregnancy. Women's alcohol use remains highly stigmatized, making women less likely to disclose it in order to access services.⁴ In 2007/2008, 6.6 percent of pregnant females in BC ages 15 to 55 drank alcohol during pregnancy.⁵ Provincial best practice and messaging regarding alcohol use in pregnancy is: there is no known safe time and no known safe amount.^{6,7}

1.2 Fetal Alcohol Spectrum Disorder

Fetal Alcohol Spectrum Disorder, caused by prenatal alcohol exposure is the leading cause of developmental disabilities among Canadian children.⁸ FASD is an umbrella term describing the range of effects that can occur in an individual whose mother drank alcohol during pregnancy. These effects may

¹ Ahmad, N., et al., Canadian Addiction Survey [CAS]: Focus on Gender, 2008, health Canada: Ottawa, ON.

² Province of British Columbia. Women and Alcohol: A Women's Health Resource. 2008.

³ BC Centre of Excellence for Women's Health. Double Exposure: A better practices review on alcohol interventions during pregnancy. (2008)

⁴ BC Centre of Excellence for Women's Health. Double Exposure: A better practices review on alcohol interventions during pregnancy. (2008)

⁵ Canadian Community Health Survey (Share Files), 2007/2008, prepared by the Office of the Provincial Health Officer and Corporate Support, Planning and Legislation, Ministry of Healthy Living and Sport, 2009.

⁶ BCRCP Guidelines for Alcohol Use in the Perinatal Period and Fetal Alcohol Spectrum Disorder. (2005).

⁷ Fetal Alcohol Spectrum Disorder. Public Health Agency of Canada. http://www.phac-aspc.gc.ca/fasd-etcaf/pdf/faq_fasd_e.pdf. Retrieved May 14, 2010.

⁸ Public Health Agency of Canada. (2003). *Fetal alcohol spectrum disorder (FASD): A framework for action, 2003*. Retrieved November 19, 2008, from <http://www.phac-aspc.gc.ca/publicat/fasd-fw-etcaf-ca/index-eng.php>.

include physical, mental, behavioural, and learning disabilities with possible lifelong implications. FASD is estimated to affect more than nine out of every 1000 live births.⁹ The average lifetime cost for medical care services and productivity losses is estimated to be as much as \$2 million per person affected.¹⁰

Supporting women to make healthy choices in pregnancy, including avoiding alcohol use, is a key action that will prevent FASD. In British Columbia (BC), the ActNow BC: Healthy Choices in Pregnancy (HCIP) initiative provided leadership for the prevention of FASD.

1.3 ActNow BC: Healthy Choices in Pregnancy

In March 2005, the BC Provincial Government launched ActNow BC, a health and wellness initiative that aims to “make British Columbia the healthiest jurisdiction to host an Olympic and Paralympic Winter Games.”¹¹ The ActNow BC program targets risk factors for chronic disease, through a multi-year initiative comprised of four pillars that focus on:

- promoting physical activity,
- promoting healthy eating,
- living tobacco free, and
- supporting healthy choices in pregnancy.

The HCIP initiative is committed to a vision in which “all women in BC are supported to make healthy choices during pregnancy.”¹² To achieve this vision, substantial fiscal, material, human, and partnering resources have been invested to support key programs and activities that provide momentum for HCIP. The four key components of HCIP are:

1. Enhancing perinatal programs and outreach through the health authorities (see Appendix A for a map of the health authorities).
2. Establishing and implementing FASD prevention plans within each health authority.
3. Educating health care providers on how to counsel women about alcohol and tobacco use in pregnancy.
4. Developing evidence based resources regarding alcohol and tobacco use in pregnancy, for women and professionals.
5. Ensuring consistent provincial messaging regarding alcohol use: no known safe amount and no known safe time.

⁹ BC Reproductive Care Program. (2005). *BCRCP guidelines for alcohol use in the perinatal period and FASD*. Vancouver, BC: Author.

¹⁰ Lupton, C., Burd, L., & Harwood, R. (2004). Cost of fetal alcohol spectrum disorders. *American Journal of Medical Genetics Part C*, 127C, 42-50.

¹¹ ActNow BC. (2006). *Measuring our success: Baseline document*. Retrieved November 19, 2008, from http://www.actnowbc.gov.bc.ca/media/ActNowBC_Baseline.pdf.

¹² ActNow BC. (2006). *Measuring our success: Baseline document*. Retrieved November 19, 2008, from http://www.actnowbc.ca/media/ActNowBC_Baseline.pdf.

Together, these HCIP programs and activities are intended to achieve multiple benefits, including:

- Health care providers being knowledgeable and comfortable providing information and counselling on tobacco and alcohol use during pregnancy;
- Women being provided information and counselling on alcohol use during pregnancy; and
- Pregnant women being offered screening, support and referrals to reduce and stop alcohol and tobacco use during pregnancy.

These benefits are expected to lead to improved maternal and infant health and well-being, and decreased incidence of FASD.¹³

2. Background

Several initiatives have been undertaken in BC in recent years to address the paucity of data on alcohol use during pregnancy. This has included: two chart reviews by the BC Perinatal Health Program in 2004/2005 and 2006/2007; and two HCIP surveys conducted by BC Stats on behalf of the Ministry of Healthy Living and Sport (MHLS) in 2006/2007 and 2008/2009.

2.1 British Columbia Perinatal Health Program Chart Reviews

In July 2006, BC Perinatal Health Program (formerly the, BC Reproductive Care Program), was asked to provide baseline data on a number of health issues in pregnant women, in conjunction with the HCIP initiative. The BC Perinatal Health Program (BCPHP) focused on abstracting data from a representative sample of obstetric charts from fiscal 2004/2005 discharges, with representation from all facilities providing obstetrical services (including home births) across BC. The health issues that the BCPHP focused on included alcohol use, T-ACE score,¹⁴ substance use, smoking (currently, before pregnancy, and secondhand smoke exposure), as well as nutrition concerns during pregnancy. In total, 2,065 Antenatal Records were collected and abstracted into a database. After incomplete charts were removed from the sample, the 2041 remaining charts accounted for 84% of a desired 2,431 charts for representative sampling.

Analysis of these charts in 2006 revealed that 70% of health care providers had “discussed” alcohol use in pregnancy with pregnant patients, and 7% of charts included comments by the health care

¹³ ActNow BC. (2006). *Measuring our success: Baseline document*. Retrieved November 19, 2008, from http://www.actnowbc.gov.bc.ca/media/ActNowBC_Baseline.

¹⁴ TACE (Tolerance, Annoyance, Cut down, Eye opener) score is an assessment of alcohol use and related risk, based on 4 questions.

provider pertaining to the patient's alcohol use in pregnancy. An additional 4% of charts included comments that identified a concern (e.g. binge drinking). In total, 74% of charts included indication of a discussion and/or included comments about alcohol use in pregnancy.

In July 2007, the BCPHP was requested to conduct a follow-up study of data from the period of September 1, 2006 until August 31, 2007.¹⁵ The BCPHP again focused on abstracting data from a representative sample of obstetric charts, with representation from all facilities providing obstetrical services as well as from home births across BC. The issues the BCPHP focused on in the follow-up study were consistent with those from the baseline study: alcohol use, T-ACE score, substance use, smoking (currently, before pregnancy and secondhand smoke exposure) and nutrition concerns during pregnancy, and additionally collected information regarding the cessation of smoking during pregnancy. After incomplete charts were removed from the sample, a total of 2,316 Antenatal Records remained, and formed the sample for this report, accounting for 96.4% of the desired representative sample.

This follow-up analyses was completed in the Fall of 2008. Results indicated that 67% of health care providers had "discussed" alcohol use with pregnant patients – slightly less than the 70% identified in 2006. Consistent with the 2006 results, 7% of charts included comments by the health care provider pertaining to the patient's alcohol use in pregnancy and 4% included comments that identified a concern (e.g. binge drinking). In total, 71% of charts indicated a discussion had taken place and/or included comments about alcohol use in pregnancy – again, slightly less than was found in 2006.

2.2 Healthy Choices in Pregnancy Survey, 2006/2007

In 2006, BC Stats was hired to administer a survey regarding public awareness of the impacts of alcohol use during pregnancy. The survey was administered as part of the monthly Community Health Education and Social Services Omnibus Survey (the CHESS) by BC Stats,¹⁶ between April 2006 and March 2007. Data collected during the CHESS established baseline indicators for HCIP, revealed gaps in the knowledge base of BC residents, and provided support for HCIP programs and activities.

In total, 6,098 surveys were completed, using a random sample of telephone numbers. Results indicated that the majority of British Columbians believe that consuming alcohol while pregnant is an unsafe behaviour. When asked about the safety of a small amount of alcohol consumption (one or two drinks during the whole pregnancy) almost 60% of BC residents said it was unsafe. When asked about larger quantities of alcohol consumption, such as one drink per day or three or four drinks per weekend,

¹⁵ Data collection was split into two phases: Phase 1 incorporated collection of records from September 1, 2006 until February 28, 2007, and Phase two incorporated collection of records from March 1, 2007 until August 31, 2007.

¹⁶ The CHESS currently covers such topics as tobacco use, employment and workplace issues, disability, and general demographics.

more than 90% of residents said that the behaviour was unsafe. Despite these indications that many people knew of behaviours that would improve the chances of having a healthy baby, almost half of respondents did not mention reducing or stopping alcohol consumption as one of the most important factors leading to the birth of healthy babies.

