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Client Reference No. - N° de référence du client H4133-184161	Date 2020-09-28

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Amendment 001

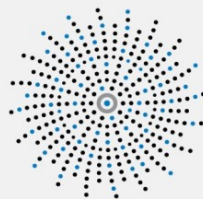The amendment 001 is raised in order to add the Appendix 1, 2 and 3.

APPENDIX 1: CSTADS 2018-19 user guide
APPENDIX 2: CSTADS 2018-19 questionnaire
APPENDIX 3: Sample School report

All other terms and conditions remain the same.

MICRODATA USER GUIDE

2018/2019 Canadian Student Tobacco, Alcohol and Drugs Survey

September 2019

PROPEL
CENTRE FOR
POPULATION
HEALTH IMPACT

Suggested Citation

Burkhalter, R., Thompson-Haile, A., Cooke, M. (2019). 2018/2019 Canadian Student Tobacco, Alcohol and Drugs Survey Microdata User Guide. Waterloo, Ontario: Propel Centre for Population Health Impact, University of Waterloo, 1-39.

Suggested Acknowledgement when using CSTADS Data

> *Data used for this research were taken from Health Canada's Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS), which was conducted for Health Canada by the Propel Centre for Population Health Impact at the University of Waterloo. Health Canada has not reviewed, approved, nor endorsed this research. Any views expressed or conclusions drawn herein do not necessarily represent those of Health Canada.*

PLEASE NOTE: For information purposes only, Health Canada would appreciate receiving advanced copies of planned publications arising from CSTADS data at least 3 weeks prior to the publication date. Send a copy by mail or email to the Technical Authority.

For further information regarding this project, please contact:

Martin Cooke (CSTADS Principal Investigator)
Propel Centre for Population Health Impact University of Waterloo
200 University Avenue West Waterloo, ON N2L 3G1
519-888-4567 x36585
cooke@uwaterloo.ca
www.cstads.ca

Please direct any questions about the data set or its use to:

University of Waterloo	*Health Canada*
Robin Burkhalter (CSTADS Analyst)	Rachel Bennett (CSTADS Technical Authority)
Data Analyst	Senior Epidemiologist
200 University Avenue West	Tobacco Control Directorate 150 Tunney's
Waterloo, Ontario N2L 3G1	Pasture Driveway Ottawa, ON K1A 0K9
(519) 888-4567 ext. 36632	(613) 330-8654
rjburkha@uwaterloo.ca	hc.cstads.questions-ectade.sc@canada.ca

PLEASE BECOME FAMILIAR WITH THE CONTENTS OF THIS DOCUMENT BEFORE PUBLISHING OR OTHERWISE RELEASING ANY ESTIMATES DERIVED FROM THE 2018/2019 CSTADS PUBLIC USE MICRODATA FILE.

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1.0 Introduction

Health Canada's 2018/2019 Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS; formerly the Youth Smoking Survey) is a Canadian, biennial, school-based survey of a generalizable sample of students in grades 7 through 12. CSTADS (YSS) has been coordinated centrally by the Propel Centre for Population Health Impact (Propel) at the University of Waterloo in partnership with Health Canada since 2004. The 2018/2019 CSTADS was implemented in schools between October 2018 and June 2019 by provincial teams located in the participating provinces, with support and leadership from the following CSTADS co- investigators:

Dr. Linda Rohr   Memorial University of Newfoundland
Dr. Donna Murnaghan   Thompson Rivers University
Dr. Jo-Ann MacDonald   University of Prince Edward Island
Dr. Mark Asbridge   Dalhousie University
Dr. Annie Montreuil   Université du Québec à Montréal
Dr. Tara Elton-Marshall Centre for Addiction and Mental Health
Dr. Nathan Nickel   University of Manitoba
Dr. Nazeem Muhajarine   University of Saskatchewan
Dr. Cam Wild   University of Alberta
Dr. Marjorie MacDonald   University of Victoria

This manual has been produced to facilitate the manipulation and use of the 2018/2019 CSTADS Public Use Microdata File. Please refer to the 2018/2019 CSTADS Data Codebook and the 2018/2019 CSTADS Frequency File for related details.

1.1 Accessing Data and Recommended Acknowledgement

Access to the 2018/2019 CSTADS Public Use Microdata File (PUMF) is possible through Propel's Data Repository. Please take note of the data release guidelines found in Section 8.6 before using the data. The following text is a recommended acknowledgement in any publications / presentations arising from CSTADS data:

> *Data used for this research were taken from Health Canada's Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS), which was conducted for Health Canada by the Propel Centre for Population Health Impact at the University of Waterloo. Health Canada has not reviewed, approved, nor endorsed this research. Any views expressed or conclusions drawn herein do not necessarily represent those of Health Canada.*

PLEASE NOTE: **For information purposes only (and in confidence), Health Canada would appreciate receiving advance copies of planned publications arising from CSTADS data at least three (3) weeks prior to the publication date. Send a copy by mail or email to the Technical Authority noted above.**

Commented [AT1]: Change this- to what? DLI?

Commented [RB2]: Likely to be DLI but no clear answer for this yet.

2.0 Background

The Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS) serves as a key surveillance tool for Health Canada and its partners to help understand Canadian trends in student tobacco, alcohol and drug use. Understanding these trends is vital to the effective development and monitoring of policies and programs aimed at reducing substance use by this population (including the regulation of tobacco products and illicit drugs). It complements the general population Canadian Tobacco, Alcohol and Drugs Survey.

CSTADS collects data on tobacco use, alcohol and drug use among students in grades 7 through 12 (secondary I through V in Québec). CSTADS produces data comparable to that of the Youth Smoking Survey (YSS) (its former name), and provides Health Canada, its partners and stakeholders, as well as the Canadian public, with timely and reliable data on use of tobacco, alcohol and drugs by Canadian students. Additional data on bullying, and new data on sleep behaviours were gathered in the 2018/2019 cycle.

The biennial CSTADS is a school-based survey of a generalizable sample of schools in the ten Canadian provinces. When first administered in 1994, the YSS was the largest and most comprehensive survey on youth smoking behaviour since 1979. The YSS was administered to grades 5 through 9 until 2006/2007, when the coverage of the YSS was expanded to include Canadian youth in grades 5 to 12. As a result of low rates of tobacco use amongst grade 5 students, they were no longer included in the 2008/2009 and subsequent iterations of the YSS/CSTADS. The 2016/2017 cycle eliminated grade 6 students from the CSTADS sample.

All schools that participated in the 2018/2019 CSTADS, with the exception of those in New Brunswick (NB), received a $100 honorarium, a school-specific profile and two one-page summaries of their survey results within two months of the school's data collection. The summaries were targeted to school staff and administrators, students and the parent community, to facilitate sharing school-specific results. These school profiles and summaries provide valuable information for schools to address tobacco, alcohol and drug use, in addition to other social and school environment issues including bullying and sleep related behaviours. The profiles and summaries compared school-specific results to past provincial and national data, when available.

2.1 Collaborative Projects

The 2018/2019 CSTADS was implemented alongside two collaborative projects, one in Nova Scotia (NS) and one in New Brunswick (NB).

Nova Scotia Department of Health and Wellness

The Nova Scotia Department of Health and Wellness (NSDHW) requested that the usual CSTADS sample be expanded to obtain results generalizable at the health zone level in addition to the usual provincial level. This partnership resulted in a larger sample of CSTADS schools and students in NS. Sampling was adjusted to achieve generalizability within each of the four NS health zones. Twenty schools were added to the NS school target number, making the CSTADS school target number in the province 44. See section 4.4 for more information on sampling in NS.

New Brunswick Student Wellness Survey

The New Brunswick Student Wellness Survey (NBSWS) is a school based census survey implemented by the New Brunswick Health Council (NBHC) every three years. The NBSWS collects data related to mental fitness, resilience, prosocial and oppositional behaviours, physical activity, healthy eating, tobacco-free living and bullying. To minimize school research burden the 2018/2019 CSTADS in NB was implemented in conjunction with the NBSWS. The majority of students completed the NBSWS, with every ninth student completing CSTADS. See section 4.4 for more information on sampling in NB.

3.0 Definitions Used in this Guide

This section describes terms and definitions used in this guide.

Approached: Sampled schools and their respective boards that were contacted to participate in the survey.

Boards Participating: A recruited school board with at least one participating school.

Eligible Class: All grade 7-12 classes within a participating school. Note: In rare cases, schools will limit the participating grades or number of participating classes.

Eligible Students: Students enrolled in an eligible class.

Participation Rate (%)[1]: The number of boards or schools that participated in the survey as a percentage of the total number of boards or schools, respectively, approached to participate in the project.

Refused: Boards or schools that refused to participate, did not respond, were unable to be reached, or withdrew their participation.

Response Rate (%): The number of grades 7 to 12 students who participated in the survey as a percentage of the total number of eligible students in participating grades 7 to 12 classrooms.

Sampled Schools: Schools selected from the sampling frame (described below). See section 4.0 for details on sampling methodology.

Sampling Frame: The list of eligible schools in Canada upon which the sample of schools for the project was drawn. Schools were eligible to be included in the sampling frame if the school had at least 20 students enrolled in any of the eligible grades (grades 7-12). Federally-funded schools, closed schools, schools for children with special needs, and First Nation reserve schools were not included in the sampling frame.

Schools Participating: Schools with at least one student questionnaire recorded in the final data file. The number of participating schools can exceed the number of targeted schools in a province.

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[1] Note that in cycles of the project prior to 2012/2013, participation rate was referred to as recruitment rate in the Microdata User Guides

<u>Targeted # of Schools</u>: The number of participating schools the sampling design anticipates is required to achieve generalizable estimates to the provincial and national levels. The number of participating schools can exceed the number of targeted schools in a province. Please note that the targeted number of schools for Nova Scotia and New Brunswick reflect the collaborations with the Nova Scotia Department of Health and Wellness and the New Brunswick Health Council, respectively. See section 4.0 for details on sampling methodology.

4.0 Sampling Design

To obtain a sample of students, a stratified single stage cluster design was used. Schools were selected from strata, and then all eligible students within selected schools were surveyed. This process was used in all provinces except New Brunswick. See section 4.4 for details on sampling design in NB. The Propel School Database is updated annually and provides a current list of schools for the sampling frame.

4.1 Target Population

The target population for the 2018/2019 CSTADS consisted of all young Canadian residents attending private, public, and Catholic schools enrolled in one of grades 7 to 12 (secondary I to V in Québec), excluding schools in the Yukon, Northwest Territories, and Nunavut. Students who attend special schools (e.g., schools for visually-impaired, schools for hearing-impaired, daycares, special needs, First Nation reserve schools, virtual schools, schools located on military bases, international schools) were excluded from the target population. In addition, students from schools that do not have at least 20 students enrolled in at least one eligible grade were also excluded from the target population of schools to control data collection costs.

4.2 Sampling Stratification

In all participating provinces, except New Brunswick (NB), the sampling of the schools (and coincidentally, the boards within which each is situated) was based on a stratified single stage cluster design. The stratification was based on two classifications: health region[2] and type of school[3]. Within each provincial sampling frame, two to three health region categories and two school-level categories were defined. The allocation of the school sample to strata ensured adequate sample sizes inside the strata and increased precision.

Classification variable 1: Health Region Smoking Rate
In keeping with past cycles of YSS/CSTADS, stratifying by provincial health region smoking rate continued for 2018/19. Stratification by health region smoking rate ensures that schools located in health regions with high and low smoking rates are adequately represented. It also reduces the variability of smoking within strata, which increases the precision of the estimates for smoking status, amount smoked and other variables correlated with smoking (including other drug and alcohol use).

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[2] In Prince Edward Island there is only one Health Region, therefore there is only one health region category for Prince Edward Island.

[3] In Québec secondary schools comprise of grades secondary I to secondary V. Since these are the only grades we will collect data from, Québec will only have one school-level category: secondary.

Within each province, schools were divided into two categories based on the smoking rate of 15-19 year olds in the health region in which the school was located. The school's six-digit postal code was used to identify the health region for a school.

The smoking rate of 15-19 year olds in each health region was based on the 2013/2014 Canadian Community Health Survey data, which were the most current data available at the time of sampling.

The goal was to create two groups of schools per province, each group homogenous in terms of health region smoking rates, with similar numbers of schools in each. To accomplish this, the smoking rates of 15-19 year olds from the Canadian Community Health Survey for each health region in a province were calculated and compared to each other within that province. Schools located in a health region with a smoking rate lower than the median smoking rate for the province were assigned to the "low" smoking rate health-region category. Similarly, schools located in a health region with a smoking rate greater than the median was assigned to the "high" smoking rate health-region category. Schools located in the health region with the median smoking rate were assigned to the "high" smoking rate health-region category provided this resulted in "low" and "high" categories with fairly similar numbers of schools. Occasionally, when there was a large number of schools in the health region with the median rate, the percentage of schools assigned to the "high" category compared to the "low" category became very high. When this occurred and presented the danger of having too few schools available to meet targets, schools in the health region with the median rate were re-assigned to the "low" category.

As a result of implementing previous cycles of YSS/CSTADS and to ensure adequate representation of schools in the most highly populated areas of certain provinces, a third "urban" category was defined in Newfoundland and Labrador (NL), Québec (QC), Ontario (ON) and Alberta (AB). Two categories paralleled the health region categories (high and low) described above, but excluded schools defined as being part of the urban areas of St. John's in NL, Montréal in QC, Toronto in ON, and Calgary/Edmonton in AB.

The urban category acknowledges the size of metropolitan areas in QC, ON and AB and was developed as a result of the difficulties experienced in past cycles of CSTADS (YSS) related to school board refusals and lower student permission rates in these specific urban areas.

Sampling schools located in large urban centres ensured representation from these centres. In NL, the third category consisted of all schools in the Eastern Regional Health Authority. The urban category was implemented in NL because the Eastern Health Region, which is the largest of the health regions in this province, had the median smoking rate. Assigning the Eastern Health Region to either the "low" or the "high" smoking rate health-region category resulted in very skewed "low"/"high" categories making school targets for the low category impossible. The only way to ensure even health region categories was to include an urban category in NL. In QC, the urban stratum is defined as all schools listed within the Greater Montréal area which includes the entire Island of Montréal, Laval and the Urban Agglomeration of Longueuil. In ON, the third category consisted of all schools in the Greater Toronto Area (GTA), defined as comprising these health units: Toronto Regional Health Unit, York Regional Health Unit, Peel Regional Health Unit, Halton Regional Health Unit and Durham Regional Health Unit. In AB, the third category consisted of all schools located within 20 kilometers of Calgary and 20 kilometers of Edmonton, included schools located in Calgary, Edmonton, St. Albert and Sherwood Park.

Classification variable 2: School Type

Schools were defined as being a member of either an elementary[4] or secondary[5] school category. When the total enrolment of elementary grades was greater than or equal to the total enrolment of the secondary grades for a school, the school was assigned to the "elementary" school category. Similarly, when the total enrolment of secondary grades was greater than the total enrolment of elementary grades, the school was assigned to the "secondary" school category.

4.3   Sample Selection

Crossing these classification variables yielded six strata in Newfoundland and Labrador, Ontario and Alberta, four strata in British Columbia, Saskatchewan, and Manitoba, three in Québec, and two in Prince Edward Island. Within each stratum, in each province, schools were selected based on simple random sampling. Typically, two elementary schools for every one secondary school were sampled to ensure appropriate distribution of participants across all grades, given that the elementary schools characteristically have lower enrolments than secondary schools.

The number of schools sampled in each province ensures a minimum sample that would produce generalizable results, and is based on the elementary and secondary school participation rates in previous cycles of YSS/CSTADS. The participation rate is defined as the total number of schools that participated in the survey divided by the number of schools sampled. Once a sampled list of schools for a province is generated, the co-investigator leading the CSTADS implementation in that province reviews the list and comments on the overall distribution of schools and identifies any problems with the sample that may be of concern at the provincial level.

All students within eligible grades in each sampled school are invited to participate in the survey. Schools have indicated that, administratively, surveying their entire school population is simpler both in terms of obtaining parental permission and questionnaire implementation.

Simple random sampling of schools within a stratum, and then surveying all eligible grades in each selected school, implies equal inclusion probabilities at the outset for all students in the stratum.

4.4   CSTADS Sample Selection when Partnering with Provincial Surveys

New Brunswick Sampling Design

The New Brunswick Student Wellness Survey (NBSWS) is a near census survey. All New Brunswick schools with at least one grade within 6 to 12 were invited to participate in the collaborative NBSWS-CSTADS study. Schools with a total enrollment of 50 students or less were excluded from the CSTADS sample of schools. Exclusion of these smaller schools ensured that school level feedback results provided by the New Brunswick Health Council are not compromised due to low student participant numbers. Within each eligible school, questionnaires were distributed among students using an 8:1 ratio of distribution with the majority of students receiving the NBSWS and the remaining the CSTADS questionnaire. Students in grade 6 participated in the NBSWS but were excluded from CSTADS.

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[4] Elementary grades defined as grades 7 to 9 in Alberta and grades 7 to 8 in all other provinces.
[5] Secondary grades defined as grades 10 to 12 in Alberta, Secondary I to V (grades 7 to 11) in Québec, and grades 9 to 12 in all other provinces.

CSTADS in Nova Scotia sampling design

For the 2018/2019 cycle, Propel partnered with the Nova Scotia Department of Health and Wellness (NSDHW). Nova Scotia was interested in obtaining data from each NS health zone. To accommodate, CSTADS in NS was implemented by stratifying by health zone and adding extra schools to the sample to obtain generalizable data within each zone. Therefore, in NS schools were stratified by school type (elementary, secondary) and health zone (four zones), yielding eight strata.

5.0 Questionnaire Development

The final 2018/2019 CSTADS questionnaire (see Appendix A) was developed through a series of meetings and pilot testing sessions. Appendix B lists questions that have appeared in all cycles of the CSTADS (YSS) since 1994 and a separate list of questions that are new to the 2018/2019 CSTADS.

Several key considerations guided the design and content of the questionnaire:

- **Comparability**: The basis of the questionnaire was past versions of the CSTADS (YSS) questionnaire (2002-2016), to allow for comparisons across cycles.

- **Responsiveness**: To meet the needs of users of the data, CSTADS investigators and those responsible for federal and provincial tobacco, alcohol and drug use strategies were given an opportunity to contribute topics/items for consideration.

- **Relevancy**: To ensure value-added for participating schools, items and content areas (i.e., bullying, mental well-being, and school connectedness) were added to enhance the school-specific results profiles and summaries to schools.

- **Feasibility**: To meet the criterion of students being able to complete the questionnaire in one class period (30 minutes), questionnaire length was restricted.

The final content of the questionnaire included questions on demographics, tobacco use, alcohol and drug use, bullying, and sleep related behaviours. The questionnaire was available in English and French (see Appendix A). Copies of past CSTADS (YSS) questionnaires can be found at www.cstads.ca

5.1 Pilot Testing

Two rounds of questionnaire pilot testing occurred prior to implementing the 2018/2019 CSTADS in schools: English-language (in Stratford, Ontario), and French-language (in Montréal, Québec)[6].

In each setting, student groups (4 English, 2 French) completed the CSTADS questionnaire and participated in focus groups immediately after. The pilot testing established student understanding of items, and gathered feedback from the students on new questions, questionnaire flow and overall completion times. A number of modifications were made to the questionnaire as a result of the pilot

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[6] University of Waterloo. 2018 (April).Canadian Student, Tobacco, Alcohol and Drugs Survey (CSTADS): 2018/2019 CSTADS English and French Pilot Tests Report. Waterloo: Propel Centre for Population Health Impact, University of Waterloo. 1-41. Available upon request.

testing. The French language used in the questionnaire was deemed suitable by all French- language participants.

