

SURVEY OF **PREGNANT WOMEN**

Alcohol Use Disorders Identification Test (AUDIT) & Tobacco and Marijuana Use among Pregnant Women Presenting for Prenatal Care

2020



GOVERNMENT OF BERMUDA

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SURVEY HIGHLIGHTS



Alcohol

- » There were 29.0% of women who indicated having a drink containing alcohol monthly or less.
- » Nearly four in ten (36.6%) respondents reported drinking 1 or 2 alcoholic beverages on a "typical day".
- » A small proportion of women (0.9%) stated that they needed a drink in the morning to get them going.
- » Almost one in six (14.7%) women had an alcoholic beverage since they became pregnant, while a small number (n=17) reported that they did not stop drinking when becoming pregnant.
- » There was a strong likelihood of hazardous or harmful alcohol consumption related to binge-drinking; with 19.6% of women noting that they have six or more alcoholic drinks on one occasion.

Tobacco/Marijuana

- » There were a small proportion of current smokers of both cigarettes (0.9%) and marijuana (3.6%).
- » Of the current smokers, cigarette and marijuana, a few women (n=10) did continue smoking even while in their second and third trimester of pregnancy.
- » Nearly one in five (19.6%) respondents indicated that they quit cigarette smoking because they became pregnant.
- » From a public health point of view, more than half (53.6%) of the women reported that their doctor or other health professional had discussed the harmful effects of smoking with them since becoming pregnant.
- » In the last year, 5.8% of survey respondents smoked between one to ten cigarettes on the days that they smoked.
- » A considerably high proportion (92.0%) of women reported that they were aware of the harmful effects of smoking during pregnancy.
- » There was a small proportion (1.8%) of women who indicated that they sometimes feel like having a cigarette first thing in the morning.
- » Some women (1.3%) thought that smoking cigarettes was definitely not harmful to one's health.
- » No one who had stopped smoking cigarettes indicated an intent to continue doing so in the short-term; whereas a small proportion (n=5) stated their intent to probably do so in the long-term.
- » In terms of smoking cessation, most women (77.2%) expressed that it would be difficult to quit smoking once started.

Vaping

- » Sixteen women (7.1%) reported that they had used an electronic vaping device (i.e. e-cigarette, electronic nicotine products or hookah) in their lifetime.

» During the three months before becoming pregnant, on average, 1.7% of women noted that they used an e-cigarette or other electronic nicotine product one day a week or less and a small number (0.4%) noting their use to be more than once a day; whereas 3.6% had used a hookah for one day a week or less.

INTRODUCTION



This synopsis report presents information from the Survey of Pregnant Women, which included the Alcohol Use Disorders Identification Test (AUDIT) and assessment of the use of tobacco and marijuana among pregnant women who sought prenatal care at their physician (Obstetrician-Gynecologist [OB-GYN] or General Practitioner [GP] providing antenatal care) during the three-week period of August 17th to September 4th, 2020. This is the fourth survey of this nature conducted among pregnant women in Bermuda; with the previous surveys being administered in 2005, 2010, and 2015.

Purpose

The purpose of this survey was to:

1. Continue monitoring the prevalence-of-use of alcohol, tobacco, and marijuana, along with the addition of vaping among pregnant women;
2. Assess changing trends, if any, evident within this population;
3. Gather the latest information on the use of these substances as well as vaping devices to support the DNDC's alcohol, tobacco, and marijuana use campaigns. The rationale is that alcohol, tobacco, and marijuana use in pregnancy increases the risk of negative pregnancy outcomes.

Objectives

The AUDIT is a set of ten simple questions on alcohol use that takes about two minutes to complete and is designed to identify persons whose alcohol consumption has become hazardous or harmful to their health. The section on tobacco comprised of 12 questions that sought to identify the respondents' consumption patterns and their perception of harm and their intentions to use tobacco (cigarettes) in the future. Questions related to marijuana use were also included in this section. With an increasing concern around the negative impacts of the newer phenomena of vaping via e-cigarettes or other electronic products there were four new questions added to the questionnaire in this regard. These questions, located, at the end of the tobacco section, allowed greater insight to be obtained into the use of these electronic smoking devices amongst pregnant women in Bermuda.

The main focus of this report is to present the findings of the survey and make suggestions about possible prevention and intervention aspects that need to be highlighted in the alcohol and tobacco campaigns especially as it would relate to the use of these substances during pregnancy.

Survey Limitations

There are a few noteworthy limitations of the current survey. During this round of the survey, a staff member of the DNDC Research Unit went to each location and silently observed the survey administration process. As such, the issues that arose were as follows: language barriers in terms of patients not being fluent in English, ensuring that multiple surveys were not given to the same patient if they visited the office multiple times during the survey period, and confusion around what was meant by "the last 12 months" and the "last 30 days". In light of these limitations, a communique was sent to each practice liaison requesting them to be mindful of these occurrences and the recommended solutions from DNDC, in order to ensure that all patients complete the survey accurately.

Survey Design

The Survey of Pregnant Women 2020 was administered over a three-week period, from Monday, August 17th – Friday, September 4th to all pregnant women presenting for prenatal care at their obstetrician and gynecologist (OB-GYN). The survey design is briefly described in the sections below.

Population Coverage and Participants

The survey targeted all pregnant women in Bermuda presenting for prenatal care at their obstetrician or gynecologist, whether in the private or public sector, during the three-week period of survey administration. Specifically, seven private OB-GYN's were contacted along with the government-funded clinic (see Appendix B).

Sampling

For the purpose of this study, and for comparison with previous rounds of this survey, the same sampling method was used. All patients presenting for prenatal care within the specified survey administration period, were surveyed.

Data Collection

At the beginning of the planning process, in late July, the respective practices were informed of the opportunity to collaborate on the Survey for Pregnant Women 2020. Practice liaisons were established and they along with the doctors were formally notified of the scheduled survey, the time requirements, and were asked to inform the DNDC of their participation. All 7 private practices along with the Maternal Health clinic indicated their interest to be a part of this initiative.

Data collection for the survey was carried out from Monday, August 17th – Friday, September 4th; with all participating OB-GYN office's completing the survey during this designated period. The questionnaire was provided to each patient by the practice liaison (the receptionist or the nurse). Each patient completed the survey while waiting to be seen by the physician (typically in the examination room) and was returned upon completion to the liaison for subsequent collection by the DNDC. The paper and pencil method was utilised to capture the self-reported responses.

The questionnaire took approximately five to 10 minutes to be completed. Participation was voluntary; though it was encouraged. There were no noted refusals at any of the practices. Respondents' participation or refusal in no way affected the care that the patients received.

Supervision and Control

The project team for the survey consisted of staff from the DNDC, who worked closely with an assigned contact person (practice liaison) from within each OB-GYN office. The DNDC was mainly responsible for planning the survey, printing the questionnaires, providing logistical assistance to practice liaisons, analysing the survey results, and preparing the survey report. In addition, practice liaisons were given verbal instructions on the expectations for survey administration in the event that patients had any issues with responding to the survey

questions. This ensured a uniform approach in the responses given to patients, across the different practice's, for the same questions.

Questionnaire Design

Instrument

The survey instrument consists of three sections that cover different aspects of pregnant women's use of alcohol, tobacco and marijuana among pregnant women who sought prenatal care at their physician (Obstetrician-Gynecologist [OB-GYN] or General Practitioner [GP] providing antenatal care) in Bermuda. The instrument consists of 32 questions. The actual wording of the questions and response options is included in Appendix A of this report.

The sections covered in the questionnaire are:

1. The Alcohol Use Disorders Identification Test (AUDIT) - consists of 10 questions, plus two other questions on alcohol use.
2. Tobacco and Marijuana Use Identification Test- consists of 12 questions on tobacco and marijuana use and perceptions, plus four questions on the use of electronic cigarette devices.
3. Demographics- consists of three questions

The questions were adopted from the Alcohol Use Disorders Identification Test (AUDIT), a standardised tool¹ of the WHO's Department of Mental Health and Substance Dependence; in addition to standard tested questions on tobacco and marijuana use and perceptions. The AUDIT is a set of 10 simple questions on alcohol use that is designed to identify persons whose alcohol consumption has become hazardous or harmful to their health. The questionnaire has excellent construct validity and as such can be used to determine with high sensitivity and specificity hazardous alcohol use; presence or emergence of alcohol dependence; and harmful alcohol use. The section on tobacco and marijuana comprises of 17 questions that sought to identify the respondents' consumption patterns and their perception of harm and intentions to use tobacco (cigarettes) and marijuana, whether by way of electronic vaping device or not, in the future.

Non-sampling errors were minimised by including skip instructions, which allowed patients to skip questions that were not to be responded to if they were irrelevant. This method enhanced the timeliness of data collection and the accuracy of the data. All of the questionnaire items were pre-coded.