2.3 Healthy Choices in Pregnancy Survey, 2008/2009

In April 2008, the MHLS sponsored a second survey administered by BC Stats as part of the CHESS to gain further information for the HCIP program. From April 2008 to March 2009, 7,026 surveys were completed: approximately 500 per month from April to May 2008, and 600 per month from June 2008 to March 2009.¹⁷

The MHLS recognizes that an understanding of alcohol use in pregnancy, behavioural change and the prevention of FASD require public awareness, education, counselling and support from health care providers. As such, the 2008/2009 survey was commissioned to determine the following:

1. To what extent are BC residents aware of key public education messages regarding alcohol use during pregnancy?
 - a) Does this awareness differ by gender?
 - b) Does this awareness differ by health authorities?
2. To what extent do women report that health care providers have addressed the issue of alcohol use during pregnancy with them? What is the nature of provider interactions regarding these issues?
3. What are the recent or intended behaviours of BC residents regarding alcohol and conception and/or pregnancy?
 - a) Do differences in the intended behaviours of members of pregnant women's support networks differ by gender?
 - b) Do differences in the intended behaviours of members of pregnant women's support networks differ by health authorities?

To answer these research questions, 22 questions were developed for the HCIP section of the CHESS in 2008/2009. These survey questions asked respondents about messages they may have heard about alcohol use during pregnancy, their discussions with health care providers regarding alcohol use

¹⁷ In November 2008, a skip pattern error was discovered. Women who were currently pregnant, pregnant in the last year, or planning a pregnancy were being screened out of subsequent questions about prenatal health care visits and health care provider discussions about the effect of alcohol use on conception and/or pregnancy. To address this issue, the skip pattern was revised so that all women who had been pregnant in the last three years were asked the questions about prenatal visits and health care provider discussions about the effect of alcohol use on conception and/or pregnancy. This change went into effect starting in December 2008 and yielded data from 2,400 respondents.

during pregnancy, their intended drinking behaviour in the event that they or someone they are close to becomes pregnant, and their drinking behaviour during recent pregnancies. Focus groups were held in November 2007 to assess the face validity of the tool and to refine question wording.

This report summarizes findings of the questions asked in the HCIP section of the CHES in 2008/2009 (see Appendix B for survey questions).

3. Methodology

3.1 Data Collection

The CHES is a random-digit dial telephone survey. As such, the CHES selects a random sample of telephone numbers from all possible telephone numbers in BC; interviewers then call each number to determine if it belongs to a residence. An interviewer seeks to interview one person at each identified residential number by asking to interview the person aged 15 or older whose birthday comes next.

3.2 Survey Sample

The annual CHES sample is divided equally across all five geographical health authorities. A quota sample of N=100 or N=120 was taken from each health authority. Each health authority's regional sample is proportionate to the health authority's population's characteristics (i.e., age and gender).

While the health authority *regional* sample is proportionate, the sample is disproportionate to the *provincial* population's characteristics. Post-survey weighting adjustments were produced to correct the aggregated provincial sample. Specifically, cases were weighted so that the proportions of men and women in each category of the sample match the proportions of these groups in the population age 15 and older in each health authority based on BC Stats' 2005 population estimates. This "weighted" sample can be used to estimate the percentages and numbers of British Columbians who belong to any of the various categories covered by the survey. Due to the weighting of the sample, the findings of this survey can be generalized to all British Columbians, aged 15 or over.

3.3 Data Analysis

Data was analyzed using crosstabs with chi-squares and other simple significance tests. Only statistically significant results (at the $p \leq 0.001$ level) are presented in this report. All results for provincial level findings are based on weighted data (as explained in Section 3.2). Non-valid survey response options (such as “don’t know” and “refused”) have been excluded from the analysis. Percentages may not sum to 100% due to rounding. Detailed results for HCIP questions and all response options (including “don’t know” and “refused”) are presented in the tables of Appendix D. The analysis presented in this report combine all 7,026 interviews.

4. Results

In this section the results for the 2008/2009 HCIP survey are discussed, including: BC residents’ awareness of the effects of alcohol use during pregnancy; women’s experiences with health care providers regarding discussions about alcohol use during pregnancy; women’s recent practices regarding alcohol use and pregnancy; women’s intended practices regarding alcohol use and conception and/or pregnancy; and intended practices of members of women’s support networks.

4.1 BC Residents’ Awareness of Public Education Messages

In this section, results are presented and discussed regarding whether British Columbians are aware of key public education messages concerning alcohol use during pregnancy: that is, no known safe amount, no known safe time and no known safe type of alcohol during pregnancy. Results are presented by gender, as well as by health authority region.

Results indicate that the majority of BC residents are aware of key public education messages concerning the effects of alcohol use during pregnancy. More than three quarters (77%) of residents surveyed had heard that there is no known safe amount of alcohol to drink when pregnant, while slightly less (73%) reported hearing that there is no known safe time to drink alcohol when pregnant. Fewer residents (61%) had heard that drinking ‘soft’ alcoholic beverages, such as wine or coolers, is no safer than drinking hard liquors. These results were then analyzed to determine whether awareness varies by gender and health authorities.

4.1.1 Differences in Awareness According to Gender

Women were more aware than men of all three key public education messages, as illustrated in Table 1 below.

Table 1. Awareness of key public education messages by gender

	*Have you heard the message:		
	<i>There is no known safe amount of alcohol to drink when pregnant</i>	<i>There is no known safe time to drink alcohol when pregnant</i>	<i>When pregnant, drinking "soft" alcoholic beverages such as wine or coolers are no safer than hard liquors</i>
	Yes	Yes	Yes
Women	82%	78%	64%
Men	74%	70%	60%

Statistical significance level: * $p \leq 0.001$

Greater numbers of BC women reported having heard the three key public education messages about alcohol use during pregnancy. Of these three messages, “There is no known safe amount of alcohol to drink when pregnant” was the most frequently heard message for both genders (82% of women and 74% of men). The message, “There is no known safe time to drink alcohol when pregnant” was heard less by both genders than the previous message, though more women (78%) had still heard this message than men (70%). The least familiar message for both women and men was “When pregnant, drinking ‘soft’ alcoholic beverages such as wine or coolers are no safer than hard liquors.” For this message, there was less of a difference between men and women than for the previous two questions, but women (64%) still reported hearing this message more than men (60%).

4.1.2 Differences in Awareness According to Health Authority

To determine whether awareness of key messages differed across the province, results were also compared by health authorities. For all three messages, differences emerged between health authorities (see Table 2).

Table 2. Awareness of key public education messages by health authority

	*Have you heard the message:		
	<i>There is no known safe amount of alcohol to drink when pregnant</i>	<i>There is no known safe time to drink alcohol when pregnant</i>	<i>When pregnant, drinking "soft" alcoholic beverages such as wine or coolers are no safer than hard liquors</i>
	Yes	Yes	Yes
Interior Health Authority	83%	78%	64%
Fraser Health Authority	75%	70%	60%
Vancouver Coastal Health Authority	74%	72%	61%
Vancouver Island Health Authority	81%	78%	63%
Northern Health Authority	85%	79%	68%

Statistical significance level: * $p \leq 0.001$

The frequencies for reporting hearing the three messages were higher for the Interior, Vancouver Island and the Northern Health Authority. Residents from the Fraser and Vancouver Coastal Health Authority were the least likely to report having heard these three messages. The message, “there is no known safe amount of alcohol to drink when pregnant” had the greatest range in awareness; while 85% of Northern Health Authority residents reported having heard this message, less than three-quarters (74%) of Vancouver Coastal Health Authority residents had heard it.

4.1.3 Discussion

Results indicate that the majority of BC residents are aware of key public education messages regarding alcohol use in pregnancy (there is no known safe amount, no known safe time, and no known safe type of alcohol during pregnancy). However, results also suggest that fewer residents are aware that drinking “soft” alcoholic beverages, such as wine or coolers, is no safer than drinking hard liquors. The misperception that some alcoholic beverages may be “safer” may elevate the number of alcohol exposed pregnancies. For example, women who prefer “soft” alcoholic beverages may be less inclined to reduce or stop their consumption, or women who prefer drinking hard liquors may switch to “soft” alcoholic beverages during pregnancy.

Results also suggest that men are considerably less aware of key public education messages about alcohol during pregnancy than women. Research suggests that a partner's use and/or drinking by a woman's mother are factors that increase risk of alcohol use by pregnant women.¹⁸ As such, it is important that men, as well as a woman's other support persons, be aware of those education messages. In addition to differences by gender, it is important to consider the differences in awareness of key public education messages across health authorities. Results suggest that awareness of all three key messages is lower among Fraser and Vancouver Coastal Health Authority residents.

4.2 Women's Experiences with Health Care Providers Regarding Alcohol Use during Pregnancy

In this section, results are discussed regarding the extent to which women report that health care providers have discussed the use of alcohol on conception and/or pregnancy with them, both in the course of regular medical visits and, for recently pregnant women, during prenatal visits. The nature of provider interactions regarding alcohol use is also considered.