6.0 Survey Implementation

6.1 Ethics Review

The 2018/2019 CSTADS project required ethics approval from the University of Waterloo Office of Research Ethics, the Health Canada Research Ethics Board, the ethics review boards located in affiliated provincial institutions, and school board ethics review committees. The CSTADS team obtained ethics approval from all research ethics boards noted above prior to implementation.

All amendments, modifications and adverse events were reported to the appropriate review committees (as needed). No major incidents occurred during the implementation of the 2018/2019 CSTADS in schools across the country. All minor incidents were satisfactorily resolved.

6.2 Data Quality: Recruitment and Response Rates

CSTADS implementation includes three levels of recruitment. Within each province, the team recruits school boards (divisions/districts), schools, and then students, to participate. As a result, non-response occurs at various levels. Refer to Tables 1, 2 and 5 for response rates by province at the school board, school and students by grade, respectively.

Board and School Recruitment and Participation
Trained teams within each province took responsibility for recruiting all boards and schools within their province. Schools with no governing school board were approached directly. After successfully recruiting school boards, randomly selected schools were approached. An online, real-time database used by all staff permitted central monitoring by Propel to ensure that protocols and progress were consistent across the country.

A total of 116 school boards and 442 schools participated in the 2018/2019 CSTADS. See Tables 1-4 for details on board and school participation by province and sampling stratum.

Table 1: Board Participation Outcomes by Province, 2018/2019 CSTADS

Province	# Boards Approached	# Boards Recruited	# Boards Refused	# Boards Participated^
NL	1	1	0	1
PE	2	2	0	2
NS	8	6	2	6
NB	7	7	0	7
QC	38	30	8	13
ON	55	38	17	31
MB	27	12	15	11
SK	27	11	16	9
AB	48	28	20	18
BC	44	30	14	18
Canada	**257**	**165**	**92**	**116**

^Recruited school boards with at least one participating school.

Table 2: School Participation Outcomes by Province, 2018/2019 CSTADS

Province	# Target Schools	# Sampled Schools	# Schools Approached	# Schools Recruited	# Schools Participated	# Schools Refused
NL	24	36	29	24	24	5
PE	24	30	25	22	21	3
NS	44	109	74	50	44	24
NB	151	151	151	148	139	3
QC	20	109	66	28	25	38
ON	54	369	153	66	60	87
MB	28	93	44	29	28	15
SK	36	375	78	40	37	38
AB	32	156	62	34	32	28
BC	32	172	91	37	32	54
Canada	**445**	**1600**	**773**	**478**	**442**	**295**

Table 3: Participating Schools by School Categories and Province, 2018/2019 CSTADS

Province	School Category	Target # Schools	# Schools Participated
NL	Elementary	12	12
	Secondary	12	12
PE	Elementary	16	13
	Secondary	8	8
NS	Elementary	24	24
	Secondary	20	20
QC	Secondary	20	25
ON	Elementary	36	39
	Secondary	18	21
MB	Elementary	18	17
	Secondary	10	11
SK	Elementary	18	18
	Secondary	18	19
AB	Elementary	20	20
	Secondary	12	12
BC	Elementary	20	20
	Secondary	12	12
Canada		**294**	**303**

Table 4: Participating Schools by Health Region Smoking Rate Categories and Province, 2018/2019 CSTADS

Province	Total Target # Schools	Smoking Rate Category	Target # Schools by Smoking Rate	# Schools Participating
NL	24	Low	6	6
		High	8	8
		Urban	10	10
PE	24	n/a	24	21
NS	44	Region 1	11	11
		Region 2	11	11
		Region 3	11	12
		Region 4	11	10
QC	20	Low	6	8
		High	6	8
		Urban	8	9
ON	54	Low	18	22
		High	18	19
		Urban	18	19
MB	28	Low	14	14
		High	14	14
SK	36	Low	18	21
		High	18	16
AB	32	Low	10	10
		High	10	10
		Urban	12	12
BC	32	Low	16	16
		High	16	16
Canada	**294**		**294**	**303**

Student Recruitment and Participation

Within recruited schools, all students in grades 7 to 12 were invited to participate in the survey. Only students with parental permission (or of age to consent to participate) participated in the survey. A total of 62,850 students across 10 Canadian provinces participated. See Table 5 for student participation details by grade and province. A generalizable sample was achieved at the national level and at the provincial level for all participating provinces.

A mix of active permission protocols (active) and active information-passive permission (passive) methods were used to obtain parent permission in participating schools. School boards and schools determined the permission method most appropriate within their schools.

Schools sent information and permission materials home to parents of students enrolled in grade 7 to 12 classes. The information letters provided details about the project, contact information for project staff, and referred parents to the project website for further details and copies of the questionnaires. Parents had a minimum of two weeks to respond. Schools participating with active protocols required that only those students whose parents indicated "yes" on a permission form were able to participate in

the survey. Schools participating with passive permission protocols required that parents call a toll-free number if they did not want their child to participate in the survey. Students also had the opportunity to decline participation on the day of data collection.

Table 5: Participating Students by Province and Grade, 2018/2019 CSTADS

Province	Number of Students Participating, by Grade						
	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	Total
NL	1067	901	860	922	779	792	5321
PE	993	936	1063	628	615	519	4754
NS	1309	1285	1097	1131	889	759	6470
NB	534	585	599	580	612	567	3477
QC	2924	2782	3516	3458	3163	0	15843
ON	1690	1567	930	866	494	516	6063
MB	749	770	594	532	467	406	3518
SK	877	804	635	604	463	485	3868
AB	1065	943	1167	1335	956	852	6318
BC	1362	1478	1293	1206	1057	822	7218
Canada	12570	12051	11754	11262	9495	5718	62850

Approximately 84% of students participated with passive permission and 16% of students participated with active permission, excluding NB. Among participating classes, non-response at the student level can be attributed to several factors, including parent/guardian refusals and student refusals or absenteeism on the day of survey implementation. The response rate at the student level is derived based on the number of eligible students as provided by school contacts for participating classes. Every effort is made to recruit all eligible classes in participating schools but on occasion, some eligible classes do not participate. See Table 6 for student level response rates.

Table 6: Student Level Response Rates by Province, 2018/2019 CSTADS

Province	Eligible students	Students with active permission	Students with passive permission	Completed questionnaires	Response rate [+]
NL	6579	0	5321	5321	81%
PE	5586	52	4702	4754	85%
NS	12824	2976	3494	6470	50%
NB++	4812	-	-	3477	72%
QC	17584	0	15843	15843	90%
ON	14570	3879	2184	6063	42%
MB	4668	257	3261	3518	75%
SK	4775	23	3845	3868	81%
AB	10202	2019	4299	6318	62%
BC	9071	376	6842	7218	80%
Canada	90671	9582	49791	62850	69%

[+] Based on completed questionnaires (numerator) and eligible students (denominator) in participating classes.

[++] The number of eligible students in NB is 1/9 of all eligible students in schools participating in both the NBSWS and CSTADS. Numbers of students with active/passive permission in NB are not available due to the collaboration in the province.

6.3   Classroom Implementation

Data collections occurred between October 29, 2018 and June 17, 2019. On the day of a school's data collection, classroom teachers followed standard and simple project instructions to administer the paper questionnaire during a designated class period. The questionnaire administration, including instructions to the students, required 40 minutes or less within each class. To protect confidentiality, teachers were asked not to circulate within the classroom while students were completing the questionnaire, and each student put their completed questionnaire in a sealable envelope before it was collected by a fellow student. In most cases, CSTADS staff were available at the school on the day of data collection for support. Exceptions included remote schools.

7.0 Creating the Public Use Microdata File (PUMF)

CSTADS produces a Public Use Microdata File (PUMF) in SAS, SPSS and STATA that can be requested from the Propel's Data Repository (https://uwaterloo.ca/propel/resources-and- products/propels-data-repository). This section presents a brief summary of the steps involved in producing the PUMF and considerations required when conducting analyses using the PUMF.

> **Commented [RB5]:** will have to change as in section 1.1

Note: The system for naming the variables changed in the 2014/2015 CSTADS PUMF. This resulted in new variable names for variables that existed on previous CSTADS (YSS) PUMF files. Please take this into account when analysing data over time. See Appendix B-1 for a listing of select past (since 2004) and current variables names used in the CSTADS (YSS) data files.

7.1   Data Capture

Completed questionnaires were machine-scanned using Optical Mark Recognition (OMR) technology. Procedures detailed several quality-control measures to ensure the accuracy of the scanned data. Processing staff visually scanned all questionnaires to ensure that the OMR would correctly record the data on the questionnaires.

In the course of visually scanning a questionnaire, processing staff could "correct" a questionnaire according to defined rules, including: darkening marks that were too light or incomplete (e.g., check marks instead of filled-in circles); erasing marks from answers where the respondents changed their mind but did not sufficiently erase the original response; erasing accidental/wayward marks that were not meant to indicate answers (e.g., graffiti or doodles); and, erasing marks made in any places reserved for "office use only". If processing staff were unsure of how to proceed with an answer, the project manager would instruct them and/or would seek the advice of a data analyst as necessary.

7.2   Editing and Imputation

The Public Use Microdata File (PUMF) uses the following standard codes:

Valid skip - 96 and 996

Not stated - 99 and 999

Prior to data cleaning, the 2018/2019 CSTADS student dataset contained 63,250 records and retained 62,850. Record removal occurred when respondents did not record sex (382 records), did not record

grade and the grade could not be imputed (16 records, 11 of which also did not record sex) or completed only demographic questions (13 records). In addition, Québec secondary I, II, III, IV, and V were converted to grades 7, 8, 9, 10, and 11, respectively.

<u>Note to SPSS users</u>: in the SPSS PUMF, many variables have the values 96 and/or 99, which are defined as "Missing". These cases are automatically excluded from the analysis when producing estimates for these variables. These cases can be changed by the user in the "Missing" column in the SPSS "Variable View" of the dataset.

Treatment of the 'I do not know' or 'I do not remember' Option

There are several variables in the dataset that require attention to the "I do not know" option. We recommend treating the "I do not know" response as a "Not Stated (99 or 999)" response for the following questions:

- SS_020 (Question 8) ("How old were you when you first tried smoking cigarettes, even just a few puffs?")
- PP_021 (Question 19) ("Thinking about the last time you bought cigarettes in the last 12 months, how much did you pay?")
- ELC_024 (Question 22) ("On how many of the last 30 days did you use an e-cigarette (vape, vape pen, tank & mod)?")
- ALC_020 (Question 26) ("In the last 12 months, how often did you have a drink of alcohol that was more than just a sip?")
- ALC_030 (Question 27) ("How old were you when you first had a drink of alcohol that was more than just a sip?")
- ALC_040 (Question 28) ("In the last 30 days, how often did you have a drink of alcohol that was more than just a sip?")
- ALC_050 (Question 29) ("In the last 12 months, how often did you have 5 or more drinks of alcohol on one occasion?")
- ALC_060 (Question 30) ("How old were you when you first had 5 drinks or more of alcohol on one occasion?")
- ALC_071 (Question 31) ("In the last 30 days, how often did you have 5 or more drinks of alcohol on one occasion?")
- CAN_020 (Question 34) ("In the last 12 months, how often did you use marijuana or cannabis?")
- CAN_030 (Question 35) ("How old were you when you first used marijuana or cannabis?")
- CAN_040 (Question 36) ("In the last 30 days, how often did you use marijuana or cannabis?")
- CAN_140 (Question 40) ("In the last 12 months, how often did you have alcohol AND marijuana or cannabis on the same occasion? (e.g., at a party, in the same evening, etc.)")

<u>Note to SPSS Users</u>: In the SPSS version of this file, 'I do not know' and 'I do not remember' are defined as "Missing" (along with values 96 and 99) and will not be included in estimates produced using these

variables. These cases can be changed by the user in the "Missing" column in the SPSS Variable View of the dataset.

Treatment of the 'Other' Option

No cleaning was done to the response options 'Other' in variables with this type of response option, with the exception of GENDER and ORIENTATION. Written answers were not recorded. The following is a comprehensive list of all variables where no extra cleaning was done regarding the 'Other' option:

- CA_011 (Question 17) ("Where do you usually get your cigarettes?")
- ELC_050j (Question 23) ("Where do you usually get your e-cigarettes and supplies (vape, vape pen, tank & mod, e-juice)?")
- CAN_121 (Question 38) ("In the last 12 months how did you usually get the marijuana or cannabis you used?")
- PR_110 (Question 51) ("In the last 12 months if you did use prescribed pain relievers for non-medical reasons or to get high, how did you get them?")

Grade (Question 1)

During the cleaning process, data analysts investigated cases where grade was missing or inconsistent with the grades represented in their school. If a student indicated a grade that did not match the relevant grades in the school or province, or if grade was missing or uncodeable, the variable was recoded to the median grade of the class to which the student belonged. If this option was not available, then student age was used to impute grade.

Age (Question 2)

If age was out of range for grade, then age was set to "99 = Not Stated". To make every effort to maintain confidentiality, self-reported age (question 2) is not included in the PUMF.

Gender and Orientation (Questions 4 and 5)

Put description here

Commented [RB6]: Place holder for description of cleaning to Gender and Orientation. To be completed after the work on these variables is done.

Age of Initiation Variables

If a reported age of initiation was greater than the student's self-reported age (question 2), then age of initiation was assigned a value of "99 = Not Stated". If the self-reported age (question 2) was "99 = Not Stated", then the reported age of initiation was compared to an imputed version of age based on median age per class and the grade. If the imputed age was found to be less than the age of initiation reported then the age of initiation was given a value of "99 = Not Stated". This applies to the following age of initiation questions:

- SS_020 (Question 8) ("How old were you when you first tried smoking cigarettes, even just a few puffs?")
- ALC_030 (Question 27) ("How old were you when you first had a drink of alcohol that was more than just a sip?")
- ALC_060 (Question 30) ("How old were you when you first had 5 drinks or more of alcohol on one occasion?")
- CAN_030 (Question 35) ("How old were you when you first used marijuana or cannabis?")

NEW: Question 15 (WP_040a to WP_040g) ("Thinking back over the last 7 days, how many whole cigarettes did you smoke each day?")

This one question converts to 7 variables, one for each day of the week. The range that was allowed for each variable was 0 - 36. All responses of 37 or greater have been set to "99 = Not Stated". Respondents who have not smoked a whole cigarette (SS_030 = 2 or 96) were set to "96 = Valid Skip" for each of these variables.

Imputations of Core Smoking Questions

As part of the CSTADS data cleaning we impute missing values for the core smoking questions SS_010 (Question 7), SS_030 (Question 11), SS_040 (Question 12), and SS_060 (Question 13). Historically this was done by applying either an algorithm or the SAS procedure for imputing missing variables (PROC MI) and supplementing this approach by checking imputed records with seemingly inconsistent responses. For CSTADS 2018/2019, we used the algorithm developed for CSTADS 2016/2017. This strategy was meant to ensure that any imputations were based on the collective evidence of each respondent's smoking mode and not on the probability of a respondent's habits based on other respondents' patterns. When records did not satisfy the algorithm, inconsistent and missing responses were left as provided by the student.

1) An algorithm based on the core questions described above as well as other questions in the survey, SS_020 (Question 8), WP_030 (Question 14), WP_040a to WP_040g (Question 15), SC_010 (Question 16), and CI_010 (Question 21) was applied to impute missing values of the core smoking questions. The development of the algorithm occurred last cycle (2016/2017) and is different from the original algorithm as well as the other methods used in previous cycles. One of the main differences is that some records remain missing where it did not make sense to impute. In cycles prior to 2016/2017 all missing records were imputed.

2) We completed the imputations before the application of skip patterns (described below) and the skip patterns can overwrite imputed values. For example, if SS_010 (Question 7: Have you ever tried cigarette smoking, even just a few puffs?) is "No" and SS_030 (Question 11: Have you ever smoked a whole cigarette?) is missing/"not stated" before it was sent through the imputation procedure, the "No" from SS_010 would dictate that SS_030 will be 96 (valid skip) in the final data regardless of the outcome of the imputation.

Question 23 (ELC_050a to ELC_050j)

If the student had selected "I do not use e-cigarettes" plus at least one of the other response options, all of these variables were equated to "99=Not Stated".

With the exception of the situation described above, if at least one item was selected then the variable for that item was coded to "1=Yes" and all other variables that were not selected were coded to "2=No". These variables were coded to "99=Not Stated" only when the whole question had been left blank or when there were inconsistencies as described in the paragraph above.

Skip Patterns and Inconsistent Responses

The questionnaire was intentionally designed with no respondent-use skip patterns and included response options like "I do not smoke" and "I did not use". These response options help avoid the identification of substance users by rate of questionnaire completion time in the classroom. Skip

patterns are imposed on many follow-up variables after an initial question has established whether the respondent is a user or non-user of a given substance (tobacco, alcohol, drugs).

Unlike a computer-assisted questionnaire, which may be programmed to generate prompts when inconsistent responses are provided (e.g., age at first cigarette is older than current age), there can be no built-in verification of answers in a paper-and-pencil survey. Inconsistent answers provided by respondents are retained in the data file except where skip patterns or algorithms have been imposed during the preparation of the PUMF. Imposed skip patterns overwrite all related dependent answers provided by respondents.

Starting with the 2016/2017 cycle and continuing in the 2018/2019 cycle, the core smoking questions have some missing values left as is. Skip patterns were not applied based on non-response for the tobacco questions. To have a valid skip applied, the response to the previous question must be either "No" or "Valid Skip".

Data cleaning procedures in 2018/2019 and 2016/2017 were unchanged from previous cycles for all drug and alcohol questions.

Please refer to the 2018/2019 CSTADS Data Codebook for details on the coverage for questions where skip patterns were imposed.

7.3   Derived Variables

The PUMF includes derived variables, created by combining questionnaire items, to facilitate data analysis and ensure consistency across users. The following describes the derived variables included in the 2018/2019 CSTADS PUMF. Four derived variables previously included in the 2014/2015 CSTADS (DVAMTSMK, DVCIGWK, DVNDSMK, DVAVCIGD) and which were not included in the 2016/2017 CSTADS PUMF, were computed using the number of cigarettes smoked each of the last 7 days (WP_040a to WP_040g). These derived variables were omitted in 2016/2017 and are now being reintroduced because the source question(s) were different for 2016/2017 only.

Seven derived variables previously included in the 2016/2017 CSTADS will not be included in the 2018/2019 CSTADS since their component questions are not included on the 2018/2019 questionnaire: DVSUSCEP, DVFLAV30, DVRELATE, DVAUTON, DVCOMP, DVSOC_P and DVSOC_N.

Derived Variables for Smoking Status
The following describes the derived variables in the PUMF for smoking status. These derived variables are consistent with previous cycles of CSTADS (YSS).