Survey Administration

Consent

Respondent's participation in the survey was voluntary. Permission, therefore, had to be sought from each practitioner to allow their clients to be surveyed; all of whom agreed to their respective practices', and by extension clients' participation in the survey. In addition, the government-funded clinic was also targeted and approval, including that of the Bermuda Research Ethics Committee, was subsequently given for the survey administration. This method was chosen over the active consent procedure as it was thought that the survey participation rate would not be seriously affected in this way. A letter was sent to each practice liaison explaining the purpose of the survey, the anonymity and confidentiality of the patient's participation, that non-participation will have no effect on their doctor's appointment, among other relevant information. Practice liaisons had one week in which to return, via email, the

¹ See http://whqlibdoc.who.int/hq/2001/WHO_MSD_MSB_01.6a.pdf

consent to participate in the survey.

Pre-Administration

Patient numbers were received from each office in order to obtain an accurate count for the collation of survey materials such as; questionnaires, pencils, and client information forms. The questionnaires were then packaged in individual envelopes and collated in boxes, accompanied by relevant control forms and instructions for the survey administrators (practice liaisons). The boxes containing the materials for the survey were delivered to the doctor's offices prior to the scheduled survey administration date.

Administration

Upon check-in to the doctor's office, each obstetrics patient was given an envelope which included; a pencil, the questionnaire, and a client information sheet. The survey required approximately 5 minutes to complete and was done so in the examination room while the patient was waiting for their appointment to begin.

Both the liaison and the written instructions on the front of the questionnaire assured patients that the survey was anonymous and confidential. Once the survey was completed all patients were then asked to place the completed questionnaire in the envelope, which can be sealed to preserve confidentiality. Cooperation was good across all of the doctor's offices. At the end of the survey administration period, the contact person ensured that all of the questionnaires were packed in the initial box given for resubmission to the DNDC.

Post Administration

The completed questionnaires were collected by the DNDC. They were retrieved from the envelopes, counted, numbered, and batched for data entry.

Data Quality

Response Rate

Of the target population, a total of 224 pregnant women responded to the survey, accounting for a response rate of 63.1%. Though there were no refusals, it was decided that the difference between the original patient numbers given versus those who responded was mainly due to a couple of reasons. The first being, that the original numbers were estimates and the second was that some of the patients were originally double counted (i.e. one patient may have had a doctor's visit once a week for each of the three weeks of the survey process, depending on how far along the patient is in her pregnancy). For the purposes of this survey patients were only to complete one survey each.

Validation

In order to ensure that a high level of accuracy was attained in data entry, checks were made for logical inconsistencies. For example, a person who reported that they never had a drink containing alcohol should have not responded to the questions about alcohol in Section I of the questionnaire, but instead should have skipped to Section II on Tobacco and Marijuana Use. A tenth of the questionnaires (approximately 23) were validated by a DNDC staff member. This process was completed by randomly selecting questionnaires for verification. The DNDC staff member reviewed every response in each of the selected questionnaires and corrected any error(s), which may have been entered.

Missing Data

For instances of missing data, imputations were not made as it would be difficult to assign responses founded on self-report. Hence, missing data was treated as “no answer” or “not stated” and forms part of the total response.

Data Processing

Responses to the survey questions were captured directly onto the questionnaire by the respondents. Data entry was undertaken by a DNDC staff member. Steps were taken to ensure confidentiality and reliability of the process and outcome. The process spanned approximately 1 week (one day to create the data entry screen; three days for manual data entry; and one day for data validation, cleaning, and documentation of the data entry steps and anomalies). No coding of the questionnaire was required since the questions were pre-coded. To guard against transcription errors, care was taken in entering the responses from the paper questionnaires into the computer. Data entry was done directly into SPSS for data processing and integrated into Microsoft Excel for the validation process. The captured data file was then cleaned and approximately 10% (or 23) of the questionnaires were validated.

The DNDC staff member then performed the data analyses for this report. This included the generation of appropriate tables and descriptive statistics for inclusion in this final report.

Data Analysis

For the purpose of this report, analyses of the survey results were done for each section of the questionnaire and were limited to descriptive analysis of the responses to all questions by the participants. Frequencies of percentages were generated for all questions. The percentages can be interpreted as the proportion of pregnant women who feel a certain way about a statement or question. There were instances where a small number or proportion of pregnant women provided responses. As standard practice, questions containing less than 10 responses would not be reported as they do not provide meaningful information and are considered unstable from a statistical perspective. With the small number of responses received, for this survey, there was an exception made to the standard practice, to accommodate smaller numbers (the smallest number reported in tables is one).

Since all pregnant women, who were currently under the care of an OB-GYN during the snapshot period, in Bermuda participated in this survey, this includes the full range of pregnant women surveyed. As such, the overall survey results can be interpreted as representing the attitudes and behaviours of the pregnant population as a whole.

The results are presented for the overall surveyed population and, in some instances, by a specific population characteristic, illustrated by using tables and charts accompanied by summary statements. IBM SPSS v. 23 software was used for the analysis of survey data. Charts were created in Microsoft Excel and tables and text were prepared in Microsoft Word.

Confidentiality

All information provided by the patient is held by the staff of the practice under doctor-patient confidentiality. The survey was anonymous, in that a patient was not required to provide her name or any other identifying information. All information provided to the DNDC is held in the strictest confidence, and in keeping with the DNDC Act of 2013. In reporting, it is the Department’s standard practice to present data in aggregated form where no one individual’s information can be recognised.

SURVEY PARTICIPANTS

Demographic Profile of Survey Participants

A total of 224 persons participated in the survey; representing women presenting for prenatal care during the period August 17th to September 4th, 2020 and who completed the survey.

Overall, the number of responses represents approximately 100% of all pregnant women who were to be seen by their obstetricians during the three weeks of administering the survey (based on obstetrics records of the practitioners). A distinction is made between all pregnant women in Bermuda and all pregnant women presenting for prenatal care during the snapshot period of the three weeks of survey administration. It should be noted that not all pregnant women in Bermuda would have presented for prenatal care during the survey administration period as their visit is usually dependent on how far along they are with their pregnancy. For instance, some women are seen every four weeks and as such their doctor's visit may or may not have been during the period of the survey.

Age

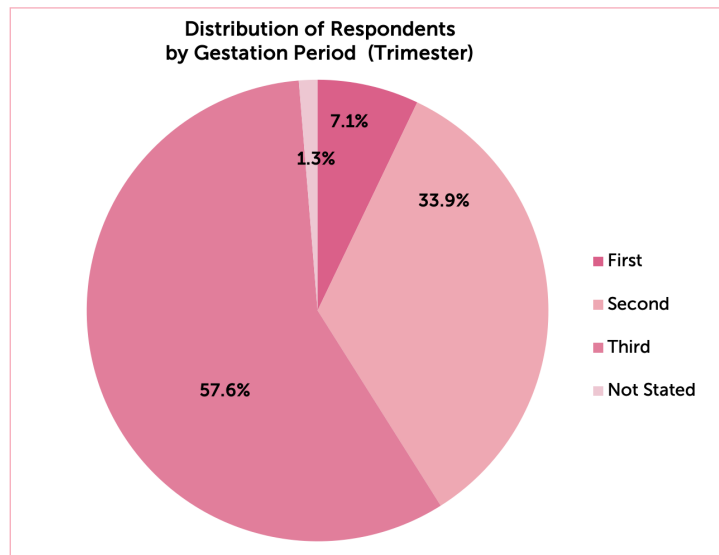
Participants' ages ranged from 19 to 46 years. The average age of survey respondents was 32.0 years. Nearly one-third of the participants (32.1%) were between the ages 30 and 34 years. A significant proportion (62.0%), or just over six in 10, of the women surveyed were in their thirties. Pregnant teenagers account for 0.9% of all respondents, while women over 40 years account for 8.5%.

Age Group (Years)	Respondents	
	n	%
15 – 19	2	0.9
20 – 24	31	13.8
25 – 29	33	14.7
30 – 34	72	32.1
35 – 39	67	29.9
40+	19	8.5
Total	224	100.0

Gestation

Gestation is the period of time between conception and birth. During this time, the baby grows and develops inside the mother's womb. Pregnancy or gestational age (describing how far along is the pregnancy) is measured in trimesters totaling approximately 40 weeks. The first trimester of pregnancy is week one through week 12, or about three months. The second trimester is week 13 to week 26. The third trimester of pregnancy spans from week 27 to the birth.

Most women surveyed (57.6%) were in their third trimester of pregnancy; while 33.9% were in their second trimester, followed by 7.1% of them who were in their first trimester. Three women (1.3%) did not indicate their gestational period.