4.2.1 Experiences of Pregnant Women

Among women surveyed who were pregnant within the last three years, 83% reported that they went for prenatal health care visits or other health care visits specifically related to their pregnancy. These visits took place with a variety of health care providers, including: family doctors (45%), obstetricians (21%), pregnancy clinic providers (15%), midwives (14%), public health centre providers (3%), and others (2%). These women reported that during these visits, 62% of health care providers talked to them about how alcohol use in pregnancy could affect their baby's health. Of those women who said that their health care provider spoke to them about alcohol use during pregnancy, 33% reported that their health care provider presented information, facts or figures, and 60% reported that their provider discussed their patient's personal experiences and knowledge. In addition, 58% of these women reported that their provider asked them if they drank any alcoholic beverages, including beer, wine, coolers, and liquor during their pregnancy.

4.2.2 Experiences of Non-Pregnant Women

In comparison to experiences of pregnant women, analysis indicates that health care providers were less likely to discuss alcohol use in pregnancy with women during regular medical visits (when

¹⁸ BC Centre of Excellence for Women's Health. (2008). Double Exposure: A better practices review on alcohol interventions during pregnancy.

women are not pregnant). Almost two-thirds (64%) of women reported seeing a health care provider (such as a doctor, or nurse) for regular medical visits, while another 23% see a health care provider when they are ill. This includes all women not pregnant at the time of their visit, whether they were planning a pregnancy or were actively preventing pregnancy. Only 10% of women aged 15 to 50 reported that their health care provider talked to them about alcohol during their last medical visit, and of those women, only 32% (less than 2% of women surveyed) reported that their provider specifically talked to them about alcohol and its effects on conception and/or pregnancy. The length of discussions with providers and their approach to these conversations varied. While 25% of women who reported that this issue was addressed responded that the conversation lasted less than one minute, 17% reported that the conversation lasted from one to three minutes, and 51% reported that the conversation lasted over three minutes. Over half (53%) of women surveyed reported that their health care provider presented information, facts, or figures, 55% reported that their providers gave them handouts or other resources, and 44% characterized their interaction as a discussion of their personal experiences and knowledge.

4.2.3 Discussion

According to these results, not all health care providers are providing BC women of reproductive age with information about the implications of alcohol on pre-conception, conception and/or pregnancy. Health care providers were more likely to provide information about alcohol use in pregnancy during prenatal visits than during regular medical visits. However, while 83% of recently pregnant women went for prenatal health care visits, only 62% reported that their health care provider talked to them about how alcohol use during pregnancy could affect their baby's health. Some of this disparity may be a result of women not understanding the information provided, or not remembering the discussions. Prenatal alcohol exposure throughout the pregnancy can lead to developmental disabilities, including in the first trimester when a woman may not yet know she is pregnant or may not have had a prenatal health care visit. Therefore, providing information about alcohol use during pregnancy to all women of reproductive age during routine medical visits is an important goal to support the goals of HCIP and prevent FASD.

4.3 Non-Pregnant Women's Intended Behaviours Regarding Alcohol Use during Pregnancy

This section focuses on what women's intended drinking behaviours with respect to alcohol use if they were planning to become pregnant or if they became pregnant.

4.3.1 Women’s Intended Behaviours

Among BC women aged 15-50 who drink alcohol, 72% said they would stop drinking alcohol if they were planning to become pregnant. Another 25% of women would reduce or “cut back” on alcohol consumption if they were planning a pregnancy. A small percentage (3%) of women indicated they would not change the amount of alcohol they drink if planning a pregnancy. When asked about their intended behaviours if they found out they were pregnant, 88% of BC women aged 15-50 reported they would stop drinking alcohol. Some women (12%) who drink stated they would “cut back” on alcohol consumption if they found out they were pregnant.

Table 3. Intended behaviours of women aged 15-50 who drink alcohol

If you were planning to become pregnant, would you:		
<i>Stop all alcohol consumption</i>	<i>Cut back on your alcohol consumption</i>	<i>Not change the amount of alcohol you drink</i>
72%	25%	3%
If you found out you were pregnant, would you:		
<i>Stop all alcohol consumption</i>	<i>Cut back on your alcohol consumption</i>	<i>Not change the amount of alcohol you drink</i>
88%	12%	0%

Statistical significance level: * $p \leq 0.001$

As shown in Table 3 above, women were more likely to have intentions to change their behaviours if they found out they were pregnant, than if they were planning a pregnancy.

4.3.2 Discussion

This section focused on what non-pregnant women state they would do if they were planning to become pregnant or if they found out they were pregnant. Results indicate that 72% of BC women state they would stop all alcohol use if they were planning to become pregnant and 88% would stop if they found out they were pregnant. Over one-quarter (28%) of BC women state they would cut back on alcohol consumption if they were planning a pregnancy, and 12% would cut back but not stop all alcohol consumption if they found out that they were pregnant. A small portion of BC women (3%) stated they would not change their alcohol consumption if they were planning to become pregnant.

Almost half of pregnancies are unintended¹⁹; these findings highlight the importance of messaging during the preconception period, including safe use of alcohol,²⁰ as alcohol exposure can happen in the high number of unplanned pregnancies. The provincial message of no known safe amount, no known safe time and no known safe type of alcohol use in pregnancy is important to continue to assist women to understand that potential exposures may happen before they are aware they may be pregnant.

4.4 Pregnant Women’s Actual Behaviours Regarding Alcohol Use

In this section, women were asked to recall whether they changed their behaviour on alcohol consumption during a pregnancy that occurred within the last three years. Results are presented on women’s stated ‘actual behaviours.’

4.4.1 Actual Behaviours of Recently Pregnant Women

Among BC women reporting a pregnancy within the past three years, 60% stated they changed the amount of alcohol they were drinking, while the remainder indicated they did not. Most (86%) women who did change their drinking behaviour reported that they stopped all alcohol consumption, and the remainder said they cut back.

Table 4. Actual behaviours of women who were pregnant in the past 3 years

While you were pregnant, did you change the amount of alcohol you were drinking?	
Yes	No
60%	40%
If yes, how did you change your drinking during pregnancy?	
<i>Stopped all alcohol consumption</i>	<i>Cut back on your alcohol consumption</i>
93%	7%

Statistical significance level: * $p \leq 0.001$

As shown in Table 4 above, 7% of BC women who were pregnant in the past three years cut back, but did not stop drinking entirely, during pregnancy. It is important to note that of the 40% of

¹⁹ Clinical Workgroup of the CDC Select Panel on Preconception Care, October 28, 2007. Caring for our Future: The Content of Preconception Care: What is the evidence to recommend provision of clinical services before pregnancy for the purposes of improving reproductive outcomes.

²⁰ Malleon, R.M. (2002). Emergency contraception: A simple, safe, and effective approach to preventing pregnancy after unprotected intercourse. *BC Medical Journal*, 44(1), 30-35.

women who stated they would not change the amount of alcohol they drank in pregnancy, some²¹ may be non drinkers.

4.4.2 Discussion

Results presented here suggest that there is some disparity between BC women's intended and actual behaviours pertaining to alcohol use during pregnancy. Women's intended behaviours align more closely with their awareness of information about alcohol use during pregnancy, than with actual reported behaviours. While 40% of recently pregnant women reported they would not change their drinking behaviour during pregnancy, some²² of these women were likely non-drinkers before pregnancy. The remainder of women who indicated that they did not change their drinking behaviour would have continued to consume alcohol during their pregnancy.

These results regarding pregnant women's actual behaviours may also under-represent women who drink during pregnancy in BC, since women in middle to high education categories tend to underreport their drinking behaviour.²³ Parenting and societal expectations of mothers can add a complicated layer of shame and fear for women who have used alcohol or have alcohol problems.²⁴ Women's use of substances, including alcohol, remains highly stigmatized, which also contributes to women being less likely to disclose alcohol use.²⁵

4.5 Intended Behaviours of Pregnant Women's Support Networks

In this section, the intended behaviours of women's support network members were examined, with regard to alcohol use in pregnancy. Results are presented according to gender, as well as by health authority region.

When BC residents were asked what they would do if a person they lived with or were close to was to become pregnant, or was pregnant, 85% reported that they would encourage her to stop all alcohol consumption. A smaller proportion (6%) would encourage her to cut back on alcohol consumption. Members of women's support networks' willingness to change their own drinking behaviours were also

21 This percentage may be as high as 30-35% of all women surveyed who self-reported that they did not drink alcohol when asked, "If a person you live with or are close to was to become, or is, pregnant, would you?" and "If you found out you were pregnant would you?"

22 This percentage may be as high as 30-35% of all women surveyed who self-reported that they did not drink alcohol when asked, "If a person you live with or are close to was to become, or is, pregnant, would you?" and "If you found out you were pregnant would you?"

23 May et al. (2009). Prevalence and epidemiological characteristics of FASD from various research methods with an emphasis on recent in-school studies. *Developmental Disabilities Research Reviews*, 15, 176-192.

24 Poole, N. and L. Greaves (Eds). (2007). *Highs and lows: Canadian Perspectives on women and substance use*. Centre for Addiction and Mental Health: Toronto, ON.

25 Ibid.

investigated. In general, support network members expressed their willingness to change their own drinking behaviours in order to support pregnant women in abstaining from drinking alcohol. Among support network members who drink, 27% reported that they would stop drinking alcohol, and almost one quarter (21%) said that they would cut back. An additional 25% of these support network members reported that they would not drink alcohol when the pregnant woman is present. Results of these intended behaviours were analyzed by gender. To determine whether behaviours differed across the province, results were compared by health authority.