DERIVED VARIABLE	DVTY1ST
RESPONSE OPTIONS FOR DVTY1ST	1 = Current Smoker
	2 = Former Smoker
	3 = Never Smoker
	99 = Not Stated
COVERAGE FOR DVTY1ST	Coverage: All Respondents
QUESTIONS	SS_030 (Question 11): *Have you ever smoked a whole cigarette?*
	1 (Yes)
	2 (No)
	96 (Valid Skip)
	99 (Not Stated)
	Coverage: All Respondents where SS_010 = 1 or 99 (Ever tried smoking a cigarette, even a few puffs or not stated)
	SS_040 (Question 12): *Have you ever smoked 100 or more whole cigarettes in your life?*
	1 (Yes)
	2 (No)
	96 (Valid Skip)
	99 (Not Stated)
	Coverage: All Respondents where SS_030 = 1 or 99 (Ever smoked a whole cigarette or not stated)
	SS_060 (Question 13): *On how many of the last 30 days did you smoke one or more cigarettes?*
	1 (None)
	2 (1 day)
	3 (2 to 3 days)
	4 (4 to 5 days)
	5 (6 to 10 days)
	6 (11 to 20 days)
	7 (21 to 29 days)
	8 (30 days (every day))
	96 (Valid Skip)
	99 (Not Stated)
	Coverage: All Respondents where SS_030 = 1 or 99 (Ever smoked a whole cigarette or not stated)

DERIVATION OF RESPONSES FOR DVTY1ST

CURRENT SMOKER	**Definition**: A current smoker is someone who has smoked at least 100 cigarettes in his or her lifetime, and who has smoked at least one whole cigarette during the past 30 days **Calculation:** SS_040 (Question 12): *Have you ever smoked 100 or more whole cigarettes in your life?* Valid response 1 (Yes) AND SS_060 (Question 13): *On how many of the last 30 days did you smoke one or more cigarettes?* Valid responses 2 (1 day) 3 (2 to 3 days) 4 (4 to 5 days) 5 (6 to 10 days) 6 (11 to 20 days) 7 (21 to 29 days) 8 (30 days (every day))
FORMER SMOKER	**Definition:** A former smoker is a person who reports having smoked 100 or more cigarettes but did not smoke in the last 30 days. **Calculation:** SS_040 (Question 12): *Have you ever smoked 100 or more whole cigarettes in your life?* Valid response 1 (Yes) OR SS_060 (Question 13): *On how many of the last 30 days did you smoke one or more cigarettes?* Valid response 1 (None)

NEVER SMOKER	**Definition:** A never smoker is a person who reports that he or she has not smoked 100 or more whole cigarettes in his or her life time but might have smoked a whole cigarette. **Calculation:** SS_040 (Question 12): *Have you ever smoked 100 or more whole cigarettes in your life?* Valid response 2 (No) OR SS_030 (Question 11): *Have you ever smoked a whole cigarette* Valid responses 2 (No) 96 (Valid Skip)
NOT STATED	**Definition:** Smoking status unknown. Respondents whose smoking status could not be determined due to missing responses in one or more contributing variable. **Calculation:** Remaining respondents who were not assigned a smoking status based on the logic above.

DERIVED VARIABLE	DVTY2ST
RESPONSE OPTIONS FOR DVTY2ST	1 = Current Daily Smoker
	2 = Current Occasional Smoker
	3 = Former Smoker
	4 = Experimental Smoker (Beginner)
	5 = Past Experimental Smoker
	6 = Puffer
	7 = Never Tried
	99 = Not Stated
COVERAGE FOR DVTY2ST	Coverage: All Respondents
QUESTIONS	SS_010 (Question 7): *Have you ever tried cigarette smoking, even just a few puffs?* 1 (Yes) 2 (No) 99 (Not Stated) Coverage: All Respondents
	SS_030 (Question 11): *Have you ever smoked a whole cigarette?* 1 (Yes) 2 (No) 96 (Valid Skip) 99 (Not Stated) Coverage: All Respondents where SS_010 = 1 or 99 (Ever tried smoking a cigarette, even a few puffs or not stated)
	SS_040 (Question 12): *Have you ever smoked 100 or more whole cigarettes in your life?* 1 (Yes) 2 (No) 96 (Valid Skip) 99 (Not Stated) Coverage: All Respondents where SS_030 = 1 or 99 (Ever smoked a whole cigarette or not stated.
	SS_060 (Question 13): On how many of the last 30 days did you smoke one or more cigarettes? 1 (None) 2 (1 day) 3 (2 to 3 days) 4 (4 to 5 days) 5 (6 to 10 days)

	6 (11 to 20 days) 7 (21 to 29 days) 8 (30 days (every day)) 96 (Valid Skip) 99 (Not Stated) Coverage: All Respondents where SS_030 = 1 or 99 (Ever smoked a whole cigarette or not stated)
DERIVATION OF RESPONSES FOR DVTY2ST	
CURRENT DAILY SMOKER	**Definition:** A current daily smoker is a person who reports currently smoking cigarettes every day. **Calculation:** SS_040 (Question 12): *Have you ever smoked 100 or more whole cigarettes in your life?* Valid response 1 (Yes) AND SS_060 (Question 13): *On how many of the last 30 days did you smoke one or more cigarettes?* Valid response 8 (30 days (every day))
CURRENT OCCASIONAL SMOKER	**Definition:** A current occasional smoker is a person who currently smokes cigarettes but not every day. **Calculation:** SS_040 (Question 12): *Have you ever smoked 100 or more whole cigarettes in your life?* Valid response 1 (Yes) AND SS_060 (Question 13): *On how many of the last 30 days did you smoke one or more cigarettes?* Valid responses 2 (1 day) 3 (2 to 3 days)

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	4 (4 to 5 days) 5 (6 to 10 days) 6 (11 to 20 days) 7 (21 to 29 days)
FORMER SMOKER	**Definition:** A former smoker is a person who smoked at least 100 cigarettes in his/her lifetime but did not smoke at all in the last 30 days. **Calculation:** SS_040 (Question 12): *Have you ever smoked 100 or more whole cigarettes in your life?* Valid response 1 (Yes) AND SS_060 (Question 13): *On how many of the last 30 days did you smoke one or more cigarettes?* Valid Response 1 (None)
EXPERIMENTAL SMOKER (BEGINNER)	**Definition:** An experimental smoker is a person who has smoked in the last 30 days but has not smoked 100 or more cigarettes. **Calculation:** SS_030 (Question 11): *Have you ever smoked a whole cigarette?* Valid response 1 (Yes) AND SS_040 (Question 12): *Have you ever smoked 100 or more whole cigarettes in your life?* Valid response 2 (No) AND

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	SS_060 (Question 13): *On how many of the last 30 days did you smoke one or more cigarettes?* Valid responses 2 (1 day) 3 (2 to 3 days) 4 (4 to 5 days) 5 (6 to 10 days) 6 (11 to 20 days) 7 (21 to 29 days) 8 (30 days (every day))
PAST EXPERIMENTAL SMOKER	**Definition:** A past experimental smoker is a person who has smoked a whole cigarette but did not smoke in the last 30 days and also did not smoke 100 cigarettes in his/her lifetime. **Calculation:** SS_030 (Question 11): *Have you ever smoked a <u>whole</u> cigarette?* Valid response 1 (Yes) AND SS_040 (Question 12): *Have you ever smoked 100 or more whole cigarettes in your life?* Valid response 2 (No) AND SS_060 (Question 13): *On how many of the last 30 days did you smoke one or more cigarettes?* Valid response 1 (none)
PUFFER	**Definition:** A puffer is a person who has tried smoking, but has never smoked a whole cigarette. **Calculation:**

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		SS_010 (Question 7): *Have you <u>ever</u> tried cigarette smoking, even just a few puffs?* Valid response 1 (Yes) AND SS_030 (Question 11): *Have you ever smoked a <u>whole</u> cigarette?* Valid response 2 (No)
	NEVER TRIED	**Definition:** A person classified as never tried, has never tried a cigarette, not even just a few puffs. **Calculation:** SS_010 (Question 7): *Have you <u>ever</u> tried cigarette smoking, even just a few puffs?* Valid response 2 (No)
	NOT STATED	**Definition:** Detailed smoking status unknown. Respondents whose detailed smoking status could not be determined due to missing responses in one or more contributing variable. **Calculation:** Remaining respondents who were not assigned a smoking status based on the logic above.

Derived Variable for Smoking in the Last 30 Days

The following describes the derived variable in the PUMF for smoking in the last 30 days.

DERIVED VARIABLE	DVLAST30
OBJECTIVE	To measure the rate of having smoked one or more cigarettes in the last 30 days out of all respondents.
RESPONSE OPTIONS FOR DVLAST30	1= Yes 2= No 99 = Not Stated
COVERAGE FOR DVLAST30	Coverage: All Respondents
QUESTIONS	SS_060 (Question 13): *On how many of the last 30 days did you smoke one or more cigarettes?* 1 = None 2 = 1 day 3 = 2 to 3 days 4 = 4 to 5 days 5 = 6 to 10 days 6 = 11 to 20 days 7 = 21 to 29 days 8 = 30 days (every day) 96 = Valid Skip 99 = Not Stated Coverage: All Respondents where SS_030 = 1 or 99 (Ever smoked a whole cigarette or not stated) Notes: • Code "Yes" for respondents who reported 1-30 days of cigarette use in question 13 (2 <= SS_060 <= 8). • Code "No" for respondents who did not report 1-30 days of cigarette use in question 13 (SS_060 = 1 (None) or 96 (Valid Skip)). • Code "Not Stated" for respondents who did not respond to question 13 (SS_060 = 99).

Derived Variables for Amount Smoked

The following describes the derived variables in the PUMF for amount smoked. These derived variables are consistent with previous cycles of CSTADS (YSS) of 2014/2015 and earlier.

COMPONENT VARIABLES	WP_040A, WP_040B, WP_040C, WP_040D, WP_040E, WP_040F, WP_040G
QUESTION	(All seven days from Question 15) *Thinking back over the last 7 days, how many whole cigarettes did you smoke each day?* *a) Sunday* *b) Monday* *c) Tuesday* *d) Wednesday* *e) Thursday* *f) Friday* *g) Saturday*
RESPONSE OPTIONS	0 = 0 whole cigarettes smoked 1 : 36 whole cigarettes smoked 96 = Valid Skip 99 = Not Stated
COVERAGE	Coverage: Respondents where SS_030 = 1 or 99 (Ever smoked a whole cigarette or not stated)

DERIVED VARIABLES

DVAMTSMK	**Definition**: The average number of whole cigarettes smoked per day across all 7 days in the past week. **Calculation of Responses:** (WP_040a + WP_040b + WP_040c + WP_040d + WP_040e + WP_040f + WP_040g)/7 **Notes:** If any component variables have missing data then DVAMTSMK = 99. **Coverage:**

	Respondents where SS_030 = 1 or 99 (Ever smoked a whole cigarette or not stated)
DVCIGWK	**Definition**:
	Total number of whole cigarettes smoked in the last 7 days.
	Calculation of Responses:
	WP_040a + WP_040b + WP_040c + WP_040d + WP_040e + WP_040f + WP_040g
	Notes:
	• Not necessary for all to have valid responses.
	• If all component variables have missing data then DVCIGWK = 999.
	Coverage:
	Respondents where SS_030 = 1 or 99 (Ever smoked a whole cigarette or not stated)
DVNDSMK	**Definition**:
	Number of days the respondent smoked at least one whole cigarette in the week prior to the survey.
	Calculation of Responses:
	A count of WP_040a, WP_040b, WP_040c, WP_040d, WP_040e, WP_040f, and WP_040g with valid responses excluding days with a missing or zero response.
	Notes:
	• If all component variables are equal to the numeric value 0 or if some of the component variables are equal to the numeric value 0 and some are missing then DVNDSMK = 0.
	• If all component variables have missing data then DVNDSMK = 99.
	Coverage:
	Respondents where SS_030 = 1 or 99 (Ever smoked a whole cigarette or not stated)

DVAVCIGD

Definition:

Average number of whole cigarettes smoked on the days that the respondent smoked.

Calculation of Responses:
DVCIGWK / DVNDSMK

Notes:
- If DVCIGWK and DVNDSMK = 0 then DVAVCIGD = 0.
- If either DVCIGWK or DVNDSMK were missing, then DVAVCIGD = 99.

Coverage:
Respondents where SS_030 = 1 or 99 (Ever smoked a whole cigarette or not stated)

Derived Variable for Number of years lived in Canada

The following describes the derived variable in the PUMF for the number of years lived in Canada.

DERIVED VARIABLE	DVRES
OBJECTIVE	To measure the number of years the respondent lived in Canada. Categories from the original variable (RES_010), which appears on the Restricted version only, are collapsed in order to maintain confidentiality.
RESPONSE OPTIONS FOR DVRES	1 = I was born in Canada 2 = 1 to 10 years 3 = 11 or more years 99 = Not Stated
COVERAGE FOR DVRES	Coverage: All Respondents
QUESTIONS	RES_010 (Question 6): *How many years have you lived in Canada?* 1 = I was born in Canada 2 = 1 to 2 years 3 = 3 to 5 years 4 = 6 to 10 years 5 = 11 or more years 99 = Not Stated Coverage: All Respondents *Note that RES_010 has been removed from the PUMF due to confidentiality reasons. Notes: - Code "I was born in Canada" for respondents who responded "I was born in Canada" to question 6 (RES_010 = 1). - Code "1 to 10 years" for respondents who responded either "1 to 2 years", "3 to 5 years" or "6 to 10 years" to question 6 (2 <= RES_010 <= 4). - Code "11 or more years" for respondents who responded "11 or more years" to question 6 (RES_010 = 5). - Code "Not Stated" for respondents who did not respond to question 6 (RES_010 = 99).

Derived Variable for Urban/Rural

The following describes the derived variable in the PUMF in classifying each record as being urban or rural.

DERIVED VARIABLE	DVURBAN
OBJECTIVE	To classify the respondent's school location as urban or rural.
RESPONSE OPTIONS	1 = Urban 2 = Rural
QUESTION	The school's postal code was used to calculate this variable.
COVERAGE	All Respondents Using the Statistical Area Classification system variable SACTYPE obtained from the Postal Code Conversion File plus Version 7A, respondents were assigned a rural or urban status based on the postal code of the school they attended at the time of their participation in the survey. The SACTYPE variable distinguishes among census metropolitan areas (all of which are tracted), tracted versus untracted census agglomerations, and the residual area not in any census metropolitan area or census agglomeration ("rural and small town Canada"), with the latter further classified by the relative importance of commuting flows to work in any census metropolitan area or census agglomeration (CMACA) --also known as "metropolitan influence zones" or MIZ. SACTYPE has the following categories: 1 = CENSUS METROPOLITAN AREA 2 = TRACTED CENSUS AGGLOMERATION 3 = NON-TRACTED CENSUS AGGLOMERATION 4 = NON-CMACA, STRONG CMACA INFLUENCE 5 = NON-CMACA, MODERATE CMACA INFLUENCE 6 = NON-CMACA, WEAK CMACA INFLUENCE 7 = NON-CMACA, NO CMACA INFLUENCE 8 = NON-CMACA, TERRITORIES
NOTES	• Categories 1 to 3 would be categorized as Urban (DVURBAN = 1) and categories 4 to 8 would be categorized as Rural (DVURBAN = 2).

	• Respondents with school Postal Codes for which the program was unable to compute SACTYPE were imputed into either an Urban or Rural category by using an older version of the Postal Code Conversion File (Version 6D).

Derived Variable for Socioeconomic Status (SES)

The following describes the derived variable in the PUMF for socioeconomic status (SES).

DERIVED VARIABLE	DVHHINC2
OBJECTIVE	This variable reflects the median household income for the area where the respondent's school is located.
QUESTION	The school's postal code was used to calculate this variable.
COVERAGE	All Respondents The forward sortation area (FSA), which is the first three digits of the postal code of the respondent's school, was merged onto the Canadian 2016 Census data on median household income that was sorted by FSA. The median household income was then rounded to the nearest $5000. Outliers were grouped so that at least 5 schools are associated with each income category.

7.4 Weighting

Survey weights are needed to derive population estimates from the survey sample. In a simple random sample, every unit in the population has the same probability of being drawn. The *fraction* of the population that is sampled is the sample size divided by population size. To calculate the weight of each sampled member, one should multiply each member by 1/*fraction*. If the sample size was 100 and the population was 100,000, then the weight of each sampled member would be 1,000. This means that any sampled member's response is taken to represent 1,000 identical responses in the population. Constant sampling fractions do not apply to complex survey designs such as those used in the CSTADS. In complex survey designs, the sample data must be multiplied by appropriate weights that reflect the different sampling fractions. This survey weight is included in the PUMF and must be used to derive meaningful population estimates from the survey. See Section 8 for guidelines on using the data.

The development of the survey weights was accomplished in a series of stages detailed below. In the first stage, a weight (W_{1j}) was created to account for the school selection within health region and school strata. A second weight (W_{2jg}) was calculated to adjust for student non-response (Stage 2). The product of these two weights (Stage 3) was re-based province by province and trimmed (Stage 4). The resulting re-based and trimmed weights were calibrated to the provincial sex and grade distribution so that the total of the survey weights by sex, grade and province would equal the actual enrolments in those groups for the target population (Stage 5). Finally, bootstrap weights (see Stage 6) were generated to attach to the data file.

Stage 1: Calculation of W_{1j}

Within each provincial sampling frame, there are two to four health region categories: "low" and "high" for all provinces except Prince Edward Island, Nova Scotia, and New Brunswick, and "urban" for Newfoundland and Labrador, Québec, Ontario, and Alberta, and for Nova Scotia only, stratification by specific health region. Two school-level categories ("elementary" and "secondary") are also defined. Crossing these stratifications yields eight strata in Nova Scotia, six strata in Newfoundland and Labrador, Ontario and Alberta, and four in Manitoba, Saskatchewan and British Columbia. In Prince Edward Island, there is only one health region in the province, resulting in two strata. In Québec, the provincial sampling frame contained only secondary schools, resulting in three strata. Within each stratum, in each province, schools were selected based on simple random sampling.

New Brunswick was sampled differently due to the collaboration with the NBSWS as described in Section 4.4. For the purpose of creating the weights, the whole province of New Brunswick will be considered as one stratum.

Within each stratum, in each province, schools were randomly selected. For school *j*, W1j has been computed as

$$W_{1j} = 1/\pi_{1j}$$

where π_{1j} is the probability of inclusion at stage 1 for school j, and where

$$\pi_{1j} = \ell / L$$

ℓ = Number of participating schools in the given stratum, and

L = Total number of schools in the stratum.

Stage 2: Calculation of W$_{2jg}$

Within each selected school we computed the response rate for the students by grade.

$$\pi_{2jg} = \frac{n_j(g)}{N_j(g)}$$

where

$n_j(g)$ is the number of participating students in grade g in school j

$N_j(g)$ is the total number of eligible students in grade g in school j

Then

$$W_{2jg} = 1/\pi_{2jg}$$

Stage 3: Un-Calibrated Final Weight

The final un-calibrated weight is based on the product of w$_{1j}$ and w$_{2jg}$.

$$w_{3jg} = (w_{1j} * w_{2jg})$$

Stage 4: Re-basing and Trimming the Un-Calibrated Final Weight

The final un-calibrated weight is then re-based province by province using the formula:

$$rw_{3jg} = \frac{w_{3jg}}{\sum w_{3jg}} * \text{(sample size within respondent's province)}$$

Where rw_{3jg} is the re-based weight and $\sum w_{3jg}$ is the sum of the weights within the respondent's province.

Consistent with standard practice, the re-based weight is then trimmed at the level of 10, such that all respondents with a re-based weight larger than or equal to 10 are equated to 10.