Age Group (Years)	Respondents by Trimester									
	1 st		2 nd		3 rd		Not Stated		Total	
	n	%	n	%	n	%	n	%	n	%
15 – 19	-	-	-	-	2	0.9	-	-	2	0.9
20 – 24	3	1.3	6	2.7	21	9.4	1	0.4	31	13.8
25 – 29	3	1.3	11	4.9	19	8.5	-	-	33	14.7
30 – 34	3	1.3	27	12.1	42	18.8	-	-	72	32.1
35 – 39	6	2.7	26	11.6	35	15.6	-	-	67	29.9
40+	1	0.4	6	2.7	10	4.5	2	0.9	19	8.5
Total	16	7.1	76	33.9	129	57.6	3	1.3	224	100.0

Parity

Parity, or the number of times a woman has been pregnant (for 20 or more weeks regardless of whether the infant is dead or alive at birth), does not include the current pregnancy. Parity, or the number of previous pregnancies, has been shown to impact the long-term health status of women and pregnancy outcomes, specifically birth weight, for some groups, or excessive maternal postpartum weight retention and iron deficiency.

In this survey, women were asked whether the current pregnancy was their first. Of the 224 respondents, 40.2%, or four in ten women, said 'Yes' while 58.9%, or about three in five women, responded 'No'. A small proportion of respondents who were teenagers (0.4%) indicated that the current pregnancy was their first. Similarly, those women in the 20-29 age group, reported that for most (16.1%) they have not had a previous pregnancy. In contrast, for all of the other age groups, more women reported that they have previously been pregnant. Interestingly, there were 1.3% of pregnant women 40 years or older who indicated that the current pregnancy was their first.

SURVEY RESULTS: ALCOHOL USE DISORDERS IDENTIFICATION TEST (AUDIT)

Survey Results

This section of the report provides the survey findings by the following sub-sections: alcohol use disorders identification test (AUDIT), tobacco use, marijuana use, and vaping.

Consumption Patterns

The basic assumption in the interpretation of the responses to the questionnaire is that respondents identified the reference time period to which the questions refer as being present or, in other cases, up to a year prior to the survey administration.

Just under half, of the respondents (44.2%) indicated that they had never had a drink containing alcohol. This proportion decreased from the 48.7% reported in the 2015 survey. About three in 10 women (29.0%) indicated use 'monthly or less' (30.7% in 2015); 12.9% said they drank alcohol two to four times a month (12.2% in 2015); 12.5% indicated having a drink containing alcohol between 'two to three times a week', a large increase from the 8.4% recorded in 2015; and 1.3% indicated having a drink containing alcohol '4 or more times a week', with no one reporting this in 2015.

When asked about "How many drinks containing alcohol do you have on a typical day when you are drinking", 82 women (36.6%) said '1 or 2'; a further 32 (14.3%) said '3 or 4'; 7 respondents (3.1%) indicated they drank '5 or 6' such drinks, while 2 respondents indicated that they drank 7 or more drinks. One result is significantly different from that reported in 2015, where 7.6% (n = 18) said they drank '3 or 4' drinks.

Drinking Frequency	Respondents	
	n	%
Never	99	44.2
Monthly or less	65	29.0
2 to 4 times a month	29	12.9
2 to 3 times a week	28	12.5
4 or more times a week	3	1.3
Total	224	100.0

Number of Drinks	Respondents	
	n	%
1 or 2	82	36.6
3 or 4	32	14.3
5 or 6	7	3.1
7, 8, or 9	1	0.4
10 or more	1	0.4
Not Stated	2	0.9
Total	125	55.8

Hazardous alcohol intake is defined as a level of consumption or pattern of drinking which, if it persists, is likely to result in harm.

Harmful alcohol intake is defined as that causing harm to the psychological or physical well-being of the individual.

Binge-drinking is defined as drinking more than six drinks on one occasion.

Binge Drinking

To estimate the prevalence of binge drinking, respondents were asked 'How often do you have six or more drinks on one occasion'. Slightly more than one-third (36.2% or 81), or one in three women, indicated that they never engage in binge drinking. In contrast, 44 women indicated that they do consume six or more drinks on one occasion. This would suggest a binge-drinking rate of 19.6%; a marked increase of 5.3 percentage points above the 14.3% (n=34) observed in 2015. This further means that there is a strong likelihood of hazardous or harmful alcohol consumption by at least 19.6% of the women surveyed.

Binge Drinking	Respondents	
	n	%
Never	81	36.2
Less than monthly	33	14.7
Monthly	9	4.0
Weekly	2	0.9

Binge Drinking and Gestation Period

Among those pregnant women identified as binge-drinkers (n = 44), 9.1% were in their first trimester of pregnancy, 34.1% in the second, and 56.8% were in their third trimester. This is equivalent to 1.8%, 6.7%, and 11.2% of all surveyed pregnant women, respectively, by trimester.

Binge Drinking	Trimester					
	1 st		2 nd		3 rd	
	n	%	n	%	n	%
Yes	4	9.1	15	34.1	25	56.8
No*	8	10.0	30	37.5	42	52.5

* One (1.2%) woman who responded 'No' did not indicate her gestation period.

The age among those considered as binge drinkers ranged from 19 to 41 years but was most prevalent among the 30-34 (n=15) year age group (34.1% of binge drinkers or 6.7% of all respondents).

Four participants indicated that someone was injured as a result of her drinking; with only two indicating this occurrence within the past year.

Drinking and Pregnancy

The participants who reported that they consume alcohol were asked if they have done so since becoming pregnant. There were about one in four such respondents (26.4% or 33); equivalent to 14.7% of all survey respondents who said that they have had a drink containing alcohol since being pregnant.

	Had a drink containing alcohol since pregnant (n = 125)		Stopped drinking because of pregnancy (n = 125)	
	n	%	n	%
Yes	33	26.4	102	81.6
No	90	72.0	17	13.6
Not Stated	2	1.6	6	4.8

At the same time, just over one in 10 persons who reported to have consumed alcohol (13.6% or 17) indicated that they did not stop drinking because they became pregnant. This is equivalent to 7.6% of the total number of respondents.

Interpretation of the AUDIT Scores

A look at the AUDIT scores (total score on Questions 1 to 10 on the questionnaire), showed that 4.2% (n = 9) of the pregnant women scored eight or more; indicating hazardous or harmful alcohol use, as well as possible alcohol dependence. The total AUDIT score reflects a patient's level of risk related to alcohol. Higher scores simply indicate greater likelihood of hazardous and harmful drinking. However, such scores may also reflect greater severity or risk of alcohol problems and dependence, as well as a greater need for more intensive treatment.

Criteria ²	Respondents	
	n	%
Overall AUDIT Score		
Low Risk	Q1 – Q10 (score of 0 to 7)	116 51.8
High Risk	Q1 – Q10 (score of 8 or more)	9 4.2
Hazardous Consumption Level	Q2 – Q3 (score of 1 or more)	56 25.0
Alcohol Dependence	Q4 – Q6 (score of 1 or more)	9 4.2
Alcohol-Related Harm	Q7 – Q10 (score of 1 or more)	22 9.8
Past Alcohol Problem	Q9 - Q10 (score of 1 or more)	6 2.7

A more detailed interpretation of the patients' total score may be obtained by determining on which questions points were scored. In general, a score of one or more on Question 2 or Question 3 indicates consumption at a hazardous level. The results showed that 25.0% (n = 56) of the pregnant women reported a hazardous level of alcohol consumption.

Points scored above zero on Questions 4 to 6 (especially weekly or daily symptoms) imply the presence or onset of alcohol dependence. There were 4.2% of the respondents (n = 9) whose scores on these questions would suggest the emergence or presence alcohol dependence.

Points scored on Questions 7 to 10 indicate that alcohol-related harm is already being experienced. The scores on these questions reflect that 9.8% of the participants (n = 22) were in this state.

²T. F. Babor, J. C. Higgins-Biddle, J. N. Saunders, M. G. Monteiro. (2001). *The Alcohol Use Disorders Identification Test. Guidelines for Use in Primary Care. Second Edition.* World Health Organisation: Department of Mental Health and Substance Abuse Dependence.

Scores on Questions 9 and 10 were reviewed to determine whether patients gave evidence of a past problem (that is, 'yes, but not in the past year'). Even in the absence of current hazardous drinking, positive responses on these items should be used to discuss the need for vigilance by the patients. There were 2.7% (n = 6) patients who fell within this category.

TOBACCO USE

The results showed that, overall, 9.8% of the pregnant women surveyed (n = 22) indicated that they used tobacco (cigarette or some other form of tobacco product) in the past year (prior to being surveyed). However, a much smaller proportion (0.9% or n = 2) of pregnant women reported being current users, that is, used cigarettes in the 30-day period prior to the survey.

Among the current tobacco users, half (50.0% or n = 1) indicated that they were pregnant before compared to 50.0% (n = 1) who were having their first pregnancy. Similarly, 50.0% or one-half (n = 1) were in their second trimester and the remaining were in their third trimester. This, therefore, means that there were a few persons who did smoke while pregnant.