4.5.1 Differences in Intended Behaviours of Support Network Members According to Gender

Slight differences were found between men and women’s intended behaviours on encouraging a pregnant woman they lived with or were close to, to stop all alcohol consumption. Slight differences were also found between genders, on their intended behaviours related to alcohol consumption if a woman they lived with or were close to was pregnant.

Table 5. Intended behaviours on encouraging a pregnant woman they lived with or were close to to stop all alcohol consumption by gender

	*If a person you live with or are close to was to become, or is, pregnant, would you:		
	<i>Encourage her to stop all alcohol consumption</i>	<i>Encourage her to cut back on alcohol consumption</i>	<i>Not say anything unless you believed her drinking was excessive</i>
Women	88%	5%	7%
Men	85%	8%	7%

Statistical significance level: * $p \leq 0.001$

As shown in Table 5 above, an equal percentage (7%) of men and women indicated that if a woman they were close to was pregnant they would not say anything to her unless they believed her drinking was excessive.

Table 6. Intended behaviours on changing their alcohol consumption if they lived with a pregnant woman or were close to by gender

	*If a person you live with or are close to was to become, or is, pregnant, would you:				
	<i>Stop drinking alcohol</i>	<i>Cut back on alcohol</i>	<i>Not drink alcohol when she is present</i>	<i>Increase the amount of alcohol you drink</i>	<i>Not change your alcohol consumption</i>
Women	25%	14%	30%	0%	30%
Men	29%	26%	21%	1%	23%

Statistical significance level: * $p \leq 0.001$

As shown in Table 6, slight differences were found between genders with men more likely to report that they would stop drinking alcohol or cut back on alcohol if a woman they lived with or were close to was pregnant. Women were more likely to not drink alcohol when the pregnant woman is present, or to not change their alcohol consumption.

4.5.2 Differences in Intended Behaviours of Support Network Members According to Health Authority

Interesting differences have been found according to health authority for support network members' intended behaviours, as shown in Table 7 below.

Table 7. Intended behaviours on encouraging a pregnant woman they lived with or were close to, to stop all alcohol consumption by health authority.

	*If a person you live with or are close to was to become, or is, pregnant, would you:		
	<i>Encourage her to stop all alcohol consumption</i>	<i>Encourage her to cut back on alcohol consumption</i>	<i>Not say anything unless you believed her drinking was excessive</i>
Interior Health Authority	89%	6%	5%
Fraser Health Authority	86%	7%	7%
Vancouver Coastal Health Authority	84%	7%	9%
Vancouver Island Health Authority	89%	5%	6%
Northern Health Authority	90%	5%	5%

Statistical significance level: * $p \leq 0.001$

While the majority of residents in all health authorities reported that they would encourage a pregnant woman to stop all alcohol consumption, residents within Vancouver Coastal Health Authority were the least likely to report (84%) that they would encourage a pregnant woman to stop all alcohol consumption. Moreover, 9% of Vancouver Coastal Health Authority residents indicated that they would not say anything to a pregnant woman unless they believed her drinking was excessive.

As shown in Table 8 below, members of women's support networks varied greatly across health authorities in their approach to changing their own drinking behaviour to support a woman they lived with or were close to if she was pregnant. The proportion of residents who reported that they would stop drinking alcohol ranged from 23% in the Vancouver Island Health Authority to 34% in the Northern Health Authority, while those who would cut back on alcohol consumption ranged from 15% in the Northern Health Authority to 22% in the Vancouver Coastal Health Authority.

Table 8. Intended behaviours on changing their alcohol consumption if they lived with a pregnant woman or were close to by health authority.

	*If a person you live with or are close to was to become, or is, pregnant, would you:				
	<i>Stop drinking alcohol</i>	<i>Cut back on alcohol</i>	<i>Not drink alcohol when she is present</i>	<i>Increase the amount of alcohol you drink</i>	<i>Not change your alcohol consumption</i>
Interior Health Authority	29%	21%	26%	1%	24%
Fraser Health Authority	28%	20%	25%	1%	26%
Vancouver Coastal Health Authority	26%	22%	23%	0%	28%
Vancouver Island Health Authority	23%	20%	29%	0%	28%
Northern Health Authority	34%	15%	28%	0%	23%

Statistical significance level: * $p \leq 0.001$

Over one-third (34%) of residents in the Northern Health Authority reported that they would stop drinking alcohol if a woman they lived with or were close to was pregnant, and 28% said they would not drink alcohol when she was present. Residents of the Interior Health Authority were the second most likely to report that they would stop drinking alcohol (29%), and also had higher rates of residents reporting not drinking in her presence (26%). Similarly, in the Fraser Health Authority, residents preferred to stop drinking alcohol altogether (28%) and also reported their intention to not drink in her presence (25%). Residents of the Vancouver Island and Vancouver Coastal Health Authorities were the least likely to stop drinking alcohol if a woman they lived with or were close to were pregnant. Vancouver Island Health Authority and Vancouver Coastal Health Authority had the largest proportions of residents reporting that they would not change their alcohol consumption.

4.5.3 Discussion

BC men's awareness of information about alcohol use during pregnancy was lower than BC women's awareness. As members of a pregnant woman's support network, both men's and women's stated intended behaviours were to support pregnant women in their efforts to abstain from alcohol during pregnancy. Female support network members were more likely to encourage pregnant women to stop all alcohol consumption, and to not drink alcohol in the pregnant women's presence, but were less likely than

men to change their own drinking behaviour by stopping or cutting back on alcohol consumption. Conversely, while men were less likely to encourage pregnant women to stop drinking alcohol, they were more likely to change their own behaviours by stopping or cutting back on alcohol consumption. Although these results are based on ‘intended’ behaviours, this seems to indicate men showed support through behavioural change that is not drinking alcohol when the pregnant woman is present, while women showed support by encouraging the pregnant woman to stop or cut back on alcohol consumption. Additionally, these data may suggest that men were responding to survey questions as a potential expectant father and/or as a pregnant woman’s intimate partner, whereas women were responding as a concerned friend or family member.

Residents of the Interior and Northern Health Authority indicate the strongest support for women in their support network who may be (or become) pregnant. These two health authorities have high rates of encouraging pregnant women to stop all alcohol consumption, and high rates of intentions to refrain from drinking themselves when a woman they lived with or was close to was or became pregnant. Results from other health authorities are more varied. For example, when a person they lived with was (or became) pregnant, residents in the Vancouver Island Health Authority were least likely to change their own drinking behaviour by stopping or cutting back, but also had one of the highest reported occurrences of encouraging her to stop drinking alcohol.

5. Summary of Survey Results

This survey was conducted through the BC Stats CHES Omnibus Survey, and involved 7,026 interviews from April 2008 to March 2009. The survey investigated: BC residents' awareness of key public education messages regarding alcohol use during pregnancy; women’s experiences with health care providers (both pregnant and non-pregnant women); women’s intended behaviour pertaining to alcohol use and pregnancy or conception; recently pregnant women’s actual behaviour with respect to alcohol use; and, intended behaviour of pregnant women’s support network members. Results indicate that while many BC residents have heard key messaging regarding alcohol use and pregnancy, intend to change their behaviour according to these messages, and/or actually act in accordance with these messages, awareness and related behaviours in BC vary by gender and health authority.

BC residents’ awareness of key messages regarding alcohol use during pregnancy:

- Most (77%) BC residents have heard that the public education message “there is no known safe amount of alcohol to drink when pregnant.”

- Slightly less (73%) have heard the message “there is no known safe time to drink when pregnant.”
- The least heard message reported (61%) was that “drinking ‘soft’ alcoholic beverages such as wine or coolers is no safer than drinking hard liquors.”
- Women were more likely to report having heard these three messages than men.
- Residents within the Interior, Vancouver Island and Northern Health Authorities were more likely to report having heard these messages than residents within the Fraser and Vancouver Coastal Health Authorities.

Women’s experiences with health care providers:

- Most women (64%) saw a health care provider for an annual medical visit when they were not pregnant.
- Among these 64% of women, only 10% (less than 2% of BC women) aged 15-50 recall their provider talking to them about the effect of alcohol use on conception and/or pregnancy during their last visit.
- Among women who were pregnant in the last three years, 62% reported that their health care provider discussed the effect of alcohol use during pregnancy on their baby’s health.

Women’s intended behaviours regarding alcohol use and conception and/or pregnancy

- Among BC women aged 15-50 who drink alcohol, 72% stated they would stop drinking alcohol if they were planning to become pregnant, 25% would reduce or “cut back” and 3% stated they would not change the amount of alcohol that they drink.
- If they were to find out they were pregnant, 88% of BC women aged 15-50 would stop drinking alcohol, while 12% would “cut back” but not stop drinking.

Women’s actual behaviours regarding alcohol use during pregnancy

- Among BC women reporting a pregnancy within the past three years, 60% changed the amount of alcohol they were drinking. It is unknown how many of the 40% of women who stated they did not change their alcohol consumption were non-drinkers.
- Most (86%) women who changed their drinking behaviour when pregnant stopped all alcohol consumption, and the remainder “cut back.”