Stage 5: Calibration of Survey Weights

The re-based and trimmed weights described above were then calibrated using school administrative datasets that include the total student enrolment of the target population by grade (grades 7 through 12) for each province gathered from the sampling frame. Province, grade, and sex calibration were used to adjust the sampling weights so that estimated numbers of students in these domains reproduce known population numbers exactly. The final weight variable was defined as WTPP in the 2018/2019

CSTADS PUMF. The calibration was done by dividing the final un-calibrated, re-based and trimmed weight by the t-ratio, as in this formula:

$$WTPP = (\frac{rw_{3jg}}{t-ratio})$$

The t-ratio is created by dividing the weighted frequency counts for each province by grade by sex (created by the final un-calibrated, re-based and trimmed weight), by each province's population numbers by grade by sex. The provincial population numbers by grade are obtained from the sampling frame. We do not have sex information in our sampling frame, so we used the sex ratio, by age, from Statistics Canada's post-censal CANSIM tables for 2018 (formerly Table 051- 0001) where the age-based sex ratios were used for the following grades: 12 years = grade 7, 13 years = grade 8, 14 years = grade 9, 15 years = grade 10, 16 years = grade 11, and 17 years = grade 12.

Stage 6: Construction of Bootstrap Weights

Statisticians use resampling methods such as the bootstrap to more precisely estimate sampling error. Bootstrap weights for each province were constructed separately using the following process. The bootstrap weights can be accessed through Propel's Data Repository.

1) Within each stratum (health region smoking rate crossed with grade-level) of n participating schools, we resampled n schools with equal probability and with replacement (this is called "unrestricted random sampling" in the SAS procedure, PROC SURVEYSELECT). A bootstrap weight is created from a sample selected where some schools among the participating schools were not selected, and some were selected once and some were selected multiple times.

2) The weight was recalculated and adjusted for the resampling inference based on the method of Rao and Wu (1988)[7].

3) Finally, the new weight was recalibrated to the provincial enrolment figures using the administrative datasets.

Six thousand (6,000) such bootstrap samples were computed. The average of sets of twelve bootstrap weights were used to create a set of 500 averaged bootstrap weights.

The formula for the weight adjustment is obtained as follows:

$$\text{Let } \lambda_{1i} = \sqrt{\frac{n_i}{n_i-1}(1-\frac{n_i}{N_i})}$$

where N_i is the number of schools in a given stratum and n_i is the number of schools actually selected in that stratum.

Let w_{ij} be the smoothed calibrated main weight for student j in school i.

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[7] Rao, J.N.K. & Wu, C.F.J. (1988). Resampling inference with complex survey data. Journal of the American Statistical Association 83, 231-241.

The bootstrap weight w_{ij*} would then be given by

$$w_{ij}[1 - \lambda_{1i} + \text{ (number of times school } i \text{ has been resampled)}^* (\lambda_{1i})].$$

7.5   Suppression of Confidential Information

It should be noted that not all variables are included in the PUMF, as actions have been taken to protect the anonymity of individual survey respondents. Specifically, the following variables have been removed from the PUMF to help ensure anonymity.

- school board & school identifiers (including postal code) with the exception of school identification number
- class identifiers
- strata identifiers
- age
- gender
- sexual orientation
- years lived in Canada (prior to collapsing categories)

8.0 Guidelines for Tabulation, Analysis and Release

This section details guidelines for users when tabulating, analyzing, and publishing or otherwise releasing any data derived from the survey data files. With the aid of these guidelines, users of the 2018/2019 CSTADS PUMF should be able to produce the same figures as those produced by any statistician and, at the same time, will be able to develop currently unpublished figures in a manner consistent with these established guidelines. Please note that these guidelines are consistent with past implementations and have been adapted from the 2002 YSS User Guide written by Statistics Canada.[8]

8.1   Survey Errors

The estimates derived from this survey are based on a sample of schools. Somewhat different estimates might be obtained if a complete census had been taken using the same questionnaire, data collection staff, and processing methods. The difference between the estimates obtained from the sample and those resulting from a complete count taken under similar conditions are called the sampling error of the estimate.

Errors that are not related to sampling may occur at almost every phase of survey implementation. Administrators may misunderstand instructions, respondents may make errors in answering questions, the answers may be incorrectly entered on the questionnaire, and errors may be introduced in the processing and tabulation of the data. These are all examples of non-sampling errors.

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[8] Statistics Canada (2002). Microdata User Guide: Youth Smoking Survey 2002. Accessible at:
http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=4401&lang=en&db=imdb&adm=8&dis=2

Over a large number of observations, randomly-occurring errors will have little effect on estimates derived from the survey; however, errors occurring systematically will contribute to biases in the survey estimates. Considerable time and effort were taken to reduce non- sampling errors in the survey. Quality assurance measures were implemented at each step of the data collection and processing cycle to monitor the quality of the data. These measures included 1) the use of protocols that have been validated in previous studies of school-based data collections related to youth smoking; 2) detailed instructions for teachers and participating students; 3) extensive training of project staff with respect to survey procedures; 4) procedures to ensure that data capture errors were minimized; and 5) coding and editing quality checks to verify the processing logic.

8.2   Use of Survey Weights

Why should survey weights be used?

When producing simple population estimates, including the production of ordinary statistical tables, users must apply the proper sampling weights. There are two reasons why a survey weight variable should be used when performing analyses.

1) **Total population versus sample size[9]**. Users may want results based on population figures instead of estimates based on the sample of individuals included in the study. For example, the CSTADS survey weight, when used, will produce results based on a national population estimate of N, which represents all the students in the participating provinces (grades 7-12) instead of n, which is the total number of students who actually completed the survey. The latter is known as the sample size of the CSTADS.

2) **Adjusting for sampling method.** The second use of survey weights is to adjust for sampling methods. If every member of a population has an equal probability of being selected in a sample, each case would carry the same survey weight and the survey weight for all individuals would be 1. In reality, however, CSTADS sampling employed more complex considerations (described in Section 4.0). As a result, individuals did not have an equal probability of being selected. To correct for this unequal probability or chance of being selected, the survey weight variable was created. In short, using the survey weight variable permits the user to make generalizations to the population from which the sample was drawn.

If proper weights are not used, the estimates derived from the PUMF cannot be considered as representative of the survey population, and will not correspond to estimates produced by Health Canada.

8.3   Rounding Guide

Users are urged to adhere to the following guidelines regarding the rounding of such estimates:

1) Estimates in the main body of a statistical table are to be rounded to the nearest hundred units using the normal rounding technique. In normal rounding, if the first or only digit to be dropped is 0 to 4, the last digit to be retained is not changed. If the first or only digit to be dropped is 5 to 9, the last digit to be retained is raised by 1. For example, in normal rounding to the nearest 100, if the last two digits are between 00 and 49, they are changed to 00 and the preceding digit (the hundreds digit) is left unchanged. If the last digits are between 50 and 99, they are changed to

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[9] Sample size refers to the number of records in the final data set.

00 and the preceding digit is incremented by 1.

2) Marginal sub-totals and totals in statistical tables are to be derived from their corresponding un-rounded components and then are to be rounded themselves to the nearest 100 units using normal rounding.
3) Averages, proportions, rates and percentages are to be computed from un-rounded components (i.e., numerators and/or denominators) and then are to be rounded to one decimal using normal rounding. In normal rounding to a single digit, if the final or only digit to be dropped is 0 to 4, the last digit to be retained is not changed. If the first or only digit to be dropped is 5 to 9, the last digit to be retained is increased by 1.
4) Sums and differences of aggregates (or ratios) are to be derived from their corresponding un-rounded components and then are to be rounded themselves to the nearest 100 units (or the nearest one decimal) using normal rounding.
5) Under no circumstances are un-rounded estimates to be published or otherwise released by users. Un-rounded estimates imply greater precision than actually exists.

8.4   Use of Weights for Variance Estimation

The weighting procedure in some statistical analysis software packages may not be appropriate for sample survey analysis. The user should understand how the weight variable is used within the software package.

The calculation of more precise variance estimates and coefficients of variation requires detailed knowledge of the design of the survey. Such details cannot be given in the PUMF since confidentiality must be respected.

A preferable method of calculating variances is available that takes account of the sample design by using the bootstrap weights which are provided as a separate data file. The correct variance for the mean bootstrap can be computed by specifying balanced repeated replication (BRR) with an appropriate Fay factor[10]. For the variance computation specify BRR with the Fay factor set to $\rho = 1 - \sqrt{1/12} = 0.71132487$. The number "12" in the formula stems from each mean bootstrap sample representing an average over 12 bootstrap samples. The replicate weights commands can be used to specify the bootstrap weights. This procedure, which can be applied in statistical software such as STATA and SAS, creates reliable estimates of the variance for both simple estimates such as estimates of totals, proportions and ratios, and more complex analyses such as linear or logistic regression.

Health Canada employed STATA [11]for all analyses of the 2018/2019 CSTADS. The *svyset* commands are used to account for the complex survey design. The *svyset* statement to be used in STATA with the 2018/2019 CSTADS dataset would have the following form:

svyset [pweight=wtpp], brrweight(bsw1-bsw500) vce(brr) fay(0.71132487)

Declaring **pweight=wtpp** tells STATA that the survey weight (which is often called the probability weight) is the variable **wtpp**. The option **vce(brr)** states that the variance estimation approach to use is BRR. The option **fay(0.71132487)** states that the BRR variance estimation approach is to use a Fay's adjustment of 0.71132487. The option **brrweight(bsw1-bsw500)** states that the names of the BRR

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[10] Judkins, D. 1990. Fay's Method for Variance Estimation. Journal of Official Statistics, 6(3), 223-239
[11] StataCorp. 2015. Stata Statistical Software: Release 14. College Station, TX: StataCorp LP

weight variables are **bsw1**, **bsw2**, …, **bsw500**. This option can also be designated as **brrweight(bsw*)** provided there are no variables other than the bootstrap weight variables whose names begin with "bsw".

Finally, the **mse** option, which can be added to the end of the **svyset** statement, tells STATA to calculate the variance using squared differences between bootstrap estimates and the full- sample estimate of the quantities of interest. If this option is not included, STATA uses squared differences between each bootstrap estimate and the mean of all the bootstrap estimates. Both approaches are acceptable and should yield approximately the same result.

Equivalently in SAS, the survey procedures (SURVEYFREQ, SURVEYMEANS, SURVEYLOGISTIC, SURVEYREG, etc.) can be used to account for the complex survey design. This is done using the VARMETHOD=BRR (FAY = 0.71132487) option for the procedure in question and by using the REPWEIGHTS BSW1 -- BSW500 statement and the WEIGHT WTPP statement.

SURVEYREG produces some incorrect results when the REF=option is specified and BRR variance estimation is used. This is only an issue with certain releases of SAS. More information can be found on the SAS website (http://support.sas.com/kb/59/127.html). Please note, this website only mentions the Jackknife method, but it is in fact also an issue with BRR variance estimation.

The SAS survey procedures are equivalent to using the **mse** option in STATA. Another option is to use the Bootvar program available in SAS. It is made up of macros that compute variances for totals, differences between ratios and for linear and logistic regression.

Bootvar may be downloaded from Statistics Canada's Research Data Centre website (http://www.statcan.gc.ca/pub/12-002-x/2014001/article/11901-eng.htm#a8). Users must accept the Bootvar Click-Wrap License before they can read the files. There is a document on the site explaining how to adapt the system to meet users' needs.

8.5   Definitions of Types of Estimates: Categorical and Quantitative

Before discussing how the CSTADS data can be tabulated and analyzed, it is useful to describe the two main types of point estimates of population characteristics which can be generated from the PUMF for CSTADS.

Categorical Estimates

Categorical estimates are estimates of the number, or percentage of the surveyed population possessing certain characteristics or falling into some defined category. The number of students who ever smoked a whole cigarette or the proportion of smokers who usually buy cigarettes from a friend or someone else are examples of such estimates. An estimate of the number of persons possessing a certain characteristic may also be referred to as an estimate of an aggregate.

Examples of Categorical Questions:

Question: Have you ever smoked a whole cigarette?

Responses: Yes / No

Questions: Where do you usually get your cigarettes?

Responses: I do not smoke / I buy them myself at a store / I buy them from a First Nation Reserve (i.e., delivery service) / I buy them on a First Nation Reserve / I buy them from a friend / I buy them from someone else / I ask someone to buy them for me / etc.

Quantitative Estimates

Quantitative estimates are estimates of totals or of means, medians and other measures of central tendency of quantities based upon some or all of the members of the surveyed population. They also specifically involve estimates of the form $\hat{X} / \hat{Y}$ where $\hat{X}$ is an estimate of surveyed population quantity total and $\hat{Y}$ is an estimate of the number of persons in the surveyed population contributing to that total quantity.

An example of a quantitative estimate in the 2018/2019 CSTADS is the average number of whole cigarettes smoked over the last 7 days among all current smokers. The numerator ($\hat{X}$) is an estimate of the total number of whole cigarettes smoked over the last 7 days and the denominator ($\hat{Y}$) is the number of persons who reported smoking over the last 7 days.

Tabulation of Categorical Estimates

Estimates of the number of people with a certain characteristic can be obtained from the CSTADS PUMF by summing the final weights of all records possessing the characteristic(s) of interest. Proportions and ratios of the form $\hat{X} / \hat{Y}$ are obtained by:

a) summing the final weights of records having the characteristic of interest for the numerator ($\hat{X}$),

b) summing the final weights of records having the characteristic of interest for the denominator ($\hat{Y}$), then

c) dividing estimate a) by estimate b) ($\hat{X} / \hat{Y}$).

Tabulation of Quantitative Estimates

Estimates of quantities can be obtained from the CSTADS PUMF by multiplying the value of the variable of interest by the final weight for each record, then summing this quantity over all records of interest. For example, to obtain an estimate of the total number of whole cigarettes smoked in the past 7 days prior to the survey by students in grade 9 (secondary III in Québec), multiply the value reported in the derived variable DVCIGWK (number of whole cigarettes smoked in the past 7 days prior to the survey) by the final weight for the record (WTPP), then sum this product for all records where DVCIGWK < 996 and GRADE equals 9.

8.6 Coefficient of Variation Release Guidelines

Before releasing and/or publishing any estimate from the 2018/2019 CSTADS, users should first determine the quality level of the estimate. The quality levels are Acceptable, Marginal, and Unacceptable. Data quality is affected by both sampling and non-sampling errors as discussed in Section 8.1. However, for this purpose, the quality level of an estimate will be determined only on the basis of sampling error as reflected by the coefficient of variation (i.e., standard error divided by the estimate, multiplied by 100) as shown in the table below.

First, determine the number of respondents who contributed to the numerator in the calculation of the estimate. **If this number is less than 30, the weighted estimate must be considered to be of unacceptable quality and cannot be released.**

For weighted estimates based on sample sizes of 30 or more, users should determine the coefficient of variation of the estimate and follow the guidelines in Table 7. Apply these quality level guidelines to weighted rounded estimates. Unacceptable quality level estimates cannot be released and marginal level estimates can only be released with the warning to caution subsequent users outlined in Table 7.

Table 7: Quality Level Guidelines for Weighted Estimates

Quality Level of Estimate	Guidelines
Acceptable	Estimates have a sample size of 30 or more and low coefficients of variation in the range of 0.0% to 16.5%. No warning is required.
Marginal	Estimates have a sample size of 30 or more and high coefficients of variation in the range of 16.6% to 33.3%. Estimates should be flagged with the letter M (or some similar identifier). They should be accompanied by a warning to caution subsequent users about the high levels of error associated with the estimates.
Unacceptable	Estimates have a sample size of less than 30, or very high coefficients of variation in excess of 33.3%. It is not recommended to release estimates of unacceptable quality. Such estimates should be replaced with the letter U (or some similar identifier) and the following statement: **"Unreleasable due to low sample size."**

APPENDICES

APPENDIX A: 2018/2019 CANADIAN STUDENT TOBACCO, ALCOHOL AND DRUGS SURVEY QUESTIONNAIRE

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APPENDIX B: COMPARABILITY OF QUESTIONNAIRE ITEMS ACROSS SURVEY CYCLES

Table B-1: CSTADS Questions in all cycles: 9 items

Question	Variable Name 2018/2019, 2016/2017 & 2014/2015 CSTADS	Variable Name 2012/2013 and previous Youth Smoking Survey (YSS)
Have you ever smoked 100 or more whole cigarettes in your life?	SS_040	SHUND0A1
Have you ever tried to quit smoking cigarettes?	SC_010	SEVRQTA1
Have you ever tried cigarette smoking, even just a few puffs?	SS_010	SPUFF0A1
How old are you today?	AGE	AGE
What was your sex at birth?$^{\phi}$	SEX	SEX
What grade are you in?	GRADE	GRADE
On how many of the last 30 days did you smoke one or more cigarettes?	SS_060	SLST30A1
Have you ever smoked a whole cigarette?	SS_030	SWHOLEA1

ϕ Prior to the 2018/2019 questionnaire this question read: Are you...? Female Male

Table B-2: New Questions for the CSTADS 2018/2019 Cycle: 23 items

New Questions	Variable Name
What is your gender? *Gender refers to current gender which may be different from sex assigned at birth and may be different from what is indicated on legal documents.*	GENDER
Which of the following best describes you?	ORIENTATION
How many years have you lived in Canada?	RES_010
At any time during the next 12 months do you think you will smoke a cigarette?	TS_011
At any time during the next 12 months do you think you will use an e-cigarette (vape, vape pen, tank & mod)?	TV_010

Thinking back over the last 7 days, how many whole cigarettes did you smoke each day?
    Sunday
    Monday
    Tuesday
    Wednesday
    Thursday
    Friday
    Saturday
	
	WP_040a
	WP_040b
	WP_040c
	WP_040d
	WP_040e
	WP_040f
	WP_040g

Where do you usually get your cigarettes?	CA_011
Thinking about the last time you bought cigarettes in the last 12 months, how much did you pay?	PP_021
On how many of the last 30 days did you use an e-cigarette (vape, vape pen, tank & mod, e-juice)?	ELC_024

In the last 30 days, did you use any of the following?
 	
  a) Cigars, little cigars or cigarillos (plain or flavoured)
  b) Smokeless tobacco (chewing , pinch, dip, snuff, or snus)
  c) Nicotine patches, nicotine gum, nicotine lozenges, nicotine inhalers, or nicotine spray
  d) A water-pipe (hookah) to smoke shisha (tobacco)
  e) Heated tobacco products (iQOSTM or GloTM)
  f) E-cigarettes (vape, vape pen, tank & mod) with nicotine
  g) E-cigarettes (vape, vape pen, tank & mod) without nicotine
	
	TP_016
	TP_046
	TP_056
	
	TP_066
	TP_086
	ELC_026a
	ELC_026b

In the last 12 months, did you drink any of the following? e) Sweetened beverages with high alcohol content (7% or higher), (such as Four Loko, FCKD UP, Clubtails)	 NRG_050
In the last 12 months how did you usually get the marijuana or cannabis you used?	CAN_121
The use of cannabis was made legal for adults in Canada. Has it been easier to get marijuana or cannabis for yourself after legalization?	CAN_130
In the last 12 months, how often did you have alcohol AND marijuana or cannabis on the same occasion? (e.g., at a party, in the same evening, etc.)	CAN_140

Have you ever used a drug or substance to get high that was not what you thought it was?	UND_020
How much do you think people risk harming themselves when they do each of the following activities? 　　e) Use an e-cigarette with nicotine once in a while 　　f) Use an e-cigarette with nicotine on a regular basis 　　g) Use an e-cigarette without nicotine once in a while 　　h) Use an e-cigarette without nicotine on a regular basis	 PH_051 PH_061 PH_052 PH_062
How difficult or easy do you think it would be for you to get each of the following types of substances, if you wanted some? 　　b) An e-cigarette with nicotine 　　c) An e-cigarette without nicotine	 ELC_041 ELC_042
Which behaviours are allowed, or do you think are allowed, at your house? 　　a) smoking cigarettes? 　　b) smoking cannabis? 　　c) vaping e-cigarettes? 　　d) vaping cannabis?	 BEH_010 BEH_020 BEH_030 BEH_040
On a typical school night (Sunday to Thursday), what time do you… 　　a) go to bed? – hour –minute 　　b) fall asleep? –hour –minute	 SLP_020 & SLP_021 SLP_030 & SLP_031
On a typical school morning (Monday to Friday), what time do you… 　　a) wake up? – hour –minute 　　b) leave your house to get to school? – hour –minute 　　c) arrive at school? – hour –minute	 SLP_040 & SLP_040 SLP_050 & SLP_051 SLP_060 & SLP_061
On a typical WEEKEND, what time do you… 　　a) go to bed? (Friday and Saturday night) – hour –minute 　　b) fall asleep? (Friday and Saturday night) – hour –minute 　　c) wake up? (Saturday and Sunday morning) – hour –minute	 SLP_070 & SLP_071 SLP_080 & SLP_081 SLP_090 & SLP_091
Do you use electronics (e.g., TV, video games, computer, tablet, or smartphone) before bedtime?	SLP_100
In the last two weeks, how often have you… 　　a) felt satisfied with your sleep? 　　b) arrived late to class because you overslept? 　　c) fallen asleep in a morning class? 　　d) fallen asleep in an afternoon class? 　　e) stayed up until at least 3am? 　　f) stayed up all night? 　　g) slept past noon? 　　h) felt tired, dragged out, or sleepy during the day? 　　i) needed more than one reminder to get up in the morning? 　　j) had an extremely hard time falling asleep? 　　k) gone to bed because you just couldn't stay awake any longer? 　　l) struggled to stay awake while reading, studying, or doing homework?	 SLP_110 SLP_120 SLP_130 SLP_140 SLP_150 SLP_160 SLP_170 SLP_180 SLP_190 SLP_200 SLP_210 SLP_220

CANADIAN STUDENT TOBACCO, ALCOHOL AND DRUGS SURVEY 2018/2019

Thousands of students across Canada, just like you, have been asked to take part in this survey. This important survey will help Health Canada to better understand tobacco, alcohol, and drug use among young people in Canada.