	Annual Use (Past Year)				Current Use (Past 30 Days)			
	Yes	No	Yes	No	Yes	No	Yes	No
TOTAL	22	100	192	100	2	100	210	100
Age Group								
15 – 19	-	-	1	0.5	-	-	1	0.5
20 – 24	3	13.6	24	12.5	-	-	29	13.8
25 – 29	3	13.6	28	14.6	-	-	32	15.2
30 – 34	7	31.8	63	32.8	1	50.0	69	32.9
35 – 39	7	31.8	60	31.3	1	50.0	61	29.0
40+	2	9.1	16	8.3	-	-	18	8.6
Gestation (Trimester)								
1 st	-	-	15	7.8	-	-	16	7.6
2 nd	9	40.9	65	33.9	1	50.0	72	34.3
3 rd	13	59.1	109	57.8	1	50.0	119	56.7
Parity (First Pregnancy)								
Yes	10	45.5	75	9.1	1	50.0	87	41.4
No	12	54.5	115	59.9	1	50.0	121	57.6

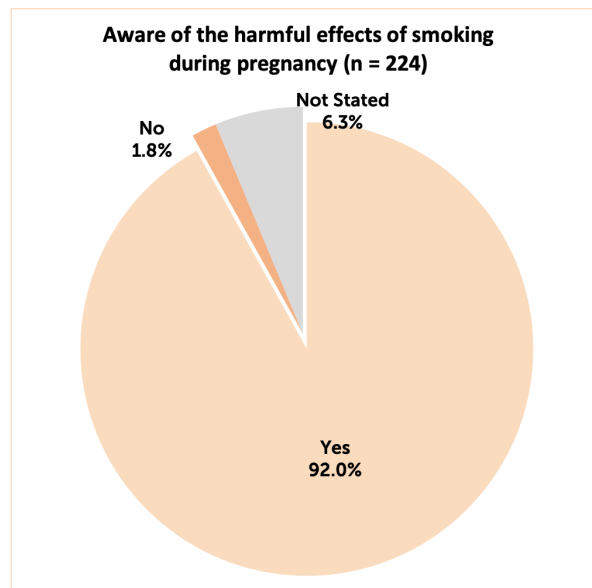
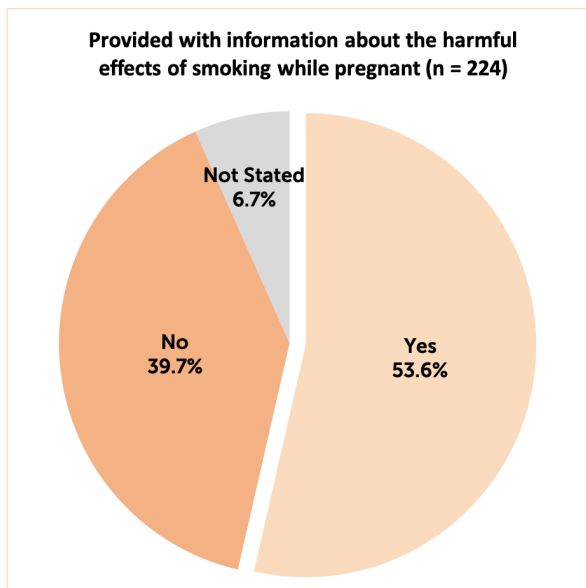
Where numbers and percentages do not add up to the referenced totals mean that the difference is accounted for by not stated responses.

For those respondents who indicated cigarette use in the past year (n = 22), the reported frequency of smoking less than one cigarette a day accounted for 5.4% of all participants; one cigarette a day was 0.9%; two to five cigarettes a day was 3.1%; and six to 10 cigarettes a day was 1.8%. At the same time, there were 1.8% (n = 4) of women who said ‘yes, I sometimes feel like having a cigarette first thing’.

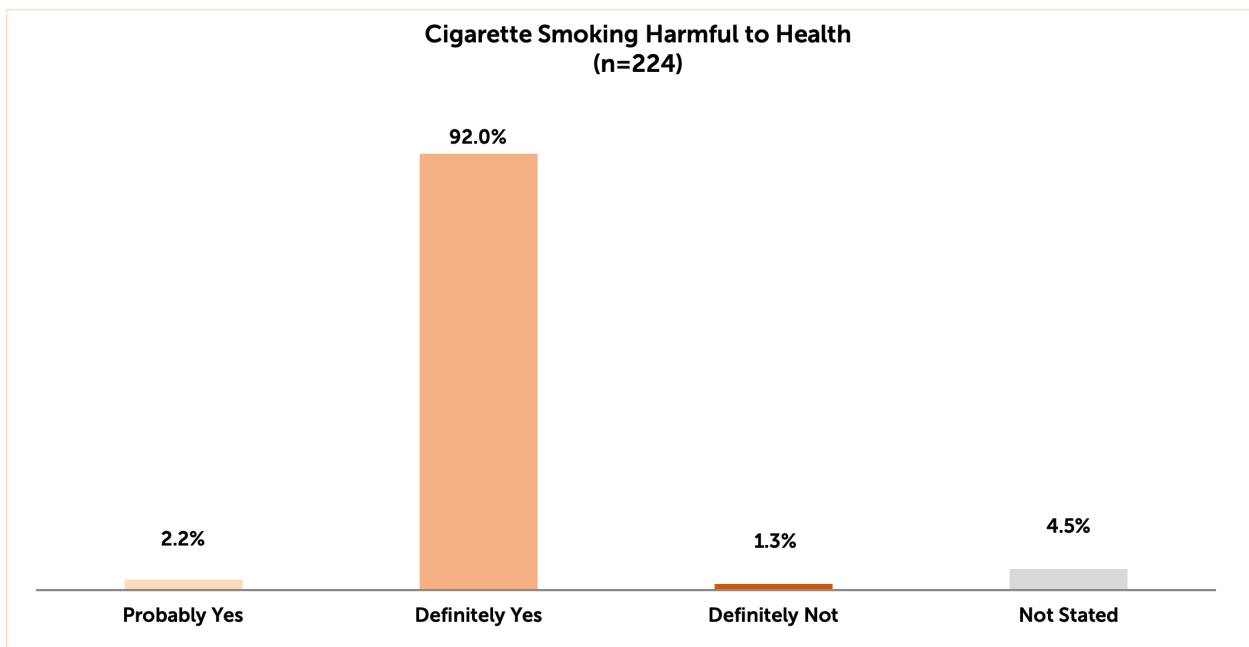
Overall, there were 20 women who smoked cigarettes in the past year but did not smoke in the past 30 days. Further, respondents were asked if they had stopped smoking because they became pregnant and 19.6% of all participants or 43.2% (n = 19) of those who indicated use of cigarettes in the past year, reported a cessation of smoking because of becoming pregnant. The majority of the women who stopped smoking were currently in their third trimester (n=27) while there were still a few who were in their first and second trimesters (n=16).

Knowledge and Perception of Harm

Slightly over half of the respondents (53.6%) indicated that their doctor or other health provider had discussed with them the harmful effects of smoking cigarettes since becoming pregnant. This, therefore, means that there were nearly four in 10 pregnant women (39.7%) who indicated that they had not been cautioned about the harmful effects of smoking by their doctor or other health provider.

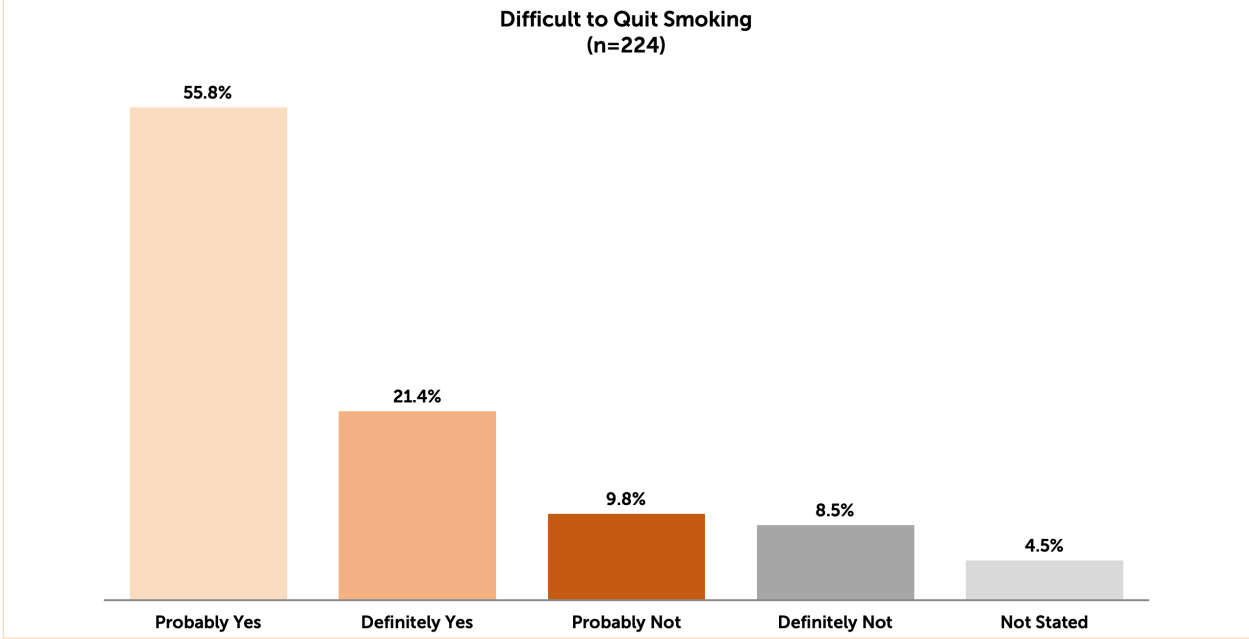


Nonetheless, the majority (92.0%) of pregnant women indicated that they were aware of the harmful effects of smoking during pregnancy. At the same time, when asked of their perception of cigarette smoking to their health, a large proportion of women (92.0%) reported that they definitely think that this habit is harmful. A seemingly small proportion (1.3%), but important nevertheless, thought that smoking was 'definitely not' harmful to their health.