Support network members’ behaviours regarding alcohol use

- Among members of pregnant women’s support networks, women were more likely to encourage pregnant women to stop all alcohol consumption, while men were more likely to encourage pregnant women to cut back on alcohol consumption.

- Men were more likely to change their behaviour by stopping or cutting back on drinking alcohol, while women were more likely to not change their own alcohol consumption, with the exception of not drinking when the pregnant woman is present.
- Residents within the Interior, Vancouver Island and Northern Health Authorities were more likely to report that they would encourage pregnant women to stop all alcohol consumption, than residents within the Fraser and Vancouver Coastal Health Authorities.
- Residents within the Northern, Interior and Fraser Health Authorities were more likely to report that they would stop drinking alcohol if a woman they lived with or were close to became pregnant. Residents within the Vancouver Island and Vancouver Coastal Health Authorities were the least likely to change their alcohol consumption.

6. Conclusion

This report has identified five key issues. First, it has illustrated success in increasing BC residents' awareness of alcohol use in pregnancy. However, the fact that approximately one-quarter of respondents were not aware of the basic messages pertaining to alcohol use in pregnancy, indicates that continued awareness building strategies of the provincial messages; *no known safe time, amount, or type* of alcohol use in pregnancy are necessary.

Second, although the majority of pregnant women stated their primary health care provider provided information and counselling on alcohol use in pregnancy; over one-third indicated they did not receive this information. This may simply be that women do not remember their experiences, however, all pregnant women should receive information and counseling about alcohol use during their prenatal care. Also of concern is that less than 2% of women respondents stated that their physicians addressed alcohol use during their regular physician visits.

Third, women's intended behaviours do not match their actual behaviours in pregnancy. Almost all women stated they would either stop or reduce drinking alcohol if planning to become pregnant or if they found out they were pregnant, yet less than two-thirds of women changed their alcohol use behaviour when they were pregnant. However, of those who indicated they did not change their behaviour, some²⁶ were 'non-drinkers' to begin with.

²⁶ This percentage may be as high as 30-35% of all women surveyed who self-reported that they did not drink alcohol when asked, "If a person you live with or are close to was to become, or is, pregnant, would you?" and "If you found out you were pregnant would you?"

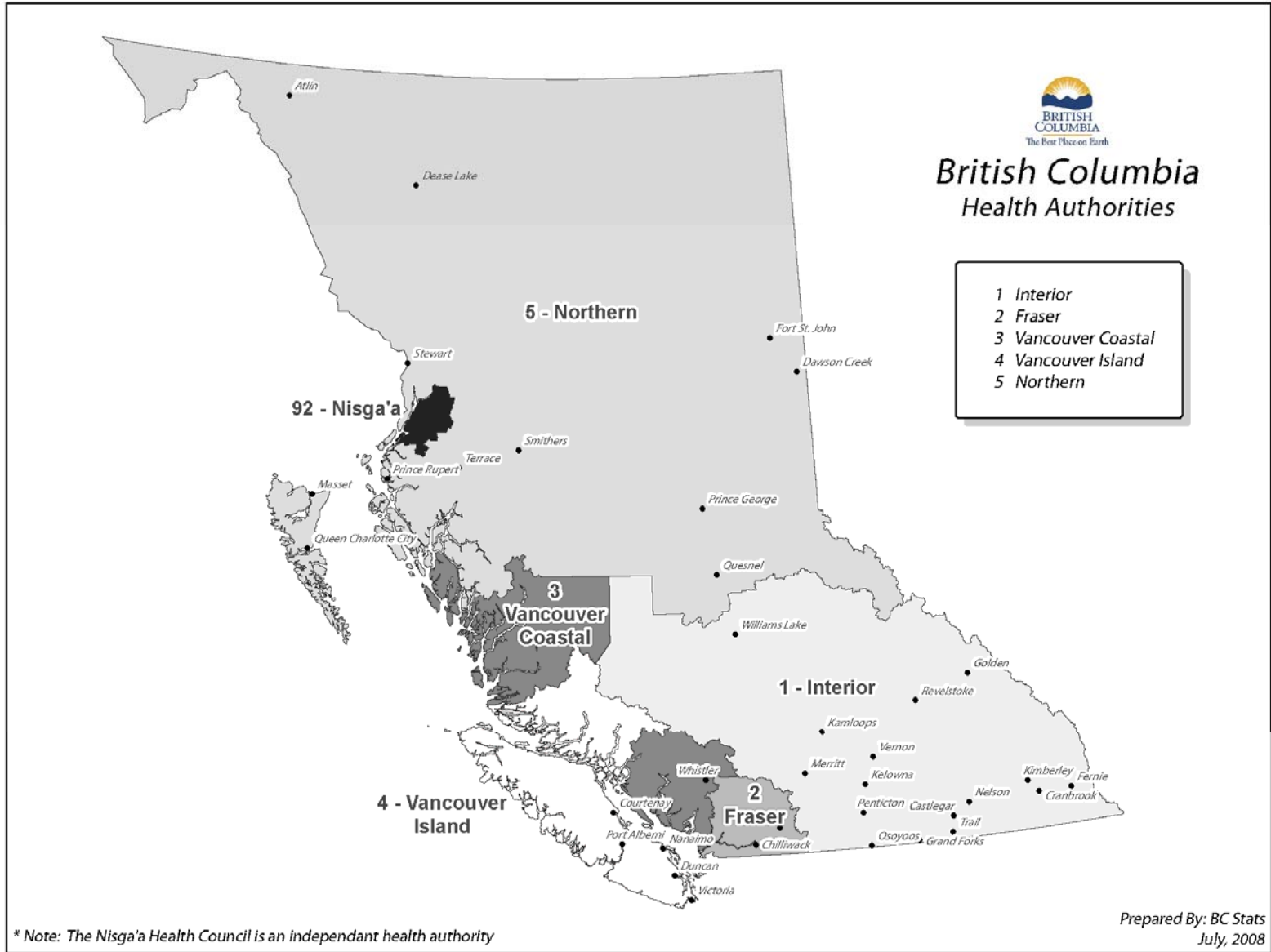
Fourth, the number of support network members who would encourage pregnant women to stop alcohol use in pregnancy is encouraging. Strategies that encourage support network members to assist and support pregnant women to stop alcohol use in pregnancy should be developed and implemented.

Lastly, there are significant differences in respondents by health authority, with residents within Northern, Interior and Vancouver Island Health Authorities, being most aware of alcohol use in pregnancy messages. The reasons for this are not known, as all health authorities have developed FASD prevention plans as a requirement of ActNow HCIP.

Clearly, continued work is required to improve BC residents awareness of the provincial messages of alcohol use in pregnancy and to support women to change their alcohol use behaviours prior to and during pregnancy through increased physician counselling with women and enhanced support from women's friends and family to improve maternal and child health and wellbeing and reduce the incidence of FASD.

Appendix A

Map of British Columbia's Health Authorities



Appendix B

The CHES: Administration, Healthy Choices in Pregnancy Section, and Demographics

BC STATS TRACKING SURVEY

PROJECT #:008-08-0007

Draft Date: **July 2008 Data Collection**

[NOTE: TEXT IN CAPS IS NOT READ OUT TO THE RESPONDENT]

INTRODUCTION

Hello.

My name is _____, and I am calling on behalf of BC STATS, the central statistical agency of the Province of British Columbia. We are conducting interviews with BC residents to learn about their experiences with government services such as health and education.

May I speak to the person in your household who is 15 years old or older and whose birthday comes next?

IF NEW RESPONDENT ON LINE, REINTRODUCE.

Your feedback will be used to help plan improvements in public services. The interview will take about 10 minutes to complete, depending on your answers. To ensure the quality of our work, this call may be recorded.

Your participation in this interview is completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. All feedback will be kept confidential and your responses will be anonymous. If there is a question that you prefer not to answer, tell me and I will move onto the next one. You can end the interview at any time you wish. May I begin the interview now?

IF YES: CONTINUE

IF NO: THANK AND TERMINATE

IF RESPONDENT WANTS TO VERIFY THE CALL:

To verify the authenticity of this call, you are welcome to contact Martin Monkman, a project manager at BC Stats. His phone number is (250) 387-6744. His email address is Martin.Monkman@gov.bc.ca.

IF ADDITIONAL INFORMATION IS REQUESTED BY RESPONDENT:

You were selected at random from a list of all BC Residents. If you agree to participate, I would ask you some questions. This will take about 10 minutes, based on your answers. The interview is confidential. All interviewers have sworn an oath that they will not identify you and can be prosecuted for breaking this oath. Information will only be reported in aggregate form to policy makers and persons who deliver health, education or economic support services. Your feedback will be used to plan improvements and report to the public on the health, education and economic security of your community and the province.

IF RESPONDENTS INQUIRES FURTHER ABOUT WHAT BC STATS IS: The mandate of BC Stats is to produce and interpret statistical information relating to all facets of life in British Columbia, including the demographic, social and economic conditions of the province and its population and to assist British Columbia provincial government ministries and agencies with their statistical activities.

IF RESPONDENT ENDS SURVEY INTERVIEW:

Because you have decided to stop the interview, you may decide to have all your responses erased or allow us to use the information you have provided. What would you prefer me to do?