We value your help today.

Please use a pencil to complete this questionnaire.

Please mark all your answers with full, dark marks like this:

- **Even if you don't use tobacco, alcohol, or drugs,** please make sure you answer each question so that all students take the same amount of time to complete the questionnaire.

- **This is NOT a test.** All of your answers will be kept **confidential.** No one, not even your parents or teachers, will ever know what you answered. Please be honest when you answer the questions.

- Mark only **one option per question** unless the instructions tell you to do something else.

- If you do not understand a question, or do not wish to answer a question, leave it blank and continue to the next question.

- Choose the option that is the **closest** to what you think/feel is true for you.

YOUR ANSWERS ARE CONFIDENTIAL

For office use only

⓪①②③④⑤⑥⑦⑧⑨
⓪①②③④⑤⑥⑦⑧⑨

[SERIAL]

About You

1. What grade are you in?

- ○ Grade 7
- ○ Grade 8
- ○ Grade 9
- ○ Grade 10
- ○ Grade 11
- ○ Grade 12

Quebec students only

- ○ Secondary I
- ○ Secondary II
- ○ Secondary III
- ○ Secondary IV
- ○ Secondary V

2. How old are you today?

- ○ 11 years or younger
- ○ 12 years
- ○ 13 years
- ○ 14 years
- ○ 15 years
- ○ 16 years
- ○ 17 years
- ○ 18 years
- ○ 19 years or older

3. What was your sex at birth?

- ○ Female
- ○ Male

4. What is your gender?
Gender refers to current gender which may be different from sex assigned at birth and may be different from what is indicated on legal documents.

- ○ Woman / girl
- ○ Man / boy
- ○ Or please specify: _____

5. Which of the following best describes you?

- ○ Gay or lesbian
- ○ Straight, that is, not gay or lesbian
- ○ Bisexual
- ○ Asexual, that is, someone who doesn't experience sexual attraction
- ○ I am not yet sure of my sexual identity
- ○ Something else. I identify as _____
- ○ I am not sure what this question means

6. How many years have you lived in Canada?

- ○ I was born in Canada
- ○ 1 to 2 years
- ○ 3 to 5 years
- ○ 6 to 10 years
- ○ 11 or more years

Tobacco Use

7. Have you <u>ever</u> tried cigarette smoking, even just a few puffs?

- ○ Yes
- ○ No

8. How old were you when you first tried smoking cigarettes, even just a few puffs?

- ○ I have never done this
- ○ I do not know
- ○ 8 years or younger
- ○ 9 years
- ○ 10 years
- ○ 11 years
- ○ 12 years
- ○ 13 years
- ○ 14 years
- ○ 15 years
- ○ 16 years
- ○ 17 years
- ○ 18 years or older

9. At any time during the <u>next 12 months</u> do you think you will smoke a cigarette?

- ○ Definitely yes
- ○ Probably yes
- ○ Probably not
- ○ Definitely not

10. At any time during the <u>next 12 months</u> do you think you will use an e-cigarette (vape, vape pen, tank & mod)?

- ○ Definitely yes
- ○ Probably yes
- ○ Probably not
- ○ Definitely not

11. Have you ever smoked a <u>whole</u> cigarette?

- ○ Yes
- ○ No

12. Have you ever smoked 100 or more <u>whole</u> cigarettes in your life?

- ○ Yes
- ○ No

13. On how many of the <u>last 30 days</u> did you smoke one or more cigarettes?

- ○ None
- ○ 1 day
- ○ 2 to 3 days
- ○ 4 to 5 days
- ○ 6 to 10 days
- ○ 11 to 20 days
- ○ 21 to 29 days
- ○ 30 days *(every day)*

14. Thinking back over the last 7 days, which days did you smoke at least one whole cigarette?

- ○ I have never smoked
- ○ I did not smoke in the last 7 days
- ○ I smoked every day
- ○ I smoked on weekend days only (*after school Friday - Sunday*)
- ○ I smoked on week days only
- ○ I smoked on week days and weekend days, but not every day

15. Thinking back over the last 7 days, how many whole cigarettes did you smoke each day?

Please use only numbers. For example, if you smoked 12 cigarettes, fill in the boxes like this:

1	2

Sunday:		
Monday:		
Tuesday:		
Wednesday:		
Thursday:		
Friday:		
Saturday:		

16. Have you ever tried to quit smoking cigarettes?

- ○ I have never smoked
- ○ I have only smoked a few times
- ○ I have never tried to quit
- ○ I have tried to quit once
- ○ I have tried to quit 2 or 3 times
- ○ I have tried to quit 4 or 5 times
- ○ I have tried to quit 6 or more times

For office use only

17. Where do you usually get your cigarettes?
(Mark only one)

- ○ I do not smoke
- ○ I buy them myself at a store
- ○ I buy them from a First Nation Reserve (i.e. delivery service)
- ○ I buy them on a First Nation Reserve
- ○ I buy them from a friend
- ○ I buy them from someone else
- ○ I ask someone to buy them for me
- ○ My brother or sister gives them to me
- ○ My mother or father gives them to me
- ○ A friend gives them to me
- ○ Someone else gives them to me
- ○ I take them from my mother, father, or siblings
- ○ Other

18. Thinking about the last time you bought cigarettes in the last 12 months, what did you buy?

- ○ I did not buy cigarettes in the last 12 months
- ○ A single cigarette
- ○ A pack of 20 cigarettes
- ○ A pack of 25 cigarettes
- ○ A bag of 200 cigarettes
- ○ A carton (200 cigarettes)
- ○ A can or pouch of tobacco (loose tobacco)
- ○ Another amount

19. Thinking about the last time you bought cigarettes in the last 12 months, how much did you pay?

- ○ I did not buy cigarettes in the last 12 months
- ○ I do not remember the price
- ○ $1.00 or less
- ○ $1.01 to $6.00
- ○ $6.01 to $8.00
- ○ $8.01 to $10.00
- ○ $10.01 to $15.00
- ○ $15.01 to $20.00
- ○ $20.01 to $40.00
- ○ $40.01 to $60.00
- ○ $60.01 to $80.00
- ○ $80.01 or more

20. When you first tried a tobacco product (not including e-cigarettes), was it flavoured (including menthol)?

- ○ I have never used a tobacco product
- ○ Yes
- ○ No

○○○○○○○○○○○○○○○○○○○○○○○○○○○○○

[SERIAL]

21. Which did you try first: a cigarette or an e-cigarette (vape, vape pen, tank & mod)?

- ○ I have never tried a cigarette nor an e-cigarette
- ○ I have only tried a cigarette and never tried an e-cigarette
- ○ I have only tried an e-cigarette and never tried a cigarette
- ○ I have tried both and tried a cigarette first
- ○ I have tried both and tried an e-cigarette first
- ○ I do not remember

22. On how many of the last 30 days did you use an e-cigarette (vape, vape pen, tank & mod)?

- ○ Daily or almost daily
- ○ Less than daily, but at least once a week
- ○ Less than weekly, but at least once a month
- ○ Less than monthly
- ○ Not at all
- ○ I do not know

23. Where do you usually get your e-cigarettes and supplies (vape, vape pen, tank & mod, e-juice)? (Mark all that apply)

- ○ I do not use e-cigarettes
- ○ I buy them from a vape shop
- ○ I buy them from a convenience store
- ○ I ask someone to buy them for me
- ○ I buy them online
- ○ A family member gives them to me
- ○ A friend gives them to me
- ○ Someone else gives them to me
- ○ I use my mother's, father's, or siblings' without their permission
- ○ I use someone else's without their permission
- ○ Other

24. In the last 30 days, did you use any of the following?

	Daily or almost daily	Less than daily, but at least once a week	Less than weekly, but at least once in the last 30 days	Tried, but did not use in the last 30 days	I have never tried
a) Cigars, little cigars or cigarillos (plain or flavoured)	○	○	○	○	○
b) Smokeless tobacco (chewing tobacco, pinch, dip, snuff, or snus)	○	○	○	○	○
c) Nicotine patches, nicotine gum, nicotine lozenges, nicotine inhalers, or nicotine spray	○	○	○	○	○
d) A water-pipe (hookah) to smoke shisha (tobacco)	○	○	○	○	○
e) Heated tobacco products (iQOS™ or Glo™)	○	○	○	○	○
f) E-cigarettes (vape, vape pen, tank & mod) **with** nicotine	○	○	○	○	○
g) E-cigarettes (vape, vape pen, tank & mod) **without** nicotine	○	○	○	○	○

Alcohol Use

A **DRINK** means: 1 regular sized bottle, can, or draft of beer; 1 glass of wine; 1 bottle of cooler; 1 shot of liquor (rum, whisky, *Baileys*®, etc.); or 1 mixed drink (1 shot of liquor with pop, juice, energy drink, etc.).

25. **Have you <u>ever</u> had a drink of alcohol that was more than just a sip?**

   ○ Yes
   ○ No

26. **In the <u>last 12 months</u>, how often did you have a drink of alcohol that was more than just a sip?**

   ○ I have never had a drink of alcohol that was more than just a sip
   ○ I did not drink alcohol in the last 12 months
   ○ Less than once a month
   ○ Once a month
   ○ 2 or 3 times a month
   ○ Once a week
   ○ 2 or 3 times a week
   ○ 4 to 6 times a week
   ○ Every day
   ○ I do not know
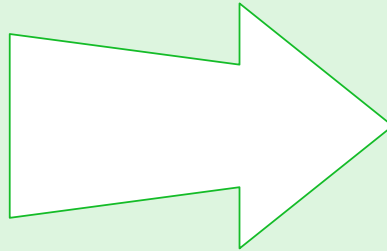
27. **How old were you when you first had a drink of alcohol that was more than just a sip?**

   ○ I have never had a drink of alcohol that was more than just a sip
   ○ I do not know
   ○ 8 years or younger
   ○ 9 years   ○ 14 years
   ○ 10 years   ○ 15 years
   ○ 11 years   ○ 16 years
   ○ 12 years   ○ 17 years
   ○ 13 years   ○ 18 years or older

28. **In the <u>last 30 days</u>, how often did you have a drink of alcohol that was more than just a sip?**

   ○ I have never had a drink of alcohol that was more than just a sip
   ○ I have not done this in the last 30 days
   ○ Once or twice
   ○ Once or twice a week
   ○ 3 or 4 times a week
   ○ 5 or 6 times a week
   ○ Every day
   ○ I do not know

29. **In the <u>last 12 months</u>, how often did you have 5 or more drinks of alcohol on one occasion?**

   ○ I have never had 5 or more drinks of alcohol on one occasion
   ○ I have not done this in the last 12 months
   ○ Less than once a month
   ○ Once a month
   ○ 2 to 3 times a month
   ○ Once a week
   ○ 2 to 5 times a week
   ○ Daily or almost daily
   ○ I do not know
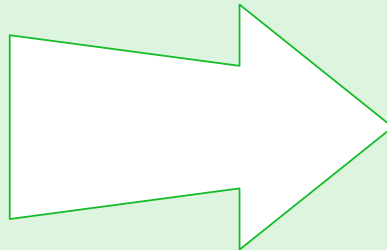
30. **How old were you when you first had 5 or more drinks of alcohol on one occasion?**

   ○ I have never had 5 or more drinks of alcohol on one occasion
   ○ I do not know
   ○ 8 years or younger
   ○ 9 years   ○ 14 years
   ○ 10 years   ○ 15 years
   ○ 11 years   ○ 16 years
   ○ 12 years   ○ 17 years
   ○ 13 years   ○ 18 years or older

31. In the <u>last 30 days</u>, how often did you have 5 or more drinks of alcohol on one occasion?

- ○ I have never had 5 or more drinks of alcohol on one occasion
- ○ I have not done this in the last 30 days
- ○ Once or twice
- ○ Once or twice a week
- ○ 3 or 4 times a week
- ○ 5 or 6 times a week
- ○ Every day
- ○ I do not know

32. In the <u>last 12 months</u>, did you drink any of the following?

	Yes	No
a) An energy drink like Red Bull®, Monster® and Rockstar®, not sports drinks	○	○
b) Alcohol and an energy drink drank separately on one occasion	○	○
c) Alcohol and an energy drink hand-mixed together by you or someone else	○	○
d) Store-bought pre-mixed alcoholic beverages with energy drink names (such as Rockstar®+Vodka)	○	○
e) Sweetened beverages with high alcohol content (7% or higher), (such as Four Loko, FCKD UP, Clubtails)	○	○

Marijuana/Cannabis Use

33. Have you <u>ever</u> used or tried marijuana or cannabis (a joint, pot, weed, hash, or hash oil)?

- ○ Yes
- ○ No

34. In the <u>last 12 months</u>, how often did you use marijuana or cannabis?

- ○ I have never used marijuana or cannabis
- ○ I have not done this in the last 12 months
- ○ Less than once a month
- ○ Once a month
- ○ 2 or 3 times a month
- ○ Once a week
- ○ 2 or 3 times a week
- ○ 4 to 6 times a week
- ○ Every day
- ○ I do not know

35. How old were you when you first used marijuana or cannabis?

- ○ I have never used marijuana or cannabis
- ○ I do not know
- ○ 8 years or younger
- ○ 9 years   ○ 14 years
- ○ 10 years   ○ 15 years
- ○ 11 years   ○ 16 years
- ○ 12 years   ○ 17 years
- ○ 13 years   ○ 18 years or older

36. In the <u>last 30 days</u>, how often did you use marijuana or cannabis?

- ○ I have never used marijuana or cannabis
- ○ I have not done this in the last 30 days
- ○ Once or twice
- ○ Once or twice a week
- ○ 3 or 4 times a week
- ○ 5 or 6 times a week
- ○ Every day
- ○ I do not know

37. Indicate whether you have used marijuana or cannabis (a joint, pot, weed, hash, or hash oil) in the following ways:

	No, I have never done this	Yes, I have done this in the last 12 months	Yes, I have done this but not in the last 12 months
a) Smoked a joint, bong, pipe or blunt	○	○	○
b) Eaten it in food such as brownies, cakes, cookies or candy	○	○	○
c) Drank it in tea, cola, alcohol, or other drinks	○	○	○
d) Vaporized it (vape)	○	○	○
e) Dabbed it	○	○	○
f) Used it some other way	○	○	○

38. In the last 12 months, how did you usually get the marijuana or cannabis you used? (*Mark only one*)

○ I have never used marijuana or cannabis
○ I have not done this in the last 12 months
○ I grow my own
○ It was shared around a group of friends
○ I took it from a family member or friend without their permission
○ I took it from someone else without their permission
○ I got or bought it from a family member or a friend
○ I got or bought it from someone else
○ I bought it from a store
○ Someone bought it for me at a retail store
○ Other

39. The use of cannabis was made legal for adults in Canada. Has it been easier to get marijuana or cannabis for yourself after legalization?

○ I have never bought/got marijuana or cannabis
○ It has been easier
○ It has been harder
○ Neither easier nor harder

40. In the last 12 months, how often did you have alcohol AND marijuana or cannabis on the same occasion? (e.g., at a party, in the same evening, etc.)

○ I have never had alcohol AND cannabis on one occasion
○ I have not done this in the last 12 months
○ Less than once a month
○ Once a month
○ 2 to 3 times a month
○ Once a week
○ 2 to 5 times a week
○ Daily or almost daily
○ I do not know

Other Drug Use

41. Have you used a drug or substance to get high without knowing what it was?

○ No, I have never done this
○ Yes, I have done this in the last 12 months
○ Yes, I have done this, but not in the last 12 months

42. Have you ever used a drug or substance to get high that was not what you thought it was?

- ○ No, I have never done this
- ○ Yes, I have done this in the last 12 months
- ○ Yes, I have done this, but not in the last 12 months

43. Indicate whether you have ever used or tried any of the following drugs:

	No, I have never used this	Yes, I have used this in the last 12 months	Yes, I have used this, but not in the last 12 months
a) Amphetamines (speed, crystal meth or ice, meth, crank, ...)	○	○	○
b) MDMA (ecstasy, E, X, ...)	○	○	○
c) Hallucinogens (LSD, acid, PCP, magic mushrooms or 'shrooms', mesc, ketamines, ...)	○	○	○
d) Heroin (smack, junk, horse, ...)	○	○	○
e) Cocaine (crack, blow, snow, ...)	○	○	○
f) Synthetic cannabinoids (spice, synthetic marijuana, scence, herbal mixtures, herbal incense, ...)	○	○	○
g) BZP/TFMPP (legal X, A2, piperazine, frenzy, nemesis, ...)	○	○	○
h) Bath salts (mephedrone, MDPV, meph, MCAT, ...)	○	○	○
i) 2C (nexus, 2C-B, 2C-I, 2C-C, …) or NBOMe (25C-NBOMe, 25B-NBOMe, 25I-NBOMe, …)	○	○	○
j) Tryptamines (DMT, 'psychosis', AMT, foxy, ...)	○	○	○
k) Glue, gasoline, or other solvents to get high	○	○	○
l) Salvia (divine sage, magic mint, sally D, ...)	○	○	○

44. Have you ever used or tried any of the following medications for non-medical reasons or to get high?

	No, I have never used this	Yes, I have used this in the last 12 months	Yes, I have used this, but not in the last 12 months
a) Sleeping medicine from a store (Nytol®, Unisom®, ...)	○	○	○
b) Stimulants (diet pills, stay awake pills, uppers, bennies, ...)	○	○	○
c) Dextromethorphan such as cold and cough medicine (Robitussin DM®, Benylin DM®, robos, dex, DXM, ...)	○	○	○
d) Gravol®	○	○	○

Now we would like to ask you about medicines that are only available with a prescription from a Health Care Provider, such as a doctor, dentist, or a nurse practitioner.