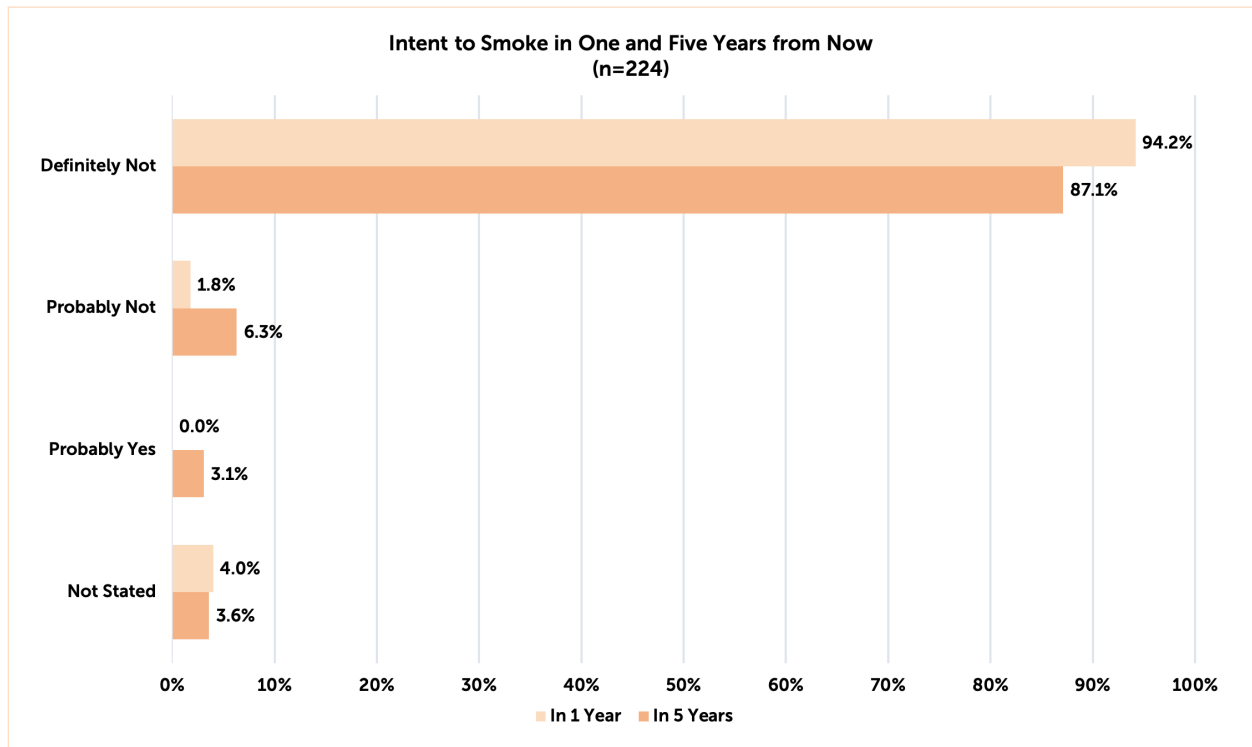
Perception of Quitting Smoking

Respondents were asked if they thought it would be difficult for someone to quit smoking once they had started. In response, slightly over one in five (21.4%) said 'definitely yes' and 55.8% said 'probably yes'. On the other hand, 8.5% of the participants did not think it would be difficult at all, and an additional 9.8% said it would 'probably not' be difficult.



Intention to Smoke

No one indicated an intention to smoke at any time during the next year. For the most part, the majority (94.2%) of respondents' stated intention was 'definitely not' to smoking cigarettes within the next 12 months.

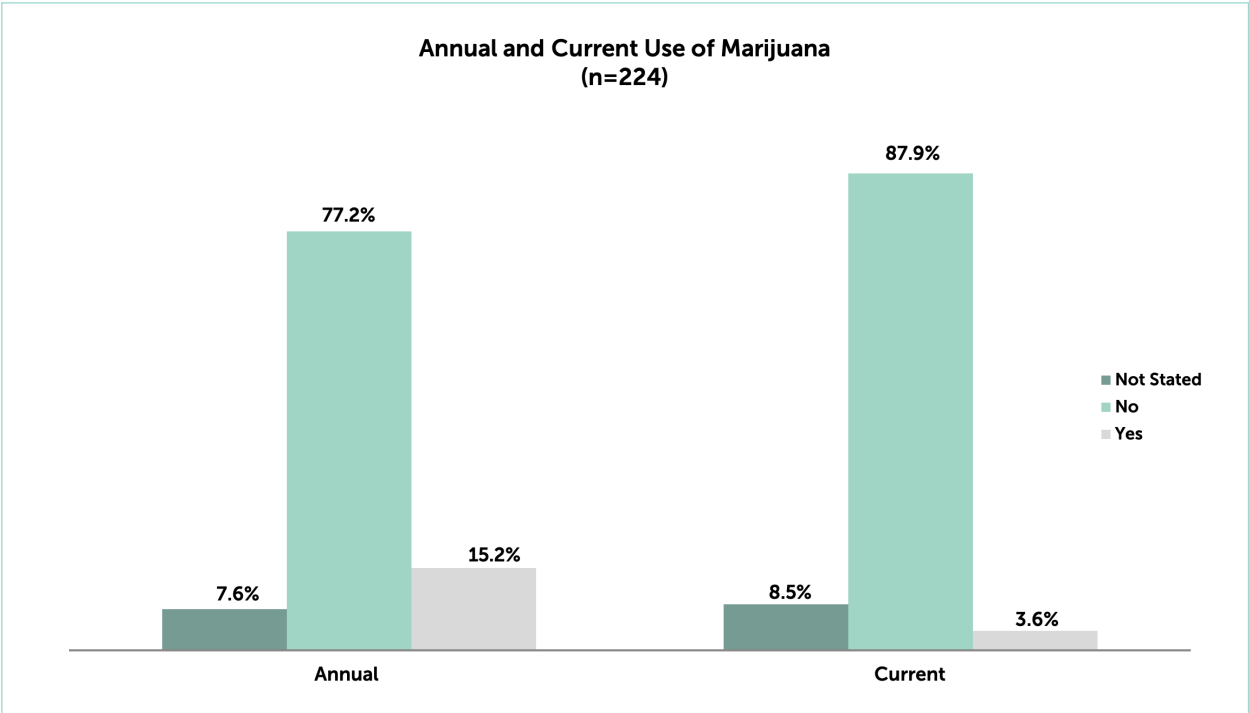


In comparison, the intention to not smoke cigarettes dropped to 87.1% of the respondents when the reference period changed to 'five years from now'. As such, there were more respondents who indicated 'probably yes' to smoking in five years' time, with no one indicating probable use in one year to 3.1% in five years.

The risk of a woman, who had stopped smoking because she became pregnant and with intentions of starting again, is almost nonexistent in that none of the persons who ceased smoking on account of pregnancy indicated the possibility of doing so in a years' time and a small proportion reporting their probable intention to smoke in five years' time. At the same time, there was only one person who indicated smoking in the current period and who also indicated the definite possibility of smoking in five years' time.

MARIJUANA USE

The survey respondents were asked if they had used marijuana in the past year (annual use) and in the past month (current use). About one in six (15.2%) women reported annual use of marijuana; while 3.6% indicated current use.



Of those (n = 34) who reported the use of marijuana in the past year, most (n = 18) were between the ages of 20 to 29 years; with majority being in their third trimester (n=18), followed by those being in their second and first trimester, respectively (n=13 and n=3). For many (n = 21) this was their first pregnancy. It is possible that those who indicated use of marijuana in the past year have used it sometime before they became pregnant.