YOB_SCREEN. Before we begin the survey, could you tell me the year and month in which you were born?

- RECORD YEAR (D1A) AND MONTH (D1B) OF BIRTH
- REFUSED

CAGE. [CALCULATE PARTICIPANT'S CURRENT AGE] IF (D1B > MON(\$D), ((YEA(\$D)-D1A)-1), IF (D1B == MON(\$D), IF (D1C>DAY(\$D), ((YEA(\$D)-D1A)-1), (YEA(\$D)-D1A)), (YEA(\$D)-D1A)))

AGE_SCREEN. ASK ONLY IF YOB_SCREEN = REFUSED. Could you tell me if are you..

1. 15 to 17 years old, or
2. 18 to 20 years old, or
3. Are you 21 or older?
4. REFUSED

CAGE_SCREEN. CALCULATE AGE_SCREEN BASED ON RESPONSE TO YOB_SCREEN.

D9. RECORD GENDER

HEALTHY CHOICES IN PREGNANCY SECTION – APRIL 2008

HCIP1INTRO. The next 3 questions are about messages you may have heard about alcohol use when pregnant. Please tell me if you have heard any of these messages:

HCIP1A. There is no known safe time to drink alcohol when pregnant. Have you heard this message?

- YES
- NO
- DON'T KNOW
- REFUSE

HCIP1B. When pregnant, drinking 'soft' alcoholic beverages such as wine or coolers are no safer than hard liquors. Have you heard this message?

- YES
- NO
- DON'T KNOW
- REFUSE

HCIP1C. There is no known safe amount of alcohol to drink when pregnant. Have you heard this message?

- YES
- NO
- DON'T KNOW
- REFUSE

HCIP15. If a person you live with or are close to was to become, or is, pregnant, would you:

- Encourage her to stop all alcohol consumption,
- Encourage her to cut back on alcohol consumption,
- Or not say anything unless you believed her drinking was excessive?
- DON'T KNOW
- REFUSE

HCIP16. If a person you live with or are close to was to become, or is, pregnant, would you:

- Stop drinking alcohol,
- Cut back on alcohol,
- Not drink alcohol when she is present,
- Increase the amount of alcohol you drink,
- Not change your alcohol consumption,
- Or would you say that you already do not drink alcohol?

HCIP8. ASK ONLY IF FEMALE AGE 15-50. If you found out you were pregnant would you:

- Cut back on your alcohol consumption,
- Not change the amount of alcohol you drink,
- Stop all alcohol consumption,
- Or would you say that you do not drink alcohol?

HCIP9. ASK ONLY IF FEMALE AGE 15-50. If you were planning to become pregnant would you

- Cut back on your alcohol consumption,
- Not change the amount of alcohol you drink,

- Stop all alcohol consumption,
- Or would you say that you do not drink alcohol?

HCIP2. ASK ONLY IF FEMALE. How often do you see a health care provider, such as a doctor, midwife, or nurse, for a regular check-up? Would you say...

- Once a year
- Every two years
- Only when you are ill
- Or that you don't get regular check-ups

HCIP3. ASK ONLY IF FEMALE AGE 15-50. During your last regular check-up, did your health care provider talk to you in any way about alcohol? (yes, continue or no, move to question HCIP10)

- YES
- NO
- DON'T KNOW
- REFUSE

HCIP4. ASK ONLY IF HCIP3=YES. During your last regular check-up, did your health care provider talk to you about alcohol and its effects on conception and/or pregnancy? (yes, proceed or no, move to #8)

- YES
- NO
- DON'T KNOW
- REFUSE

HCIP5. ASK ONLY IF HCIP4=YES. About how long was that conversation?

- Less than one minute
- One to three minutes
- Over 3 minutes
- DON'T KNOW
- REFUSE

HCIP6. ASK ONLY IF HCIP4=YES. Which of the following best describes the conversation?

- You and the health care provider discussed your experiences and knowledge,
- OR Your health care provider provided information or facts and figures,
- OTHER (SPECIFY)
- I DON'T REMEMBER (DO NOT READ)
- IT WAS TOO CONFUSING (DO NOT READ)

HCIP7. ASK ONLY IF HCIP4=YES. Did your health care provider give you with any handouts or other resources?

- YES
- NO
- DON'T KNOW
- REFUSE

HCIP10. ASK ONLY IF FEMALE AGE 15-50. Have you been pregnant in the last 3 years?

- YES
- NO
- DON'T KNOW
- REFUSE

PRG1: Which of the following statements describes your recent experience with pregnancy (respondent may select more than one).

- You are currently pregnant
- You were pregnant in last year
- You are currently trying to become pregnant
- NONE OF THEM/NOT TRYING TO GET PREGNANT/NOT BEING PREGNANT/HAVE NOT BEEN PREGNANT BEFORE (NOT READ)
- DON'T KNOW
- REFUSED

HCIP11A. ASK ONLY IF HCIP10=YES AND ~~PRG1=NONE~~. (Please note this skip pattern error was changed in December 2008.) Did you go for prenatal health-care visits or other health care visits specifically related to your pregnancy? (IF NECESSARY: Please answer in reference to your most recent pregnancy).

- YES
- NO
- DON'T KNOW
- REFUSE

HCIP11B. ASK ONLY IF HCIP11A=YES. Where did you go most of the time for these visits? Was it...

- A Family doctor
- An Obstetrician .
- A Midwife
- A Public Health Centre
- A Pregnancy Clinic
- OTHER (DO NOT READ)
- DON'T KNOW
- REFUSED

HCIP12A. ASK ONLY IF HCIP11A=YES. During any of your prenatal visits, did your health care provider talk to you about how alcohol in pregnancy could affect the health of your baby?

- YES
- NO
- DON'T KNOW / DON'T REMEMBER
- REFUSE

HCIP12B. ASK ONLY IF HCIP12A=YES. Which of the following best describes the conversation?

- You and the health care provider discussed your experiences and knowledge,
- OR Your health care provider provided information or facts and figures,
- OTHER (SPECIFY)
- I DON'T REMEMBER (DO NOT READ)
- IT WAS TOO CONFUSING (DO NOT READ)

HCIP13. ASK ONLY IF HCIP11A=YES. During any of your prenatal visits, did your health care provider ask if you drank any alcoholic beverages, including beer, wine, cooler, and liquor, during your pregnancy?

- YES
- NO

- DON'T KNOW / DON'T REMEMBER
- REFUSE

HCIP14A. ASK ONLY IF HCIP10=YES. While you were pregnant, did you change the amount of alcohol you were drinking?

- YES
- NO
- DON'T KNOW / DON'T REMEMBER
- REFUSE

HCIP14B. ASK ONLY IF HCIP14A=YES. How did you change your drinking during pregnancy? Would you say that you...

- Cut back on your alcohol consumption,
- Did not change the amount of alcohol you drank,
- Stopped all alcohol consumption,
- Or that you say that you do not drink alcohol before you became pregnant?
- DON'T KNOW
- REFUSE

GENHEALTH. Would you say that in general your health is...

Excellent
Very good
Good
Fair or
Poor
DON'T KNOW
REFUSED

DEMOGRAPHIC INFORMATION

RESUME ASKING EVERYONE

Finally, I would like to ask a few questions about you, for use for quality control and categorizing the survey data.

D1_D. Including yourself, how many people usually live here, at this address?

RECORD NUMBER OF PEOPLE LIVING IN THE HOUSEHOLD
DON'T KNOW
REFUSED

D1_E.IF D1_D >1 ASK: How many of the other people living here are... READ LIST"

Under 6 years of age?
6-14 years?
15-17years?
18-24years?
25years and more?

RECORD NUMBER OF PERSONS FOR DIFFERENT AGE GROUPS
DON'T KNOW
REFUSED

CHECK – NUMBER OF PEOPLE IN D1_D HAS TO MATCH TOTAL NUMBER OF PEOPLE IN DIFFERENT AGE CATEGORIES IN D1_E

IF TOTAL NUMBER OF PEOPLE IN D1_E DIFFER FROM D1_D DISPLAY POP UP WINDOW FOR INTERVIEWER INDICATING THAT NUMBERS DO NOT MATCH UP

D10A. Do you consider yourself to be an Aboriginal person, that is, First Nations, Metis or Inuit?

YES (GO TO D10B)
NO (GO TO D10)
UNSURE
REFUSED

D10B. Which of the following groups, if any, do you consider yourself a member of? (READ EACH GROUP, RANDOMLY ROTATE ORDER)

D10BA. First Nations?

YES
NO
DK
REFUSED

D10BB. Metis?

YES
NO
DK
REFUSED

D10BC. Inuit?

YES
NO
DK
REFUSED

D10AA. ASK IF D10A = YES: Are you a member of an Indian Band or First Nation?

YES
NO
UNSURE
REFUSED

D10AB. ASK IF D10A = YES: Are you registered under the Indian Act of Canada, that is, are you a Status Indian?

YES
NO
UNSURE
REFUSED

D10. IF D10A = YES, CODE D10 AS 01 AND DO NOT ASK QUESTION How do you describe your ethnic background? DO NOT READ.