45. In the last 12 months, were you given a prescription by a Health Care Provider for medicine to treat hyperactivity or concentration difficulty, also called ADHD (Ritalin®, Concerta®, Adderall®, Dexedrine®, ...)?

- ○ Yes
- ○ No
- ○ I do not know

○○○○○○○○○○○○○○○○○○○○○○○ [SERIAL]

46. Have you used ADHD medicine for non-medical reasons or to get high (Ritalin®, Concerta®, Adderall®, Dexedrine®, ...)?

○ No, I have never done this
○ Yes, I have done this in the last 12 months
○ Yes, I have done this, but not in the last 12 months

47. In the <u>last 12 months</u>, were you given a prescription by a Health Care Provider for sedatives or tranquilizers to help you sleep, calm down, or relax your muscles (Ativan®, Xanax®, Valium®, ...)?

○ Yes
○ No
○ I do not know

48. Have you used sedatives or tranquilizers for non-medical reasons or to get high (Ativan®, Xanax®, Valium®, ...)?

○ No, I have never done this
○ Yes, I have done this in the last 12 months
○ Yes, I have done this, but not in the last 12 months

49. In the <u>last 12 months</u>, were you given a prescription by a Health Care Provider for prescribed pain relievers (*oxycodone, fentanyl, morphine, codeine, T3, ...*)? This does <u>not</u> include pain relievers such as Advil®, Aspirin®, or regular Tylenol® that anyone can buy in a drug store.

○ Yes
○ No
○ I do not know

50. Have you used the following prescription pain relievers for non-medical reasons or to get high?	**No**, I have <u>never</u> used this	**Yes**, I have used this in the <u>last 12 months</u>	**Yes**, I have used this, but **not** in the <u>last 12 months</u>
a) Oxycodone (oxy, OC, APO, OxyContin®, percs, roxies, OxyNEO®, ...)	○	○	○
b) Fentanyl	○	○	○
c) Other prescription pain relievers (morphine, codeine, ...)	○	○	○

51. In the <u>last 12 months</u>, if you did use prescribed pain relievers for non-medical reasons or to get high, <u>how did you get them</u>?

○ I have never taken prescribed pain relievers for non-medical reasons or to get high
○ I did not do this in the last 12 months
○ I used pain relievers from my own prescription for non-medical reasons or to get high
○ I took them from a family member or friend without their permission
○ I took them from someone else without their permission
○ I got or bought them from a family member or friend
○ I got or bought them from someone else
○ Other

52. How much do you think people risk harming themselves when they do each of the following activities?

	No risk	Slight risk	Moderate risk	Great risk	I do not know
a) Smoke cigarettes once in a while	○	○	○	○	○
b) Smoke cigarettes on a regular basis	○	○	○	○	○
c) Smoke a water-pipe with tobacco (hookah) once in a while	○	○	○	○	○
d) Smoke a water-pipe with tobacco (hookah) on a regular basis	○	○	○	○	○
e) Use an e-cigarette **with nicotine** once in a while	○	○	○	○	○
f) Use an e-cigarette **with nicotine** on a regular basis	○	○	○	○	○
g) Use an e-cigarette **without nicotine** once in a while	○	○	○	○	○
h) Use an e-cigarette **without nicotine** on a regular basis	○	○	○	○	○
i) Drink alcohol once in a while	○	○	○	○	○
j) Drink alcohol on a regular basis	○	○	○	○	○
k) Smoke marijuana or cannabis once in a while	○	○	○	○	○
l) Smoke marijuana or cannabis on a regular basis	○	○	○	○	○
m) Other than smoking it, use marijuana or cannabis once in a while	○	○	○	○	○
n) Other than smoking it, use marijuana or cannabis on a regular basis	○	○	○	○	○
o) Use prescribed medication such as prescribed pain relievers, tranquilizers, or medicine to treat ADHD, "to get high" once in a while	○	○	○	○	○
p) Use prescribed medication such as prescribed pain relievers, tranquilizers, or medicine to treat ADHD, "to get high" on a regular basis	○	○	○	○	○

53. How difficult or easy do you think it would be for you to get each of the following types of substances, if you wanted some?

	Very difficult	Fairly difficult	Fairly easy	Very easy	I do not know
a) A cigarette	○	○	○	○	○
b) An e-cigarette **with nicotine**	○	○	○	○	○
c) An e-cigarette **without nicotine**	○	○	○	○	○
d) Alcohol	○	○	○	○	○
e) Marijuana or cannabis	○	○	○	○	○
f) Amphetamines (speed, crystal meth or ice, meth, crank, ...)	○	○	○	○	○
g) MDMA (ecstasy, E, X, ...)	○	○	○	○	○
h) Hallucinogens (LSD, acid, PCP, magic mushrooms, mesc, ...)	○	○	○	○	○
i) Cocaine (crack, blow, snow, ...)	○	○	○	○	○
j) Prescribed pain relievers (oxycodone, fentanyl, morphine, codeine, T3, ...)	○	○	○	○	○
k) Medicine to treat ADHD (Ritalin®, Concerta®, Adderall®, Dexedrine®, ...)	○	○	○	○	○

54. Have you <u>driven a vehicle</u> (e.g., car, snowmobile, motor boat, or all-terrain vehicle (ATV)) ...

	No, never	**Yes**, in the <u>last 30 days</u>	**Yes**, more than 30 days ago
a) within an hour of drinking one or more drinks of alcohol?	○	○	○
b) within 2 hours of using marijuana or cannabis?	○	○	○

○○○○○○○○○○○○○○○○○○○○○○○○○○○

[SERIAL]

55. Have you ever <u>been a passenger</u> in a vehicle (e.g., car, snowmobile, motor boat, or all-terrain vehicle (ATV)) ...

	No, never	**Yes**, in the <u>last 30 days</u>	**Yes**, more than 30 days ago	I do not know
a) driven by someone who had one or more drinks of alcohol in the last hour?	○	○	○	○
b) driven by someone who had been using marijuana or cannabis in the last 2 hours?	○	○	○	○

56. Which behaviours are allowed, or do you think are allowed, at your house?

	Allowed **inside and outside**	Allowed **inside <u>only</u>**	Allowed **outside <u>only</u>**	Not allowed inside or outside
a) smoking cigarettes?	○	○	○	○
b) smoking cannabis?	○	○	○	○
c) vaping e-cigarettes?	○	○	○	○
d) vaping cannabis?	○	○	○	○

Bullying and Sleep

57. In the <u>last 30 days</u>, in what ways were you bullied by other students?

	Yes	No
a) Physical attacks (getting beaten up, pushed, or kicked, ...)	○	○
b) Verbal attacks (getting teased, threatened, or having rumours spread about you, ...)	○	○
c) Non-verbal attacks (being ignored, being left out or excluded, being given dirty looks, …)	○	○
d) Cyber-attacks (being sent mean text messages or having rumours spread about you on the internet, ...)	○	○
e) Had someone steal from you or damage your things	○	○

58. In the <u>last 30 days</u>, how often have you been bullied by other students?

- ○ I have not been bullied by other students in the last 30 days
- ○ Less than once a week
- ○ About once a week
- ○ 2 or 3 times a week
- ○ Daily or almost daily

59. In the <u>last 30 days</u>, in what ways did you bully other students?

	Yes	No
a) Physical attacks (beat up, pushed, or kicked them, ...)	○	○
b) Verbal attacks (teased, threatened, or spread rumours about them, ...)	○	○
c) Non-verbal attacks (ignoring, leaving someone out or excluding them, giving dirty looks, …)	○	○
d) Cyber-attacks (sent mean text messages or spread rumours about them on the internet, ...)	○	○
e) Stole from them or damaged their things	○	○

60. In the <u>last 30 days</u>, how often did you bully other students?

- ○ I have not bullied other students in the last 30 days
- ○ Less than once a week
- ○ About once a week
- ○ 2 or 3 times a week
- ○ Daily or almost daily

For questions 61 to 63, please answer with the closest minute. For example, if you go to bed at 10:25pm, fill in the circles like this:

Hours PM	Hours AM	Minutes
⑥ ⑦ ⑧ ⑨ ● ⑪	⑫ ① ② ③ ④	⓪ ⑮ ● ㊺

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61. On a _typical_ *school night* (Sunday to Thursday), what time do you…

	Hours PM	Hours AM	Minutes
a) go to bed?	⑥ ⑦ ⑧ ⑨ ⑩ ⑪	⑫ ① ② ③ ④	⓪ ⑮ ㉚ ㊺
b) fall asleep?	⑥ ⑦ ⑧ ⑨ ⑩ ⑪	⑫ ① ② ③ ④	⓪ ⑮ ㉚ ㊺

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62. On a _typical_ *school morning* (Monday to Friday), what time do you…

	Hours AM	Hours PM	Minutes
a) wake up?	⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪	⑫ ① ② ③ ④	⓪ ⑮ ㉚ ㊺
b) leave your house to get to school?	⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪	⑫ ① ② ③ ④	⓪ ⑮ ㉚ ㊺
c) arrive at school?	⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪	⑫ ① ② ③ ④	⓪ ⑮ ㉚ ㊺

---

63. On a _typical_ *WEEKEND,* what time do you…

	Hours PM	Hours AM	Minutes
a) go to bed? *(Friday and Saturday night)*	⑥ ⑦ ⑧ ⑨ ⑩ ⑪	⑫ ① ② ③ ④	⓪ ⑮ ㉚ ㊺
b) fall asleep? *(Friday and Saturday night)*	⑥ ⑦ ⑧ ⑨ ⑩ ⑪	⑫ ① ② ③ ④	⓪ ⑮ ㉚ ㊺

	Hours AM	Hours PM	Minutes
c) wake up? *(Saturday and Sunday _morning_)*	⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪	⑫ ① ② ③ ④	⓪ ⑮ ㉚ ㊺

---

64. Do you use electronics (e.g., TV, video games, computer, tablet, or smartphone) before bedtime?

- ○ No
- ○ Yes, within 30 minutes before bedtime
- ○ Yes, within 1 hour before bedtime
- ○ Yes, within 2 hours before bedtime

---

65. In the last two weeks, how often have you….

	Every day/ night	Several times	Twice	Once	Never
a) felt satisfied with your sleep?	○	○	○	○	○
b) arrived late to class because you overslept?	○	○	○	○	○
c) fallen asleep in a morning class?	○	○	○	○	○
d) fallen asleep in an afternoon class?	○	○	○	○	○
e) stayed up until at least 3am?	○	○	○	○	○
f) stayed up all night?	○	○	○	○	○
g) slept past noon?	○	○	○	○	○
h) felt tired, dragged out, or sleepy during the day?	○	○	○	○	○
i) needed more than one reminder to get up in the morning?	○	○	○	○	○
j) had an extremely hard time falling asleep?	○	○	○	○	○
k) gone to bed because you just couldn't stay awake any longer?	○	○	○	○	○
l) struggled to stay awake while reading, studying, or doing homework?	○	○	○	○	○

○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○○

[SERIAL]

YOUR SCHOOL'S SMOKING PROFILE

Thank you, *AnyPlace School*, for participating in the 2010/2011 Youth Smoking Survey (YSS).

The Health Canada-sponsored **YSS** is a collection of health and tobacco-related data gathered from students in grades 6 through 12 in participating schools throughout Canada. The administrator of the survey, the Propel Centre for Population Health Impact (Propel), at the University of Waterloo, provides school-level profiles to all participating schools. National and provincial data on youth smoking, physical activity, eating, drug and alcohol behaviours are also included, with the intention of assisting community leaders (educators, students, and public health workers) in planning interventions that will provide the healthiest environment for students to thrive. The information contained in this profile is provided to each school and only they can provide permission to distribute this profile outside the school. We encourage schools to partner with their local health and voluntary organizations and to share these results with their school community (teachers, parents and students) to take action on these findings. For relevant, up-to-date literature and ideas on how to transform this data into appropriate action steps, see the Recommendations and Resource Summary section of this profile.   The data for this profile may or may not be representative of your school due to small sample sizes, so please interpret results with caution.

Propel is pleased to provide this results profile for your school. Propel centrally coordinated the 2010/2011 YSS across Canada in collaboration with the following provincial partners.

Memorial University of Newfoundland	Cancer Care Ontario
University of Prince Edward Island	CancerCare Manitoba
Dalhousie University	University of Saskatchewan
IWK Health Centre	University of Alberta
Québec en Forme	University of British Columbia
University of Waterloo	University of Victoria

The Government of Canada has contracted this research group to implement the Youth Smoking Survey on behalf of Health Canada. The results of the survey will be provided to Health Canada in a manner that will not identify any of the participants in the survey. Please note that in some cases results in table columns or rows and graphs may not add to 100% due to rounding.

For more information regarding this profile or the research project associated with it, **visit**

yss.uwaterloo.ca or contact:

[Name of Provincial Collaborator], [title]
Provincial Collaborator for the YSS
[Name of Institution]
[Phone number]
[email]

Steve Manske, Senior Scientist
Principal Investigator for the YSS
Propel Centre for Population Health Impact
University of Waterloo
(519) 888-4518
manske@uwaterloo.ca
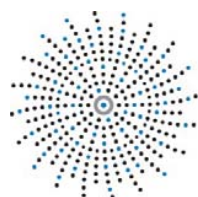
PROPEL
CENTRE FOR
POPULATION
HEALTH IMPACT

Canadian Société
Cancer canadienne
Society du cancer

UNIVERSITY OF
WATERLOO

TABLE OF CONTENTS

THE ISSUE

Smoking is a School Issue

- Youth who take up smoking show a decrease in academic achievement.[1]
  SEE PAGE 7 FOR THE CONNECTION BETWEEN ACADEMIC PERFORMANCE AND SMOKING AT YOUR SCHOOL.

- Smoking is associated with an increased risk of dropping out of high school; smoking is more predictive of dropping out than marijuana or alcohol use.[2]

- Starting smoking at an early age is predictive of a number of risky behaviours; these include fighting, drug use, and problems in school.[3-4]
  SEE PAGE 9 FOR RESULTS ON ALCOHOL, DRUG, MARIJUANA AND OTHER DRUG USE AMONGST YOUTH AT YOUR SCHOOL.

Smoking is a Student Issue

- 85% of current smokers start smoking by age 19.[5] The average age at which youth in grade 12 smoked their first whole cigarette is 14 years.[6]
  SEE PAGE 3 FOR THE NUMBER OF YOUTH AT YOUR SCHOOL SUSCEPTIBLE TO SMOKING.

- Results from the 2008/2009 YSS show that 33% of youth in grades 6 to 12 report having tried smoking and 4% of youth report smoking on a daily basis.[6]
  SEE PAGE 2 FOR THE NUMBER OF YOUTH AT YOUR SCHOOL WHO HAVE TRIED SMOKING.

- Students who smoke also tend to engage in other health risk behaviours including physical inactivity, unhealthy eating, and alcohol consumption.[8, 19]
  SEE PAGES 12-18 FOR PHYSICAL ACTIVITY AND EATING BEHAVIOUR RESULTS FOR YOUR SCHOOL.

Smoking is a Community Issue

- 17% of all deaths in Canada (or approximately 37,200 deaths/year) in Canada are attributable to tobacco use.[9] Tobacco kills three times more Canadians each year than alcohol, AIDS, illegal drugs, car accidents, suicide, and murder combined.[10] Preventing or delaying smoking can reduce short- and long-term health risks.[3,11]

- In 2008, 18% of the Canadian population aged 15 years and older were current smokers (approximately 4.9 million smokers).[12]
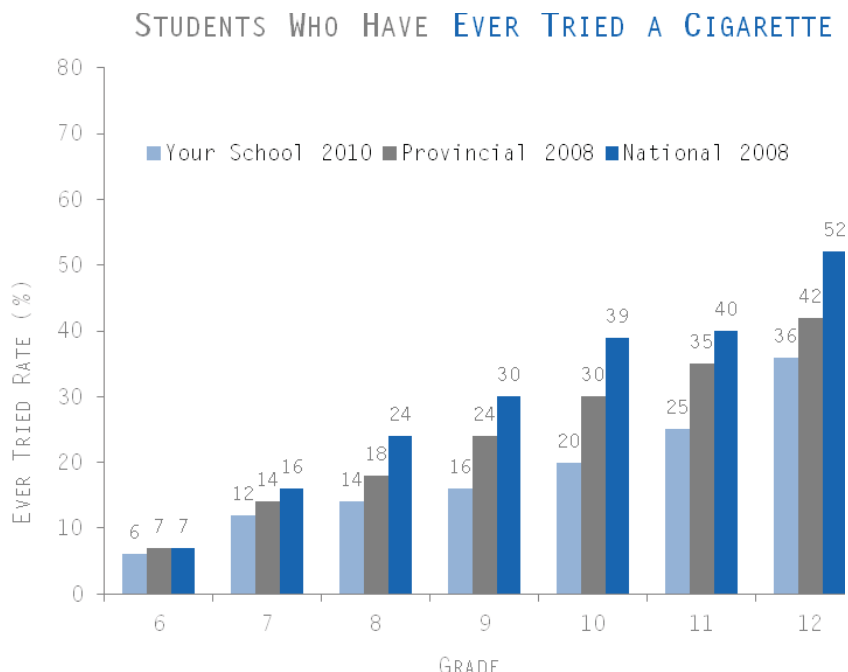 SEE PAGE 2 TO SEE HOW YOUR SCHOOL COMPARES TO OTHER SCHOOLS IN THE PROVINCE AND COUNTRY.

Smoking is Everyone's Responsibility
- We owe it to our kids to do whatever we can to keep them smoke-free and healthy.
  SEE THE RECOMMENDATIONS AND RESOURCE SUMMARY SECTION OF THIS PROFILE TO ADDRESS SMOKING AND OTHER HEALTH BEHAVIOURS AT YOUR SCHOOL.

SMOKING AT *ANYPLACE* SCHOOL

Our findings show that at your school, 7% of youth (7% males and 6% females) reported being a current smoker. Overall, 33% of youth surveyed (34% males and 31% females) reported having "ever tried" a cigarette, even a few puffs. Fewer youth (20% males and 19% females) reported having smoked a whole cigarette. We need to be concerned about all youth since they are susceptible to experimenting and starting new habits.

The Youth Smoking Survey (YSS) was first conducted in 1994 and has been repeated biennially since 2002. The graph to the right compares your school to the rest of your province and the country using 2008-2009 YSS data.

STUDENTS WHO HAVE EVER TRIED A CIGARETTE

Legend: ■ Your School 2010 ■ Provincial 2008 ■ National 2008

Y-axis: EVER TRIED RATE (%)
X-axis: GRADE

Grade	Your School 2010	Provincial 2008	National 2008
6	6	7	7
7	12	14	16
8	14	18	24
9	16	24	30
10	20	30	39
11	25	35	40
12	36	42	52

PLEASE NOTE: The graphs in this profile include all grades participating in the YSS, even though your school may not include all grades so that you can see provincial and national trends.