In the current or past month reference period, eight persons reported use of marijuana; implying that 26 persons who smoked in the past 12 months no longer smoked in the past one month. Of the current marijuana users, most women were in their second trimester (n=5) with the remaining respondents reporting that they were in their third trimester (n=3). Five of the current marijuana user's reported that this was not their first pregnancy; with an equal number (n=5) stating that they were between the ages of 30 to 39, while the other three were 24 years of age and younger. This, therefore, means that there were a few persons who are currently using marijuana while being pregnant (at least those in their second and third trimesters).

USE OF ELECTRONIC VAPING DEVICE

During this round of the survey, four additional questions were included to assess the use of electronic devices such as; e-cigarettes and hookah’s amongst pregnant women. E-cigarettes are known as battery-operated cigarettes that turn chemicals, including nicotine, into a vapor, which is then inhaled. E-cigarettes contain substances that are harmful to a developing baby, like heavy metals, flavorings, and cancer-causing chemicals.³

The survey respondents were asked if they had used e-cigarettes or electronic nicotine products in the past year (annual use). A small proportion; 3.1% or seven women reported annual use of e-cigarettes or electronic nicotine products. In terms of frequency of use, three or 1.3% of survey respondents stated that during the three months before they got pregnant, on average, they used e-cigarettes or electronic nicotine products one day a week or less. As it relates to use of a hookah, nine women or 4.0% reported that they had used a hookah in the past year; with eight of those respondents stating that their frequency of use was one day a week or less.

Use of Vaping Device in the Last Year by Type of Device

	E-cigarettes or Electronic Nicotine		Hookah	
	Number	Percent (n=224)	Number	Percent (n=224)
Yes	7	3.1	9	4.0
No	213	95.1	210	93.8
Not Stated	4	1.8	5	2.2
Total	224	100.0	224	100.0

For those survey respondents who reported annual use of e-cigarettes or electronic nicotine products, most were between 35-39 years old (n=4); with an equal number indicating that this current pregnancy was their first and that majority (n=3) were in their third trimester. In terms of the women who reported annual use of a hookah (n=9), four were in the 20-24 age range; with a large proportion (77.8% or n=7) being in their third trimester of their pregnancy.

³ A. Little Caldwell, MD. (2019). E-Cigarettes Use During Pregnancy & Breastfeeding FAQs. American Academy of Pediatrics, Retrieved from <https://www.healthychildren.org/English/ages-stages/prenatal/Pages/E-Cigarette-Use-During-Pregnancy-Breastfeeding.aspx>.

Drinking Alcohol during Pregnancy

The total AUDIT score, consumption level, signs of dependence and present harm all should play a role in determining how to manage a patient. In most cases the total AUDIT score will reflect the patient's level of risk related to alcohol. In general health care settings, most patients will score under the cut-offs and may be considered to have low risk of alcohol-related problems as was evident from the results of this survey. A smaller, but still significant, segment of the targeted population scored above the cut-offs but recorded most of their points on the first three questions. A much smaller proportion scored very high, with points recorded on the dependence-related questions as well as exhibiting alcohol-related problems. As yet there has been insufficient research to establish precisely a cut-off point to distinguish hazardous and harmful drinkers (who would benefit from a brief intervention) from alcohol dependent drinkers (who should be referred for diagnostic evaluation and more intensive treatment). This is an important question because screening programmes designed to identify cases of alcohol dependence are likely to find a large number of hazardous and harmful drinkers if the cut-off of 8 is used. These patients need to be managed with less intensive interventions. In general, the higher the score on the AUDIT, the greater the sensitivity in finding persons with alcohol dependence. For those participants who scored between 8 and 15 it is most appropriate for simple advice focused on the reduction of hazardous drinking be provided, especially given their pregnancy status.

Drinking alcohol during pregnancy can cause physical and mental birth defects. At least half of all pregnancies are unplanned, and thus an estimated one quarter of all newborns (about 100,000 infants in a year in Canada) is exposed to some alcohol during early gestation.⁴ Although many women are aware that heavy drinking during pregnancy can cause birth defects, many do not realize that moderate—or even light—drinking also may harm the foetus. In fact, no level of alcohol use during pregnancy has been proven safe.

When a pregnant woman drinks, alcohol passes swiftly through the placenta to her baby. In the unborn baby's immature body, alcohol is broken down much more slowly than in an adult's body. As a result, the alcohol level of the baby's blood can be even higher and can remain elevated longer than the level in the mother's blood. This sometimes causes the baby to suffer lifelong damage. It is known that drinking alcohol in the first three months of pregnancy can cause the baby to have abnormal facial features. Growth and central nervous system problems (e.g., low birthweight, behavioral problems) can also occur from drinking alcohol anytime during pregnancy. Counselling of women who drink small amounts of alcohol before realising they had conceived is a complex but important task, especially given that 14.7% of the respondents (or 26.4% of the alcohol users) said that they still drank alcohol since finding out they were pregnant. It is clear from research that substantial prenatal exposure, either heavy daily or weekend binge drinking, is often seen in children diagnosed with classic FAS.

What are the hazards of drinking alcohol during pregnancy?

The National Institute on Alcohol Abuse and Alcoholism has suggested that Fetal Alcohol Syndrome (FAS) prevalence in the general population of the U.S. can be estimated to be

⁴ K. Gideon, I. Nulman, A. E. Chudley, & C. Lockie. (2003). Fetal alcohol spectrum disorder. *Canadian Medical Association Journal*, 169(11), 1181-1185, p. 1183.

between 0.5 and 2 per 1,000 births, with FAS affecting at least 40,000 newborns each year.⁵ FAS occurs in about 6.0% of the babies born to women who are alcoholics or chronic alcohol abusers. These women either drink excessively throughout pregnancy or have repeated episodes of binge drinking. The exact amount of alcohol that causes this condition is unknown, although binge drinking is known to be particularly harmful. Foetal alcohol syndrome, however, is a rare condition, which only occurs if there is persistent alcohol consumption during pregnancy.

FAS is one of the most common known causes of mental retardation, and the only cause that is entirely preventable. Babies with classic FAS are abnormally small at birth and usually do not catch up on growth as they get older. They may have small eyes, a short or upturned nose and small, flat cheeks. Their organs, especially the heart, may not form properly. Many babies with FAS also have a brain that is small and abnormally formed, and most have some degree of mental disability. Many have poor coordination and a short attention span and exhibit behavioral problems. The effects of FAS last a lifetime. Even if not mentally retarded, adolescents and adults with FAS have varying degrees of psychological and behavioral problems and often find it difficult to hold down a job and live independently.

What other problems can be caused by drinking alcohol?

Consuming alcohol during pregnancy increases the risk of miscarriage, low birth-weight and stillbirth. Studies have shown that more than 8 percent of women have reported binge drinking at some time during pregnancy in the United States—most typically during the first trimester⁶. It is important to note that, heavy drinkers are two to four times more likely to have a miscarriage between the fourth and sixth months of pregnancy than are nondrinkers. Fetal demise occurring after 20 weeks gestation, or stillbirth, affects 6.22 of every 1,000 pregnancies in the United States each year. This pregnancy outcome may occur more frequently among those who consume alcohol during pregnancy. Early studies showed that alcohol intake of 14 or more drinks per week during pregnancy was associated with stillbirth.⁷

Smoking during Pregnancy

According to the World Health Organization, about 20% of women in developed countries and about 9% in developing countries smoke.⁸ Many of these women smoke while they are pregnant. This is a major public health problem because, not only can smoking harm a woman's health, but smoking during pregnancy can lead to pregnancy complications and serious health problems in newborns. Cigarette smoke contains more than 2,500 chemicals. It is not known for certain which of these chemicals are harmful to a developing baby. However, both nicotine and carbon monoxide are believed to play a role in causing adverse pregnancy outcomes.

How can smoking harm the newborn?

During the sensitive periods before and during pregnancy, fetal development can be affected by maternal health behaviour, such as smoking. Experts have warned that tobacco smoking by pregnant women may adversely affect the developing fetus. The more a pregnant woman smokes, the greater the risk to her baby. Smoking while being pregnant causes chemical changes to the DNA of a foetus detectable from as early as 12 weeks and may predispose children born to smokers to a range of health conditions which last throughout life. It is linked to numerous negative outcomes, including low birth weight, sudden infant death syndrome (SIDS), and increased risk for attention deficit disorder, conduct disorder, and nicotine use in offspring. It also confirms previous research that babies born to moms who smoked when

⁵ P. May, & P. Gossage, P. (2001). Estimating the prevalence of fetal alcohol syndrome: A summary. *Alcohol Research and Health*, 25(3), 159-167, p. 160.

⁶ Ethen, M. K., Ramadhani, T. A., Scheuerle, A. E., Canfield, M. A., Wyszynski, D. F., Druschel, C. M., Romitti, P. A., & National Birth Defects Prevention Study (2009). Alcohol consumption by women before and during pregnancy. *Maternal and child health journal*, 13(2), 274-285. <https://doi.org/10.1007/s10995-008-0328-2>

⁷ Bailey, B. A., & Sokol, R. J. (2011). Prenatal alcohol exposure and miscarriage, stillbirth, preterm delivery, and sudden infant death syndrome. *Alcohol research & health: the journal of the National Institute on Alcohol Abuse and Alcoholism*, 34(1), 86-91.