- 01 - ABORIGINAL/FIRST NATION
- 02 - ARAB
- 03 - BLACK OR AFRICAN
- 04 - CHINESE
- 05 - LATIN AMERICAN/ HISPANIC
- 06 - FILIPINO
- 07 - JAPANESE
- 08 - SOUTH EAST ASIAN (E.G. CAMBODIAN, INDONESIAN, VIETNAMESE, LAOTIAN)
- 09 - KOREAN
- 10 - SOUTH ASIAN (E.G. EAST INDIAN, PAKISTANI, PUNJABI, SRI LANKAN)
- 11 - WEST ASIAN (E.G. AFGHAN, IRANIAN)
- 12 - WHITE/CAUCASIAN
- 13 - OTHER, SPECIFY: _____

AT THIS POINT, IF D10 = 01 AND D10A = NO, AUTOMATICALLY CODE D10A AS YES AND GO BACK TO D10AA

IMMIGRANT. In which country were you born?

1. Canada
2. English Language country (e.g., US, UK, Australia, etc.)
3. French Language country (e.g., France, Haiti, Belgium, etc.)
4. Country with other language (e.g., China, Germany, Mexico, etc.)
98. Don't know
99. Refused

IMMIGYEAR. ASK ONLY IF IMMIGRANT >1. In what year did you first come to Canada to live?
RECORD YEAR – 1900 TO 2008

IMMIGDL. ASK ONLY IF IMMIGRANT >1. Did you have a license to drive from your home country or an international driver's license when you first arrived in Canada?

1. YES – COUNTRY LICENSE
2. YES – INTERNATIONAL DL
3. NO
98. DON'T KNOW
99. REFUSED

BCDL. Do you have a BC Driver's License?

1. YES
2. NO
98. DON'T KNOW
99. REFUSED

CARECARD. Do you have a BC Care Card or Personal Health Number?

1. YES
2. NO
98. DON'T KNOW
99. REFUSED

LANGUAGE. What is the language that you first learned at home in childhood and still understand?

English (81%)
French (1%)
Chinese (26%)
German (15%)
Punjabi (11%)
Italian (5%)
Dutch (5%)
Other (Specify)

D4 What is your best estimate of your total household income for the last 12 months before taxes and deductions? Please include income from all household members and from all sources.

Was it....?

Less than \$15,000
\$15 to under 30 thousand
\$30 to under 45 thousand
\$45 to under 60 thousand
\$60 to under 80 thousand
\$80 to under 100 thousand
\$100 to under 120 thousand
\$120 thousand or more
DON'T KNOW
REFUSED

D5: What is the highest grade or level of education you have ever attained? [READ AS NECESSARY]

No schooling
Some elementary
Completed elementary
Some secondary
Completed secondary
Some community college, technical college, CEGEP or nurse's training
Completed community college, technical college, CEGEP or nurse's training
Some university or teacher's college
Completed university or teacher's college
Other education or training
DON'T KNOW
REFUSED

D7. What is your postal code? ENTER SIX DIGIT POSTAL

DON'T KNOW/REFUSED

D8_A. Thank you for your time. Information from this survey will be used to plan improvements in public services. BC STATS follows up with samples of people we survey to insure the quality and accuracy of these calls or to obtain better understanding of survey findings. May BC STATS contact you again to ensure quality of our call or to better understand the survey results?

YES
NO

D8_B [ASK ONLY IF D8_A=YES]: May I have your first and last name?

D8_C [ASK ONLY IF D8_A=YES]: May I confirm your 10-digit phone number

D8_D [ASK ONLY IF D8_A=YES AND D6_A=YES]. May I have your home email address?

Appendix C

Participant Sample Demographics for the CHESS

Table A: Key participant demographics for the CHES (April 2008 through March 2009), based on unweighted data.

		Health Authority									
		IHA		FHA		VCHA		VIHA		NHA	
		Count	%	Count	%	Count	%	Count	%	Count	%
n (Unweighted)		1392		1382		1468		1393		1391	
Gender	Male	523	38%	552	40%	607	41%	527	38%	525	8%
	Female	869	62%	830	60%	861	59%	866	62%	866	62%
Age	15-19	29	2%	46	3%	44	3%	25	2%	42	3%
	20-24	29	2%	49	4%	49	3%	26	2%	49	4%
	25-44	292	21%	342	25%	403	28%	261	19%	428	31%
	45-64	607	44%	587	43%	558	38%	612	44%	588	42%
	65+	353	25%	269	20%	322	22%	388	28%	214	15%
	Don't know	5	0%	5	0%	4	0%	25	2%	42	3%
	Refused	77	6%	84	6%	88	6%	26	2%	49	4%
	Total										
household income (last 12 months)	Less than \$15k	84	6%	72	5%	63	4%	68	5%	76	6%
	\$15k to under \$30k	169	12%	94	7%	108	7%	142	10%	132	10%
	\$30k to under \$45k	168	12%	102	7%	139	10%	143	10%	127	9%
	\$45k to under \$60k	150	11%	126	9%	122	8%	164	12%	153	11%
	\$60k to under \$80k	168	12%	145	11%	143	10%	153	11%	177	13%
	\$80k to under \$100k	106	8%	126	9%	128	9%	128	9%	138	10%
	\$100k to under \$120k	66	5%	83	6%	93	6%	63	5%	75	5%
	\$120k or more	82	6%	139	10%	189	13%	105	8%	127	9%
	Don't know	96	7%	107	8%	108	7%	83	6%	81	6%
	Refused	303	22%	388	28%	375	26%	344	25%	305	22%
Highest education level obtained	No schooling	1	0%	2	0%	4	0%	1	0%	1	0%
	Some elementary	17	1%	7	1%	2	0%	7	1%	18	1%
	Completed elementary	17	1%	15	1%	7	1%	16	1%	27	2%
	Some secondary	171	12%	122	9%	74	5%	113	8%	171	12%
	Completed secondary	314	23%	291	21%	191	13%	263	19%	335	24%
	Some community college, technical college	119	9%	111	8%	82	6%	104	8%	141	10%
	Completed community college, technical college	248	18%	252	18%	195	13%	211	15%	243	18%
	Some university or teacher's college	108	8%	119	9%	129	9%	122	9%	90	7%
	Completed university or teacher's college	335	24%	385	28%	688	47%	472	34%	287	21%
	Other education or training	37	3%	38	3%	58	4%	49	4%	40	3%
Don't know	5	0%	7	1%	2	0%	2	0%	4	0%	
Refused	20	1%	33	2%	36	3%	33	2%	34	2%	

Appendix D

Frequency Tables for Healthy Choices in Pregnancy Questions

Frequency Table

HCIP1A. There is no known safe time to drink alcohol when pregnant. Have you heard this message?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	5111	72.8	72.8	72.8
	NO	1807	25.7	25.7	98.5
	DON'T KNOW	96	1.4	1.4	99.8
	REFUSED	12	.2	.2	100.0
	Total	7026	100.0	100.0	

HCIP1B. When pregnant, drinking 'soft' alcoholic beverages such as wine or coolers are no safer than hard liquors. Have you heard this message?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	4270	60.8	60.8	60.8
	NO	2627	37.4	37.4	98.2
	DON'T KNOW	116	1.7	1.7	99.8
	REFUSED	13	.2	.2	100.0
	Total	7026	100.0	100.0	

HCIP1C. There is no known safe amount of alcohol to drink when pregnant. Have you heard this message?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	5389	76.7	76.7	76.7
	NO	1524	21.7	21.7	98.4
	DON'T KNOW	100	1.4	1.4	99.8
	REFUSED	13	.2	.2	100.0
	Total	7026	100.0	100.0	

HCIP15. If a person you live with or are close to was to become, or is, pregnant, would you:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Encourage her to stop all alcohol consumption	5977	85.1	85.1	85.1
	Encourage her to cut back on alcohol consumption	434	6.2	6.2	91.2
	Not say anything unless you believe drinking was excessive	474	6.7	6.7	98.0
	DON'T KNOW	104	1.5	1.5	99.5
	REFUSED	38	.5	.5	100.0
	Total	7026	100.0	100.0	

HCIP16. If a person you live with or are close to was to become, or is, pregnant, would you:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Stop drinking alcohol	1266	18.0	18.0	18.0
	Cut back on alcohol	951	13.5	13.5	31.6
	Not drink alcohol when she is present	1175	16.7	16.7	48.3
	Increase the amount of alcohol you drink	23	.3	.3	48.6
	Not change your alcohol consumption	1229	17.5	17.5	66.1
	Already do not drink alcohol	2249	32.0	32.0	98.1
	DON'T KNOW	95	1.4	1.4	99.5
	REFUSED	38	.5	.5	100.0
	Total	7026	100.0	100.0	

HCIP8. If you found out you were pregnant would you:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cut back on your alcohol consumption	151	2.2	7.6	7.6
	Not change the amount of alcohol you drink	1	.0	.0	7.6
	Stop all alcohol consumption	1155	16.4	57.9	65.5
	Do not drink alcohol	672	9.6	33.7	99.2
	DON'T KNOW	6	.1	.3	99.6
	REFUSED	9	.1	.4	100.0
	Total	1993	28.4	100.0	
Missing	System	5033	71.6		
Total		7026	100.0		