Definitions used in this report:

EVER TRIED	**TRIER**	**CURRENT SMOKER**	**NON-SMOKER**
Someone who has ever smoked a cigarette, even a puff.	Someone who has smoked less than 100 cigarettes in their lifetime and has smoked or puffed cigarettes *in the past 30*	Someone who has smoked at least 100 cigarettes in their lifetime, and who has smoked at least one whole cigarette *in the*	Someone who has not smoked or puffed cigarettes *in the past 30 days* or has never smoked a cigarette, even a puff.

STUDENT SUSCEPTIBILITY TO SMOKING

higher actual smoking rates in these grades.

There is a relatively small window in life when a person is susceptible to start smoking. Most established smokers begin experimenting with cigarettes between the ages of 10 and 18.[3] People who become dependent can find it very difficult to quit. Therefore, we need to intervene before youth become dependent.

Youth are less likely to begin smoking in the future if they feel they can resist peer pressure to smoke and they feel strongly that they won't try smoking in the future. To assess this susceptibility, we asked youth at your school who have never smoked two types of questions. First, we asked about their intentions to remain smoke-free: *"Do you think in the future you might try smoking cigarettes?"* and *"At any time during the next year do you think you will smoke a cigarette?"*

We also asked one question relating to their confidence in resisting peer pressure, *"If one of your best friends were to offer you a cigarette, would you smoke it?"* At your school, 31% of youth who have never smoked a cigarette have low confidence in their ability to remain smoke-free in the future. These youth are at high risk to begin smoking.

The graph on this page displays the percentage of youth, by grade, who were deemed susceptible to smoking, in comparison to provincial and national data. The decrease in susceptibility amongst secondary youth reflects

SUSCEPTIBILITY TO SMOKING OF STUDENTS WHO HAVE NEVER SMOKED
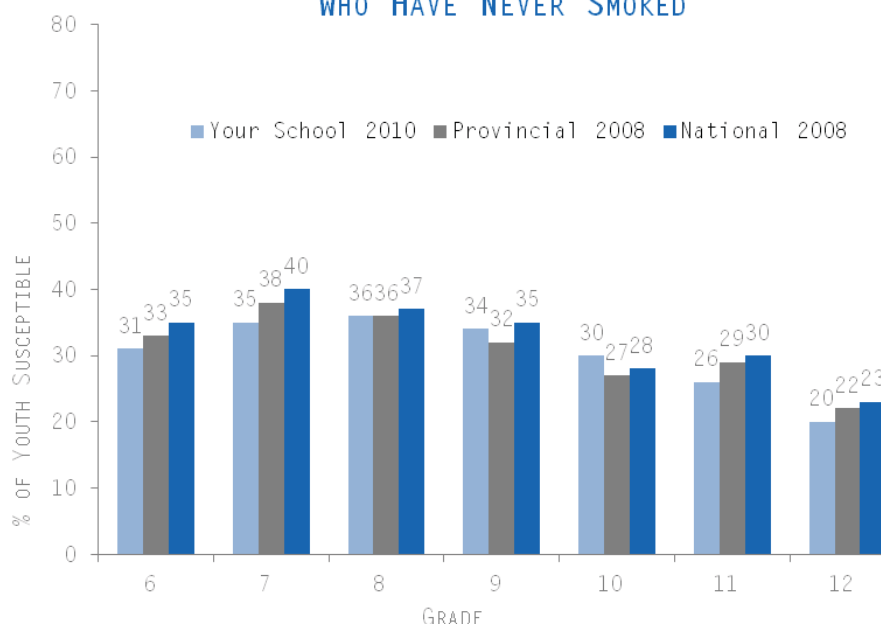
Your School Can Help Keep Students from Smoking:

Even when smoking rates are low, tobacco control efforts need to focus on preventing youth from becoming susceptible to smoking and experimenting with smoking. In addition, established smokers should be encouraged to quit. Use the following Health Canada recommendations to address tobacco use at your school.

- Ensure there are consequences for smoking on school property for all youth, parents and staff.

- Brainstorm with students and teachers about ways to redesign smoking areas for students for more positive activities.

- Involve students in writing letters to local merchants reminding them that it is illegal to sell tobacco to minors.

See the *Recommendations and Resource Summary* section of this profile for more details.

PEER AND FAMILY INFLUENCES

Youth take up smoking for a variety of reasons. Peers and family members influence youth smoking.[13] These influences are sometimes direct (peer pressure) but more often indirect (modelling). We asked youth at your school a series of questions relating to their peers and family.

Youth were asked, *"How many of your closest friends smoke cigarettes?"* At your school, current smokers/triers are more likely to have friends who smoke compared to non-smokers. Non-smokers with friends who smoke are the most susceptible to begin smoking themselves.

Youth were asked, *"Do any of your parents, step-parents, or guardians smoke cigarettes?"* and *"Do any of your brothers or sisters smoke cigarettes?"* At your school, current smokers/triers are more likely to have family members who smoke compared to non-smokers. Youth with family members who smoke face a higher risk of beginning to smoke.

Obtaining and Sharing Cigarettes

Smoking is a social activity and as a result, youth often obtain their cigarettes from social sources in addition to retail outlets. At your school:

- 47% of youth felt it would be "easy" to get cigarettes if they wanted to smoke.

- X % of current smokers and triers report "usually" or "always" sharing a cigarette with others when they smoke.

- X% of current smokers and triers report being given cigarettes from a friend, sibling, parent or someone else.

- X% of current smokers and triers report asking someone else to buy cigarettes for them or buying cigarettes from a friend or someone else.

Amount of money per Number of Friends Who Smoke	Percent of youth responding	
	Current Smokers & Triers	Non-smokers
$0 – 10	17	45
$11 – 20	16	20
$21 – 40	20	14
$41 or more	45	21

Spending Money

We asked youth at your school about the amount of spending money they usually have each week to spend on themselves or save. The table to the right shows how

Family members who smoke	Percent of youth responding "Yes"	
	Current Smokers & Triers	Non-smokers
Parents, step-parents, or guardians	67	39
Sibling(s)	51	14

Quick Facts:
FROM THE 2008/2009 YSS

Past YSS results show that 53% of current smokers in grades 9 to 12 and 80% of current smokers in grades 6 to 8 obtained cigarettes from social sources, such as family and friends. Therefore younger smokers are more likely to obtain cigarettes from friends and family.[6]

current smokers/triers and non-smokers responded.

Smoking at Home and in Cars

Second-hand smoke is a health concern for those who are exposed to tobacco smoke in the home and/or car.[12-14] Children and youth are known to be particularly vulnerable to the adverse health effects of exposure to environmental smoke.[14] We asked students about smoking rules at home and **31% reported that there were no restrictions or only some restrictions regarding smoking in the home**, as shown in the graph below to the left.

In your school, X% of youth reported riding in a car with a smoker in the last week. Currently, seven Canadian jurisdictions have legislation preventing adults from smoking in vehicles when children are present.[15] The graph below to the right shows the number of times in a week that youth at your school are exposed to smoking in cars.

HOUSEHOLD RULES FOR SMOKING

SOME RESTRICTIONS 21%

NO RESTRICTIONS 10%

TOTAL BAN 69%
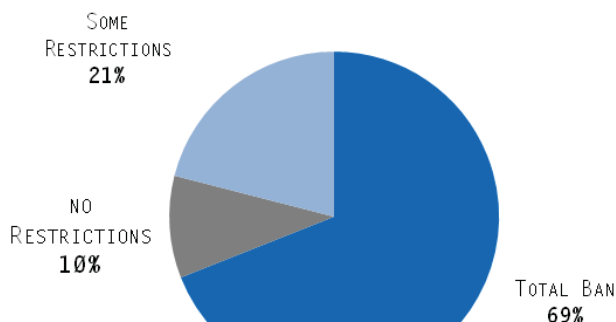
EXPOSURE TO SMOKING IN CARS (LAST WEEK)

3 OR MORE DAYS 16%

1-2 DAYS 14%

NONE 70%
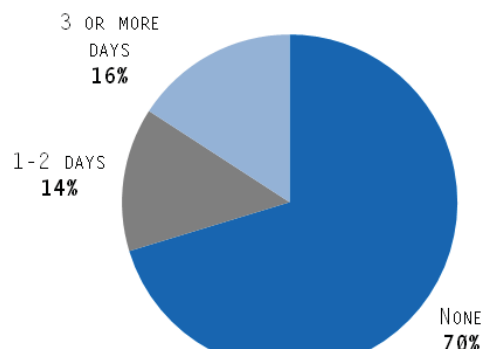
Your School Can Help Students Resist Social Pressure to Smoke

Programs that help students to develop skills for resisting social influences can be helpful. Schools can provide an environment where smoking is not acceptable. The most successful programs involve:

- Teaching youth refusal skills (through direct instruction, modelling, rehearsal, etc.),
- Ensuring designated smoking areas at schools are not visible to other youth,
- Placing designated smoking areas in inconvenient locations for youth to access,
- Teaching media literacy skills to inform youth how they are targeted by tobacco companies, and
- Include information in school newsletters to parents with tips for parents about keeping a smoke-free home (smoking outside only).

THE SCHOOL ENVIRONMENT

The school environment plays an important role in helping youth stay smoke-free. Research shows that schools influence smoking rates even after accounting for family, economic and community factors.[17] Schools are uniquely positioned to influence the heal youth, ideally in partnership with parents and community members/organizations. The results on the following pages describe the broader environment at your school. The environment serves as a foundation to behaviour.
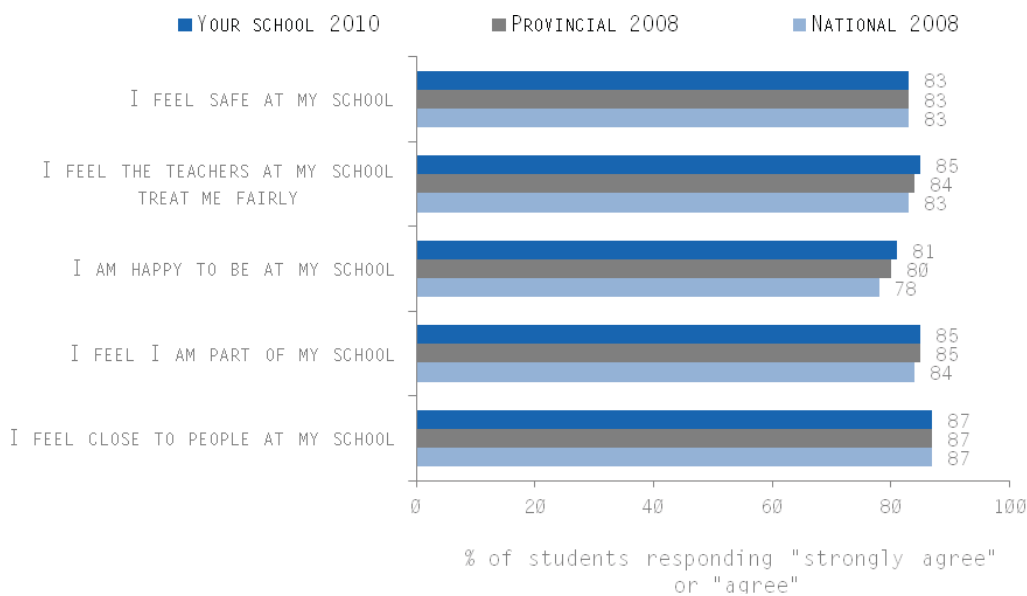
behaviours.[17]

SCHOOL CONNECTEDNESS AT YOUR SCHOOL

The graph below shows responses of youth at your school to the individual statements that comprise the school connectedness scale and contribute to the overall summary score. These are compared to the 2008/2009 YSS provincial and national results.

School Connectedness

A sense of connection to the school and school rules can support students in making healthy choices. Youth who feel an attachment to their school and who consider their teachers to be supportive are less likely to smoke or engage in other unhealthy or risky

Legend: ■ Your school 2010   ■ Provincial 2008   ■ National 2008

Statement	Your school 2010	Provincial 2008	National 2008
I feel safe at my school	83	83	83
I feel the teachers at my school treat me fairly	85	84	83
I am happy to be at my school	81	80	78
I feel I am part of my school	85	85	84
I feel close to people at my school	87	87	87

% of students responding "strongly agree" or "agree"

Rules Regarding Smoking at Your School

According to current provincial law in eight Canadian jurisdictions, no one is allowed to smoke on school property.[16] We asked youth at your school about their perceptions of your school's rules on smoking by asking how many youth at their school smoke on school property. The graph to the right shows how youth responded, suggesting there is room for improvement.

HOW MANY STUDENTS AT YOUR SCHOOL SMOKE ON SCHOOL PROPERTY?

	% of Youth Responding
A lot	16
Some	23
A few	34
None	28
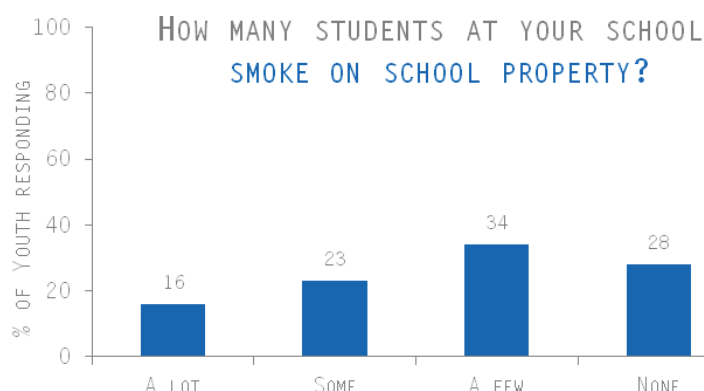
Academic Achievement

Research has shown a link between smoking and lower academic achievement in youth, as well as an increased risk of dropping out of school.[2] We asked youth what grades they usually achieved in the past year. The table to the right shows the self-reported academic standing of your school's youth and non-smokers.

	Percent of youth responding	
Grades	Current	
PLEASE NOTE: Mostly A's and B's is equivalent to 70% or higher and level 3 or 4; Mostly B's and C's is equivalent to 50-70% and level 2 or 3; and Lower than C's is equivalent to <50% and level 1.		
Mostly B's and C's	100	19
Lower than C's	25	3

Desire for Academic Success

We also asked youth at your school how much they agreed with the following statement: *"Getting good grades is important to me"*. Most schools find that non-smokers are more likely to endorse this statement.

Free Online Tool

Canada's Joint Consortium for School Health has a free online tool to help schools assess how well their school environment promotes health. After completing an assessment for tobacco use, physical activity and/or healthy eating, an action

"Getting good grades is important to me"	Percent of youth responding	
	Current Smokers & Triers	Non-smokers
Strongly agree	77	79
Agree	99	16
Disagree / Strongly disagree	24	2

Emotional Well Being

At your school, youth who report feeling good about themselves are less likely to smoke. The table to the right shows the percentage of youth at your school who reported "true" or "mostly true" to statements regarding their emotional well-being.

NUMBER OF CLASSES SKIPPED	PERCENT OF YOUTH RESPONDING	
	CURRENT SMOKERS & TRIERS	NON-SMOKERS
0 (NONE)	37	77
1 TO 2	43	19
3 OR MORE	20	3

Truancy/Absenteeism

Students at your school were asked how many *classes* they skipped when they were not supposed to, in the last four weeks. The table to the right shows the percentage of youth at your school who reported skipping classes by the number of classes skipped.

We also asked youth at your school how many *days* they missed in the last four weeks due to poor health/illness. The results for your school are shown in the last table to the right.

NUMBER OF DAYS MISSED DUE TO HEALTH	PERCENT OF YOUTH RESPONDING	
	CURRENT SMOKERS & TRIERS	NON-SMOKERS
0 (NONE)	47	88
1 TO 2	48	11
3 OR MORE	5	1

Your School Can Connect with Youth:

Increasing evidence demonstrates that when youth feel connected to and cared for by people at their school, they are less likely to use substances.[17] Additionally, youth who experience a greater connectedness to their teachers are less likely to start smoking.[18]

Ways schools can create a sense of school connectedness include:
- Supporting extracurricular activities
- Providing opportunities for student involvement in peer-lead activities, buddy programs, making choices, and taking initiative
- Having a non-judgmental, understanding, and positive classroom atmosphere
- Minimizing pressure, avoiding any coercive tactics, and providing reasons for

ALCOHOL AND MARIJUANA USE

Youth in grades 7 and above were asked about alcohol and marijuana use. At your school, 71% of youth reported having a drink of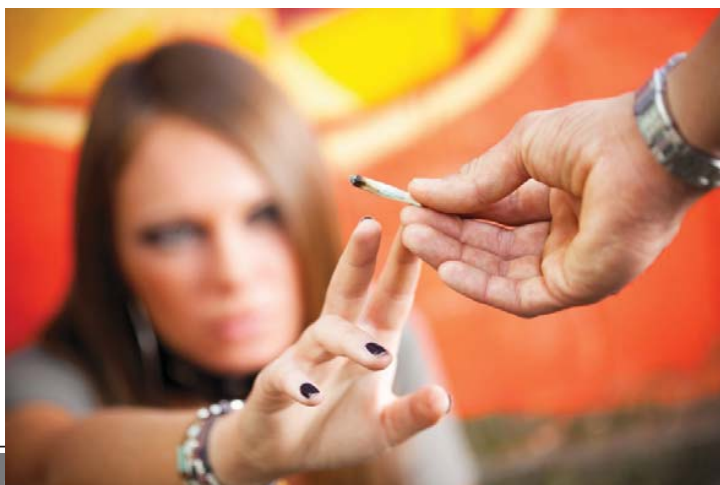 alcohol that was more than just a sip in the last 12 months. Of those who had more than just a sip in the last 12 months, x% reported having 5 drinks or more of alcohol on one occasion in the last 12 months. In addition, 30% reported having tried marijuana in the last 12 months. Among youth at your school who have tried smoking, X% did so while drinking alcohol. The graph to the right shows the percentage of youth at your school that reported having a drink of alcohol, having 5 or more drinks of alcohol on one or more occasion, and ever using or trying marijuana in the last 12 months.

the right shows the average age of grade 12 youth in your province that reported having first tried smoking, drinking alcohol and ever using or trying marijuana.

ALCOHOL AND MARIJUANA USE AT YOUR SCHOOL

■ Current Smokers & Triers   ■ Non smokers
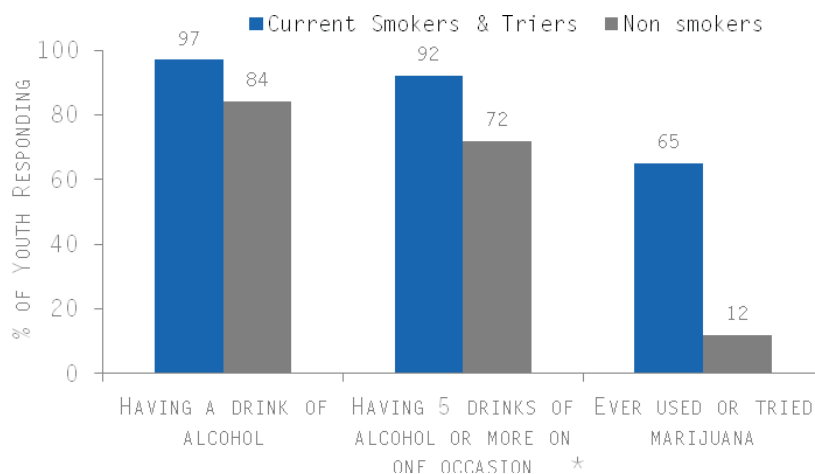
*Percent is of those who have had a drink of alcohol that was more than just a sip in the last 12 months

Age of Uptake

It is startling to note how young youth are when they first engage in these risky behaviours. Besides being illegal, youth are making decisions to engage in these behaviours before they are developmentally and fully capable of understanding the consequences. The graph to

	AVERAGE AGE (YEARS)
FIRST TRIED SMOKING CIGARETTES	14
HAVING A DRINK OF ALCOHOL THAT WAS MORE THAN JUST A SIP	14
HAVING 5 DRINKS OR MORE DRINKS OF ALCOHOL ON ONE OCCASION	15
EVER USED OR TRIED MARIJUANA	15

Binge Drinking

Binge drinking can be defined as drinking five or more drinks on a single occasion and it is the most common pattern of consumption among youth who drink alcohol.[19] The graph to the right shows the frequency of youth binge drinking, in the last 12 months, at your school.