⁸ J. Mackay & M. Eriksen. The Tobacco Atlas 2002. World Health Organisation. p. 26.

pregnant have an increased risk of nicotine addiction in adulthood.

Maternal smoking before or during pregnancy is one of the common adverse health behaviors. Research has shown that when controlling for genetic and familial confounding factors it shows that maternal smoking during pregnancy is negatively related to a child's birth weight. Similarly, a large-sample study of sibling pairs also showed that a mother who smoked during one pregnancy but not the other increases the probability of low birth weight (LBW) for only the child who was conceived during a time period in which the mother was smoking.⁹

Low birth-weight (weight of a newborn measured immediately after birth which is less than 5.5 pounds, or 2500 grams) can result from poor growth before birth, preterm delivery or a combination of both. Smoking has long been known to slow fetal growth. Studies also suggest that smoking increases the risk of preterm delivery (37 weeks of gestation). Premature and low-birth-weight babies face an increased risk of serious health problems during the newborn period, chronic lifelong disabilities (such as cerebral palsy, mental retardation and learning problems) and even death.

However, if a woman stops smoking by the end of her first trimester of pregnancy, she is no more likely to have a low-birth-weight baby than a woman who never smoked. Even if a woman has not been able to stop smoking in her first or second trimester, stopping during the third trimester can still improve her baby's growth.

How can vaping harm the newborn?

In recent years vaping, through the use of e-cigarettes, has become an international public health crisis. This fairly new epidemic, known as vaping, is the inhaling of a vapor which is created by an electronic cigarette or other vaping devices. These battery-powered smoking devices contain cartridges that are filled with liquids such as: nicotine, tetrahydrocannabinol (THC) and cannabinoid (CBD) oils, as well as other substances, flavorings, and additives. THC is the psychoactive mind-altering compound of marijuana that produces the "high." The liquids are heated into a vapor which is then inhaled creating the term vaping.¹⁰

In terms of the impact on pregnant women, smoking, of any kind, has been proven to be harmful to the mother and baby's health. While the number of people who smoke traditional cigarettes has declined in recent years, the growing popularity of e-cigarettes threatens to undo this progress – and risk babies' exposure to harmful chemicals from smoking. It is important to note, that e-cigarettes also contain other substances that are harmful to a developing baby, like heavy metals, flavorings, and cancer-causing chemicals. In many of the research efforts conducted, it has been identified that many smoking campaigns that advertise the use of vaping devices, do so on the merit that they support the idea of smoking cessation, but that is simply not correct. The U.S. Preventive Task Force (USPTF) recently concluded that "current evidence is insufficient to recommend electronic nicotine delivery systems (e-cigs) for tobacco cessation in adults, including pregnant women."¹¹

The American Academy of Pediatrics (AAP) highlights a number of negative effects that vaping has on a developing fetus and newborn baby, noting that much of the research in this area has lagged behind the quick rise in e-cigarette use. In addition to those effects stated under use of nicotine the AAP also note the risk of miscarriage's, abnormal lung function and respiratory infections such as bronchitis and pneumonia, as well as chronic ear infections. In terms of

⁹ Zhang, W. & Tse-Chuan, Y. (2019). Maternal Smoking and Infant Low Birth Weight: Exploring the Biological Mechanism Through the Mother's Pre-pregnancy Weight Status. Retrieved from <https://link.springer.com/article/10.1007/s11113-019-09554-x>

¹⁰ D. Hammond, J.L. Reid, V.L. Rynard, G.T. Fong, K.M. Cummings, A. McNeill et al. (2019). *Prevalence of Vaping and Smoking among Adolescents in Canada, England, and the United States: Repeat National Cross Sectional Surveys*. BMJ 2019; 365: 12219. <http://bmj.com/content/365/bmj.12219> (accessed February 3, 2020).

¹¹ A. Little Caldwell, MD. (2019). E-Cigarettes Use During Pregnancy & Breastfeeding FAQs. *American Academy of Pediatrics*, Retrieved from <https://www.healthychildren.org/English/ages-stages/prenatal/Pages/E-Cigarette-Use-During-Pregnancy-Breastfeeding.aspx>.

breastfeeding it should be noted that, inhaled nicotine or any other inhaled chemical enters a mother's blood through her lungs, and then easily passes into breastmilk. Research shows that these harmful chemicals, in a mother's breastmilk, can affect infant sleep patterns – raising the risk for blood sugar and thyroid problems that can lead children to become overweight. Chemicals inhaled via vaping is also thought to decrease milk supply in nursing mothers, by lowering levels of the breastmilk-stimulating hormone prolactin.¹²

Marijuana Use during Pregnancy

Current evidence indicates that cannabis use both during pregnancy and lactation, may adversely affect neurodevelopment, especially during periods of critical brain growth both in the developing fetal brain and during adolescent maturation, with impacts on neuropsychiatric, behavioural, and executive functioning. These reported effects may influence future adult productivity and lifetime outcomes. Prenatal marijuana exposure is also associated with an increased likelihood of a person using marijuana as a young adult, even when other factors that influence drug use are considered.

The foetus of a pregnant woman who uses marijuana becomes exposed to this substance via the placenta (the source of the baby's food and oxygen during pregnancy), through the umbilical cord, and into the baby's bloodstream. Marijuana smoked by a pregnant woman remains in the baby's fat cells for seven to 30 days and may alter the normal processes and trajectories of brain development. It can also be viewed as more harmful than cigarette smoking, due to the fact that marijuana smoke contains carcinogenic combustion products, including about 50% more benzoprene and 75% more benzanthracene (and more phenols, vinyl chlorides, nitrosamines, reactive oxygen species) than cigarette smoke.¹³

Smoking marijuana can affect the amount of oxygen and nutrients the baby receives, which may affect growth. Research has shown that some babies born to women who used marijuana during their pregnancies display altered responses to visual stimuli, increased tremulousness, and a high-pitched cry; which may indicate problems with neurological development. During the preschool years, marijuana-exposed children have been observed to perform tasks involving sustained attention and memory more poorly than their non-exposed counterparts. In the school years, these children are more likely to exhibit deficits in problem-solving skills, memory, and the ability to remain attentive. Studies have shown that pregnant women who use marijuana have a 2.3 times greater risk of stillbirth. Given the potential of marijuana to negatively impact the developing brain, the American College of Obstetricians and Gynecologists recommends that obstetrician-gynecologists counsel women against using marijuana while trying to get pregnant, during pregnancy, and while they are breastfeeding.

It should be noted that, surveillance of marijuana use among pregnant and postpartum women is critical to better understanding the relationship of marijuana use with birth outcomes, and postpartum experiences such as depression and breastfeeding.

¹² A. Little Caldwell, MD. (2019). E-Cigarettes Use During Pregnancy & Breastfeeding FAQs. *American Academy of Pediatrics*, Retrieved from <https://www.healthychildren.org/English/ages-stages/prenatal/Pages/E-Cigarette-Use-During-Pregnancy-Breastfeeding.aspx>.

¹³ National Institute on Drug Abuse (NIH). (2020). Marijuana Research Report. Retrieved from <https://www.drugabuse.gov/download/1380/marijuana-research-report.pdf?v=d9e67cbd412ae5f340206c1a0d9c2bfd>.

TAKE HOME MESSAGE



Alcohol

- » Although it is known that heavy drinking during pregnancy can cause birth defects, many do not realise that moderate—or even light—drinking also may harm the foetus.
- » Drinking excessively throughout pregnancy or having repeated episodes of binge drinking increases the risk of foetal alcohol syndrome (FAS).

Tobacco

- » Cigarette smoking during pregnancy adversely affects the health of both mother and child.
- » The risk for adverse maternal conditions (e.g., premature rupture of membranes, abruption placentae, and placenta previa) and poor pregnancy outcomes (e.g., neonatal mortality and stillbirth, preterm delivery, sudden infant death syndrome, and lower birth weight for infants carried to term) is increased by maternal cigarette smoking.
- » The adverse effects of cigarette smoking may occur in every trimester of pregnancy.

Marijuana

- » Marijuana can affect foetal and infant development and may cause miscarriage.
- » Prenatal marijuana use can alter genes and biological signals critical to the formation of a normal placenta during pregnancy and may contribute to pregnancy complications like preeclampsia, and is linked to premature births, small birth size, difficult or long labour, and an increase in newborn jitteriness.
- » Using marijuana during pregnancy could affect a baby's brain development by interfering with how brain cells are wired. Prenatal cannabis disrupts synapses [nerve connections] critical for higher order executive and cognitive function. The brain may be particularly sensitive to THC (delta-9-tetrahydrocannabinol) during early development, when neurons are forming critical connections.
- » The effects of prenatal marijuana exposure can have long-term effects on infants and children, such as having trouble paying attention or learning to read, and could even last into adulthood. The drug could have direct effects, or it could sensitize the brain to future drug exposure or neuropsychiatric illnesses.
- » Marijuana is never safe during pregnancy and it can harm the baby at any stage.