HCIP8 BASE = FEMALE AGE 15 TO 50

HCIP9. If you were planning to become pregnant would you:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cut back on your alcohol consumption	320	4.6	16.1	16.1
	Not change the amount of alcohol you drink	43	.6	2.2	18.2
	Stop all alcohol consumption	918	13.1	46.0	64.3
	Do not drink alcohol	684	9.7	34.3	98.6
	DON'T KNOW	13	.2	.7	99.3
	REFUSED	15	.2	.7	100.0
	Total	1993	28.4	100.0	
Missing	System	5033	71.6		
Total		7026	100.0		

HCIP9 BASE = FEMALE AGE 15 TO 50

HCIP2. How often do you see a health care provider, such as a doctor, midwife, or nurse, for a regular check-up?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Once a year	2290	32.6	63.5	63.5
	Every two years	267	3.8	7.4	70.9
	Only when you are ill	820	11.7	22.7	93.7
	Don't get regular check-ups	197	2.8	5.5	99.1
	DON'T KNOW	19	.3	.5	99.7
	REFUSED	12	.2	.3	100.0
	Total	3605	51.3	100.0	
Missing	System	3421	48.7		
Total		7026	100.0		

HCIP2 BASE = FEMALE

HCIP3. During your last regular check-up, did your health care provider talk to you in any way about alcohol?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	201	2.9	10.1	10.1
	NO	1763	25.1	88.5	98.6
	DON'T KNOW	22	.3	1.1	99.7
	REFUSED	6	.1	.3	100.0
	Total	1993	28.4	100.0	
Missing	System	5033	71.6		
Total		7026	100.0		

HCIP3 BASE = FEMALE AGE 15 TO 50

HCIP4. During your last regular check-up, did your health care provider talk to you about alcohol & its effects on conception &/or pregnancy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	63	.9	31.5	31.5
	NO	127	1.8	63.2	94.7
	DON'T KNOW	10	.1	4.9	99.6
	REFUSED	1	.0	.4	100.0
	Total	201	2.9	100.0	
Missing	System	6825	97.1		
Total		7026	100.0		

HCIP4 BASE: HCIP3 = YES (HEALTH CARE PROVIDER TALKED ABOUT ALCOHOL)

HCIP5. About how long was that conversation?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than one minute	16	.2	25.1	25.1
	One to three minutes	11	.2	17.1	42.2
	Over 3 minutes	32	.5	51.0	93.2
	DON'T KNOW	4	.1	6.8	100.0
	Total	63	.9	100.0	
Missing	System	6963	99.1		
Total		7026	100.0		

HCIP5 BASE: HCIP4 = YES (HEALTH CARE PROVIDER TALKED ABOUT ALCOHOL EFFECTS ON PREGNANCY.)

HCIP6. Which of the following best describes the conversation?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Health care provider discussed your experiences & knowledge	28	.4	43.8	43.8
	Health care provider provided information or facts & figures	34	.5	53.2	97.0
	I DON'T REMEMBER/ DON'T KNOW	2	.0	3.0	100.0
	Total	63	.9	100.0	
Missing	System	6963	99.1		
Total		7026	100.0		

HCIP6 BASE: HCIP4 = YES (HEALTH CARE PROVIDER TALKED ABOUT ALCOHOL EFFECTS ON PREGNANCY.)

HCIP7. Did your health care provider give you any handouts or other resources?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	35	.5	54.6	54.6
	NO	29	.4	45.4	100.0
	Total	63	.9	100.0	
Missing	System	6963	99.1		
Total		7026	100.0		

HCIP7 BASE: HCIP4 = YES (HEALTH CARE PROVIDER TALKED ABOUT ALCOHOL EFFECTS ON PREGNANCY.)

HCIP10. Have you been pregnant in the last 3 years?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	418	5.9	21.0	21.0
	NO	1566	22.3	78.6	99.5
	DON'T KNOW	3	.0	.1	99.7
	REFUSED	7	.1	.3	100.0
	Total	1993	28.4	100.0	
Missing	System	5033	71.6		
Total		7026	100.0		

HCIP10 BASE: FEMALE AGE 15 TO 50

PRG1. Which of the following statements describes your recent experience with pregnancy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	You are currently pregnant	58	.8	2.9	2.9
	Your were pregnant in last year	172	2.4	8.6	11.6
	You are currently trying to become pregnant	74	1.0	3.7	15.2
	NONE/ NOT TRYING/ NOT BEING PREGNANT/ HAVE NOT BEEN BEFORE	1654	23.5	83.0	98.2
	DON'T KNOW	8	.1	.4	98.7
	REFUSED	27	.4	1.3	100.0
	Total	1993	28.4	100.0	
Missing	System	5033	71.6		
Total		7026	100.0		

PRG1 BASE FEMALE AGE 15 TO 50

HCIP10. Have you been pregnant in the last 3 years? (Data from December 2008 – March 2009.)*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	149	6.2	22.1	22.1
	NO	523	21.7	77.6	99.7
	DON'T KNOW	1	.0	.2	99.9
	REFUSED	1	.0	.1	100.0
	Total	674	28.0	100.0	
Missing	System	1732	72.0		
Total		2406	100.0		

*This frequency was re-run for data collected after the skip pattern error in HCIP11A was corrected in December 2008.)

HCIP11A. Did you go for prenatal health-care visits or other health care visits specifically related to your pregnancy? (Data from December 2008 – March 2009.)*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	124	5.1	83.0	83.0
	NO	23	1.0	15.6	98.6
	REFUSED	2	.1	1.4	100.0
	Total	149	6.2	100.0	
Missing	System	2257	93.8		
Total		2406	100.0		

*This frequency was run for data collected after the skip pattern error in HCIP11A was corrected in December 2008.)

HCIP11A BASE HCIP10=YES (WAS PREGNANT IN PAST 3 YEARS)

HCIP11B. Where did you go most of the time for these visits? (Data from December 2008 – March 2009.)*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A Family Doctor	56	2.3	45.1	45.1
	An Obstetrician	26	1.1	21.2	66.3
	A Midwife	17	.7	13.9	80.2
	A Public Health Centre	3	.1	2.6	82.8
	A Pregnancy Clinic	18	.8	14.9	97.7
	OTHER	3	.1	2.3	100.0
	Total	124	5.1	100.0	
Missing	System	2282	94.9		
Total		2406	100.0		

*This frequency was run for data collected after the skip pattern error in HCIP11A was corrected in December 2008.)

HCIP11B BASE HCIP11A=YES (WENT TO PRENATAL HEALTH CARE/HEALTH CARE VISITS FOR PREGNANCY)

HCIP12A. During any of your prenatal visits, did your health care provider talk to you about how alcohol in pregnancy could affect the health of your baby? (Data from December 2008 – March 2009.)*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	77	3.2	62.4	62.4
	NO	39	1.6	32.0	94.4
	DON'T KNOW	7	.3	5.6	100.0
	Total	124	5.1	100.0	
Missing	System	2282	94.9		
Total		2406	100.0		

*This frequency was run for data collected after the skip pattern error in HCIP11A was corrected in December 2008.)

HCIP12A BASE HCIP11A=YES (WENT TO PRENATAL HEALTH CARE/HEALTH CARE VISITS FOR PREGNANCY)

HCIP12B. Which of the following best describes the conversation? (Data from December 2008 – March 2009.)*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Health care provider discussed your experiences & knowledge	46	1.9	60.0	60.0
	Health care provider provided information or facts & figures	25	1.0	32.6	92.5
	OTHER	1	.0	.7	93.2
	I DON'T REMEMBER/ DON'T KNOW	5	.2	6.8	100.0
	Total	77	3.2	100.0	
Missing	System	2329	96.8		
Total		2406	100.0		

*This frequency was run for data collected after the skip pattern error in HCIP11A was corrected in December 2008.)

HCIP12B BASE HCIP12A=YES (CARE PROVIDER TALKED ABOUT ALCOHOL EFFECTS)

HCIP13. During any of your prenatal visits, did your health care provider ask if you drank any alcoholic beverages, including beer, wine, cooler, & liquor, during your pregnancy? (Data from December 2008 – March 2009.)*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	71	3.0	57.7	57.7
	NO	44	1.8	35.4	93.0
	DON'T KNOW	9	.4	7.0	100.0
	Total	124	5.1	100.0	
Missing	System	2282	94.9		
Total		2406	100.0		

*This frequency was run for data collected after the skip pattern error in HCIP11A was corrected in December 2008.)

HCIP13 BASE HCIP11A=YES (WENT TO PRENATAL HEALTH CARE/HEALTH CARE VISITS FOR PREGNANCY)

HCIP14A. While you were pregnant, did you change the amount of alcohol you were drinking?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	245	3.5	58.7	58.7
	NO	164	2.3	39.3	97.9
	DON'T KNOW	8	.1	1.8	99.7
	REFUSED	1	.0	.3	100.0
	Total	418	5.9	100.0	
Missing	System	6608	94.1		
Total		7026	100.0		

HCIP14A BASE HCIP10=YES (WAS PREGNANT IN PAST 3 YEARS)

HCIP14B. How did you change your drinking during pregnancy?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cut back on your alcohol consumption	15	.2	5.9	5.9
	Stopped all alcohol consumption	210	3.0	85.9	91.8
	Did not drink alcohol before you became pregnant	20	.3	8.2	100.0
	Total	245	3.5	100.0	
Missing	System	6781	96.5		
Total		7026	100.0		

HCIP14B BASE HCIP14A=YES (CHANGED AMOUNT OF ALCOHOL)