Vaping

- » Vaping is not a method of smoking cessation and should not be used as such.
- » Inhalation of nicotine or other types of addictive chemicals has been proven to have harmful and long-lasting effects on the infant and the mother.
- » Due to the lack of regulation, the chemical compounds in e-cigarettes can vary between brands increasing the need for increased prevention programmes around the negative impacts of vaping.

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PATIENT: Alcohol and drug use can affect your health and can interfere with certain medications and treatments. It is therefore important that we ask some questions about your use of alcohol, tobacco (cigarette), and marijuana. Your answers will remain confidential so please be honest. Place a tick (✓) in the one box that best describes your answer to each question.

I: The Alcohol Use Disorders Identification Test (AUDIT)	
<p>1. How often do you have a drink containing alcohol?</p> <p>0 <input type="checkbox"/> never [Go to Section II]</p> <p>1 <input type="checkbox"/> monthly or less</p> <p>2 <input type="checkbox"/> 2 to 4 times a month</p> <p>3 <input type="checkbox"/> 2 to 3 times a week</p> <p>4 <input type="checkbox"/> 4 or more times a week</p>	<p>6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?</p> <p>0 <input type="checkbox"/> never</p> <p>1 <input type="checkbox"/> less than monthly</p> <p>2 <input type="checkbox"/> monthly</p> <p>3 <input type="checkbox"/> weekly</p> <p>4 <input type="checkbox"/> daily or almost daily</p>
<p>2. How many drinks containing alcohol do you have on a typical day when you are drinking?</p> <p>0 <input type="checkbox"/> 1 or 2</p> <p>1 <input type="checkbox"/> 3 or 4</p> <p>2 <input type="checkbox"/> 5 or 6</p> <p>3 <input type="checkbox"/> 7, 8, or 9</p> <p>4 <input type="checkbox"/> 10 or more</p>	<p>7. How often during the last year have you had a feeling of guilt or remorse after drinking?</p> <p>0 <input type="checkbox"/> never</p> <p>1 <input type="checkbox"/> less than monthly</p> <p>2 <input type="checkbox"/> monthly</p> <p>3 <input type="checkbox"/> weekly</p> <p>4 <input type="checkbox"/> daily or almost daily</p>
<p>3. How often do you have six or more drinks on one occasion?</p> <p>0 <input type="checkbox"/> never</p> <p>1 <input type="checkbox"/> less than monthly</p> <p>2 <input type="checkbox"/> monthly</p> <p>3 <input type="checkbox"/> weekly</p> <p>4 <input type="checkbox"/> daily or almost daily</p>	<p>8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?</p> <p>0 <input type="checkbox"/> never</p> <p>1 <input type="checkbox"/> less than monthly</p> <p>2 <input type="checkbox"/> monthly</p> <p>3 <input type="checkbox"/> weekly</p> <p>4 <input type="checkbox"/> daily or almost daily</p>
<p>4. How often during the last year have you found that you were not able to stop drinking once you had started?</p> <p>0 <input type="checkbox"/> never</p> <p>1 <input type="checkbox"/> less than monthly</p> <p>2 <input type="checkbox"/> monthly</p> <p>3 <input type="checkbox"/> weekly</p> <p>4 <input type="checkbox"/> daily or almost daily</p>	<p>9. Have you or has someone else been injured as a result of your drinking?</p> <p>0 <input type="checkbox"/> no</p> <p>2 <input type="checkbox"/> yes, but not in the last month</p> <p>4 <input type="checkbox"/> yes, during the last year</p>
<p>5. How often during the last year have you failed to do what was normally expected of you because of drinking?</p> <p>0 <input type="checkbox"/> never</p> <p>1 <input type="checkbox"/> less than monthly</p> <p>2 <input type="checkbox"/> monthly</p> <p>3 <input type="checkbox"/> weekly</p> <p>4 <input type="checkbox"/> daily or almost daily</p>	<p>10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?</p> <p>0 <input type="checkbox"/> no</p> <p>2 <input type="checkbox"/> yes, but not in the last month</p> <p>4 <input type="checkbox"/> yes, during the last year</p>
<p>11. Have you had a drink containing alcohol since you have been pregnant?</p> <p>0 <input type="checkbox"/> no 1 <input type="checkbox"/> yes</p>	<p>12. Did you stop drinking because you became pregnant?</p> <p>0 <input type="checkbox"/> no 1 <input type="checkbox"/> yes</p>

II. Tobacco and Marijuana Use Identification Test

1. During the **past year** have you used any form of tobacco or marijuana products?

Tobacco 0 no 1 yes
 Marijuana 0 no 1 yes

7. Are you aware of the harmful effects of smoking especially during pregnancy?

0 no 1 yes

2. During the **past year** on the days you smoked, how many cigarettes did you usually smoke?

0 I did not smoke during the past year
 1 less than one cigarette a day
 2 one cigarette a day
 3 2-5 cigarettes a day
 4 6-10 cigarettes a day
 5 more than 10 cigarettes a day

8. Do you think cigarette smoking is harmful to your health?

0 definitely not
 1 probably not
 2 probably yes
 3 definitely yes

3. During the **past 30 days** have you used any form of tobacco or marijuana products?

Tobacco 0 no 1 yes
 Marijuana 0 no 1 yes

9. Has your doctor or any other health provider discussed the harmful effects of smoking with you since pregnant?

0 no 1 yes

4. During the **past 30 days** on the days you smoked, how many cigarettes did you usually smoke?

0 I did not smoke during the past 30 days
 1 less than one cigarette a day
 2 one cigarette a day
 3 2-5 cigarettes a day
 4 6-10 cigarettes a day
 5 more than 10 cigarettes a day

10. At any time during the next 12 months do you think you will smoke a cigarette?

0 no 1 yes

5. Did you stop smoking because you became pregnant?

0 never smoked 1 no 2 yes

11. Do you think you will be smoking cigarettes five years from now?

0 definitely not
 1 probably not
 2 probably yes
 3 definitely yes

6. Do you ever have a cigarette or feel like having a cigarette first thing in the morning?

0 I have never smoked a cigarette
 1 I no longer smoke cigarettes
 2 no, I do not feel like having a cigarette first thing
 3 yes, I sometimes feel like having a cigarette first thing
 4 yes, I always feel like having a cigarette first thing

12. Do you think it would be difficult for someone to quit smoking once they had started?

0 definitely not
 1 probably not
 2 probably yes
 3 definitely yes

<p>13. Have ever used e-cigarettes or electronic nicotine products in the last year?</p> <p>0 <input type="checkbox"/> yes 1 <input type="checkbox"/> no [Go to Question 16]</p>	<p>15. During the last 3 months of your pregnancy, on average, how often did you use e-cigarettes or other electronic nicotine products?</p> <p>0 <input type="checkbox"/> more than once a day 1 <input type="checkbox"/> once a day 2 <input type="checkbox"/> 2-6 days a week 3 <input type="checkbox"/> 1 day a week or less 4 <input type="checkbox"/> I did not use e-cigarettes or other electronic nicotine products then</p>
<p>14. During the 3 months before you got pregnant, on average, how often did you use e-cigarettes or other electronic nicotine products?</p> <p>0 <input type="checkbox"/> more than once a day 1 <input type="checkbox"/> once a day 2 <input type="checkbox"/> 2-6 days a week 3 <input type="checkbox"/> 1 day a week or less 4 <input type="checkbox"/> I did not use e-cigarettes or other electronic nicotine products then</p>	<p>16. Have ever used a hookah in the last year?</p> <p>0 <input type="checkbox"/> yes 1 <input type="checkbox"/> no [Go to Section III]</p>
	<p>17. How often did you use a hookah in the last year?</p> <p>0 <input type="checkbox"/> more than once a day 1 <input type="checkbox"/> once a day 2 <input type="checkbox"/> 2-6 days a week 3 <input type="checkbox"/> 1 day a week or less 4 <input type="checkbox"/> I did not use a hookah in the last year</p>

III: Demographics

1. How old are you? years

2. How many weeks pregnant are you? weeks

3. Is this your first pregnancy? 0 no 1 yes

THANKS FOR YOUR COOPERATION!

APPENDIX B: LIST OF PARTICIPANTS

For this round of the survey there were seven obstetrician/gynecologists that participated as well as the government-funded clinic. The participants were as follows:

Dr. Wendy Woods

Dr. Carla Reese

Dr. Dale Wilmont

Dr. Terry-Lynne Emery

Dr. Emma Robinson

Dr. Alton Trott

Dr. Yusuf Morant-Wade

The Maternal Health Clinic



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