FREQUENCY OF BINGE DRINKING
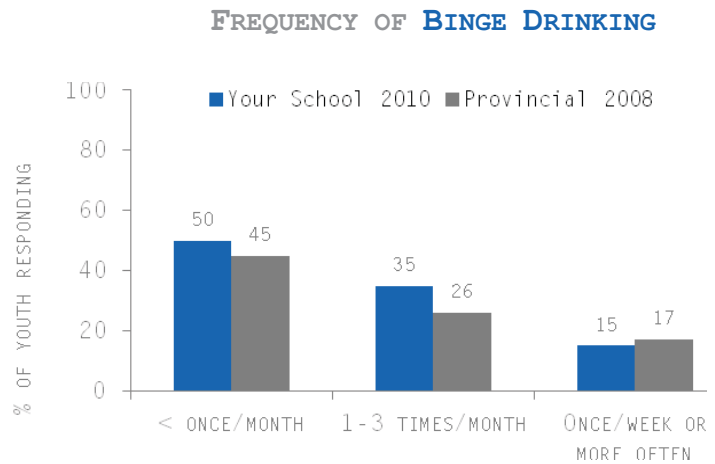
Marijuana Use

Youth who reported using marijuana were also asked how often they engaged in this behaviour. The graph to right shows the frequency of marijuana use by youth at your school, in the last 12 months.

FREQUENCY OF MARIJUANA USE
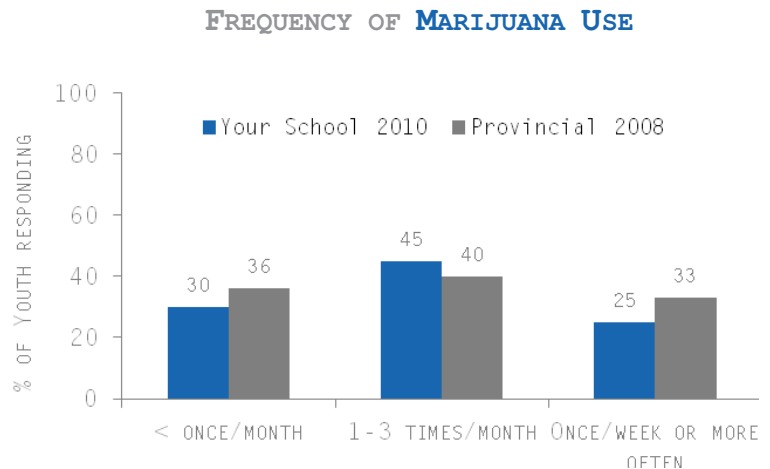
Other Substance Use

There are other substance-use concerns beyond tobacco, alcohol, and marijuana. The table to the right shows the percentage of youth at your school who have tried illicit drugs (other than marijuana) and who have used medication for the purpose of getting high in the last 12 months.

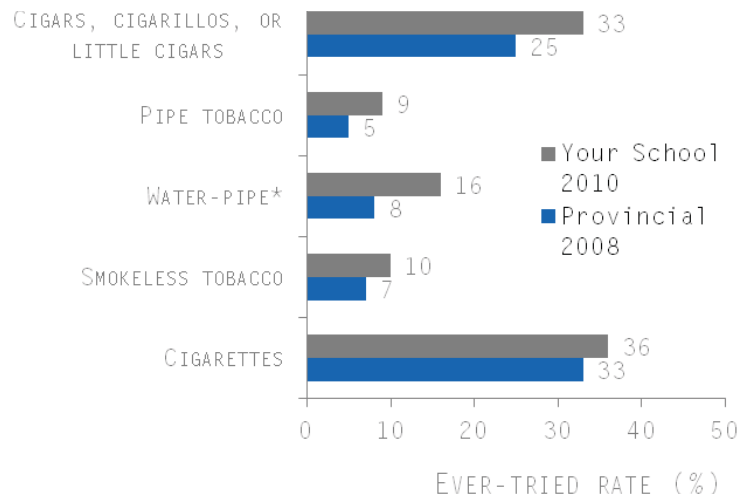| OTHER SUBSTANCES USED TO GET HIGH	% OF YOUTH AT YOUR SCHOOL	% OF PROVINCIAL YOUTH
ILLICIT DRUGS USED TO GET HIGH (EXCLUDING MARIJUANA)	33	29
PRESCRIPTION AND OVER-THE-COUNTER DRUGS USED TO GET HIGH	48	50

BEYOND CIGARETTES: EMERGING ISSUES

Youth use tobacco products other than cigarettes, including cigars, cigarillos, little cigars, water-pipes, pipe tobacco, smokeless tobacco (i.e., chewing tobacco) and flavoured tobacco. The growing popularity of these products is especially concerning because youth commonly misconceive alternate forms of tobacco as not being as bad for them as cigarettes. Research shows that these alternative forms of tobacco may be worse in some cases[20-21]. At your school, 21% of youth indicated that they had used flavoured tobacco products (e.g., menthol, cherry, strawberry, vanilla flavoured, etc.).

Results from the 2008/2009 YSS show that 24% of Canadian youth in grades 6 to 12 (8% in grades 6 to 8; 36% in grades 9 to 12) reported having "ever tried" smoking cigars, cigarillos, or little cigars, flavoured or unflavoured. Though not as high as the "ever tried" rates for smoking cigarettes (33%) (17% in grades 6 to 8; 45% in grades 9 to 12, this proportion is high enough to warrant increased monitoring and action[6]. The graph to the right provides the percentage of youth at your school who

repor
ted
ever
tryin

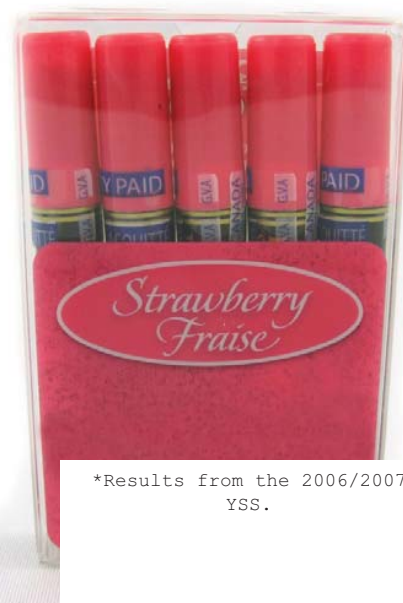## ALTERNATE FORMS OF TOBACCO USE COMPARED TO CIGARETTES

CIGARS, CIGARILLOS, OR LITTLE CIGARS — 33 / 25
PIPE TOBACCO — 9 / 5
WATER-PIPE* — 16 / 8
SMOKELESS TOBACCO — 10 / 7
CIGARETTES — 36 / 33

■ Your School 2010
■ Provincial 2008

EVER-TRIED RATE (%)

g various tobacco products, including cigarettes.

*Results from the 2006/2007 YSS.

Quick Facts:

Health Canada reports that the sale of cigarillos has grown since 2001, (when about 53 million cigarillos were sold), to more than 403 million sold in 2007.[22]

Youth under age 20 are 3.4 times more likely to use cigarillos compared to those over the age of 25. This is different than cigarettes, where youth use is no higher than the general population, and is lower than in young adults.[22]

Healthy Body Weight

One way of determining healthy body weight is by using the body mass index (BMI), which is a calculation that compares a person's weight to their height. BMI results indicate whether a person is under, over or within a healthy body weight range.[24]

$$BMI = weight$$

Based on BMI calculations, the graph below and to the left shows the percentage of male and female youth who are underweight, of a healthy weight, overweight or obese for their age, height and gender.

The majority (just under 70%) of Canadian children and youth have a BMI that shows they are a healthy weight for their height. About 4% are underweight and 26% fall into the overweight/obese categories.[24] Being overweight

during childhood can lead to increased illness and risk of chronic diseases such as heart disease, cancer and type-2 diabetes.[25] Overweight and obese youth are often stigmatized by peers and adults.[26] These youth may experience psychological stress, and have a poor body image, as well as poor self-esteem.[27] Obesity in youth has also been linked to poorer academic performance.[28]

Research has shown that youth with higher BMIs, or those who fall in the overweight or obese categories, tend to be more likely to smoke cigarettes.[29] This relationship tends to occur especially in young females who may be using smoking as a method of weight loss or control. The graph below to the right shows the relationship between BMI and smoking status for males and females at your school. Smokers have higher BMIs than

CATEGORIES OF SELF-REPORTED HEIGHT AND WEIGHT AT YOUR SCHOOL

BODY WEIGHT AND SMOKING AT YOUR SCHOOL

non-smokers.
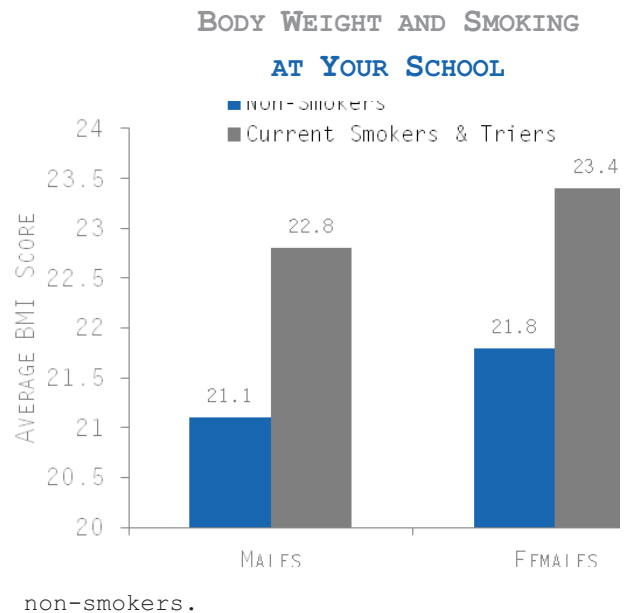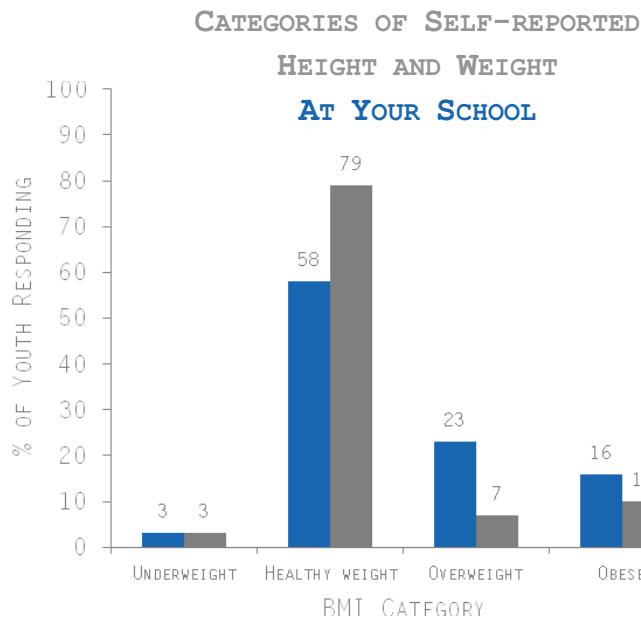
PLEASE NOTE: When reviewing these results, please be aware that self-report of body weight tends to be an underestimate of actual weight.

Meeting Canada's Physical Activity Guidelines

Research shows that physical activity can increase children and youth's social skills, self-esteem and school performance and decrease depression and anxiety.[32] In addition, physical activity strengthens the heart, bones and muscles, improves fitness and helps youth achieve a healthy body weight.[33] Canada's Physical Activity Guide recommends that children and youth should be physically active for 60 minutes per day and should reduce the amount of time spent on sedentary activities such as watching TV and playing video games.[31] Research shows that Canadian children and youth are *not* currently meeting these guidelines.

Youth at your school were asked how many minutes of hard physical activity they engaged in on a daily basis over the previous week. Hard physical activities include activities that make you breathe hard and sweat. The graph below shows the percentage of youth at your school who meet Canada's Physical Activity Guidelines.

YOUTH AT YOUR SCHOOL MEETING PHYSICAL ACTIVITY GUIDELINES

Bar graph — ■ Meet Physical Activity Guidelines. Y-axis: % OF YOUTH RESPONDING (0 to 80). Males: 35, 65. Females: 30, 70.
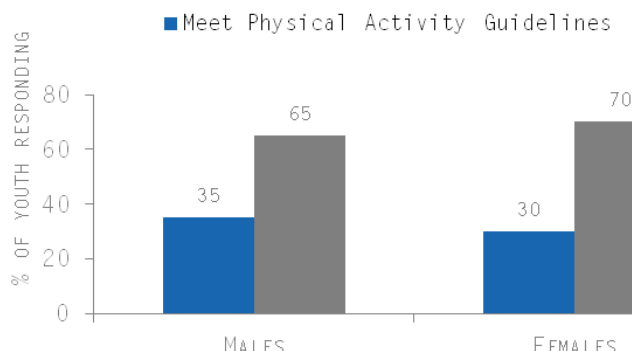
Quick Facts:

Since 1981, the prevalence of overweight boys increased from 15% in 1981 to 35% in 1996, and among girls from 15% to 29%. During the same time frame, the prevalence of obesity in children tripled, from 5% to 16% for boys and from
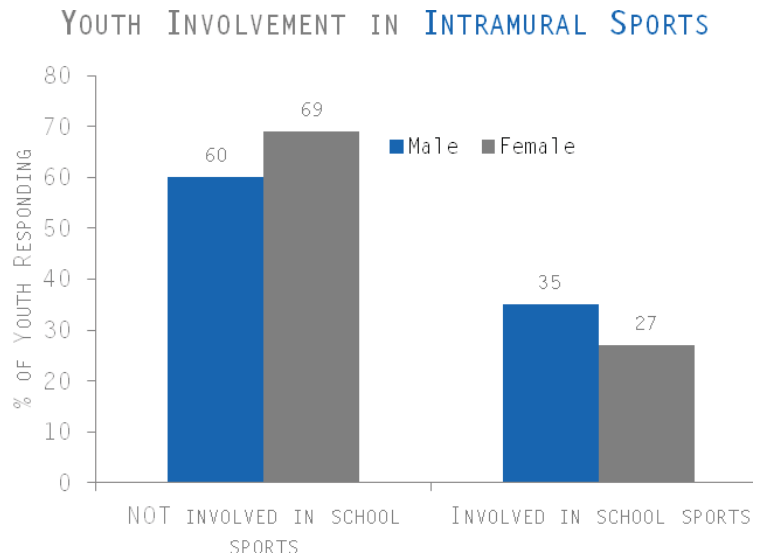
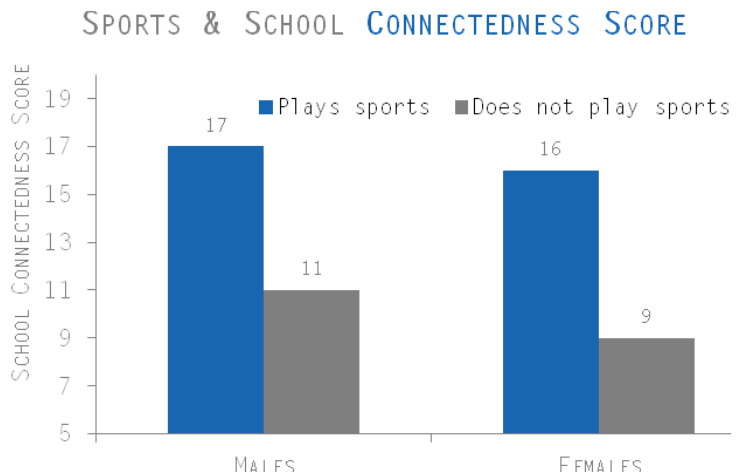### Your School Can be more active...

Health Canada Recommends:

- Posting Canada's Physical Activity Guidelines and Food Guide in cafeterias and other youth gathering locations
- Setting class or school goals for physical fitness
- Providing and maintaining facilities to encourage physical activity (bike-friendly areas, skateboard parks, etc.)

Intramural Sports

One way that youth can increase their level of physical activity is through sports programs that are offered at school. Those who play intramural sports tend to spend more time being physically active, spend less time engaging in sedentary behaviours, have healthier body weight, engage in healthier lifestyle choices, and avoid unhealthy ones.[35-36] The graph to the right shows the percentage of youth at your school that participate in intramural or school team sports.

YOUTH INVOLVEMENT IN INTRAMURAL SPORTS

% OF YOUTH RESPONDING

- ■ Male ■ Female

	NOT involved in school sports	Involved in school sports
Male	60	35
Female	69	27

Research shows that youth who participate in extracurricular school activities, especially intramural sports, tend to have greater levels of school connectedness.[35] Intramural sports help youth build relationships with others in their school environment and increase feelings of acceptance, value, and belongingness at school.[35] The graph to the right shows that youth at your school who participate in intramural sports tend to have a greater sense of connectedness to their school, especially for males. See page 6 for more information on school connectedness.

SPORTS & SCHOOL CONNECTEDNESS SCORE

SCHOOL CONNECTEDNESS SCORE

- ■ Plays sports ■ Does not play sports

	MALES	FEMALES
Plays sports	17	16
Does not play sports	11	9

Your School Can make a difference:

Help students get more involved in intramural sports at school by:

- Providing opportunities for extracurricular physical activities before and after school
- Organizing a physical activity challenge/competition between youth, teachers and parents
- Providing reminders (announcements, bulletin boards, etc.) about activities and programs to increase student awareness of available facilities
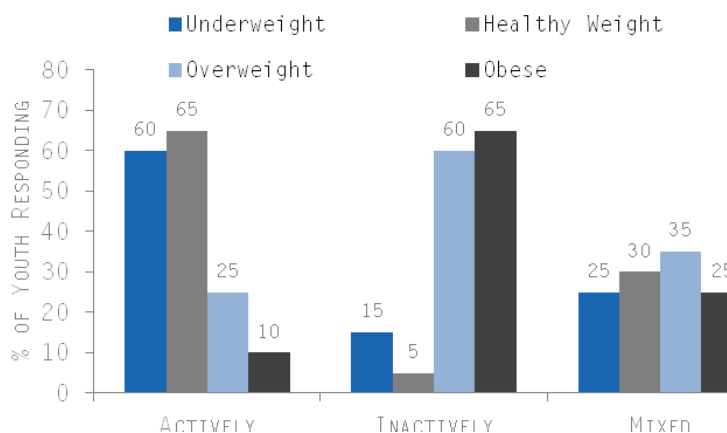
Commuting to School

Active commuting to school is one way for children and youth to increase their daily level of physical activity and can include walking, biking, skateboarding, in-line skating, skiing, wheel chairing, etc. to school. Fifty-one per cent of Canadian children aged 5 to 17 rely on inactive modes of transportation to get to and from school.[31]

Research has shown that youth who actively commute to school tend to be more physically active overall, have greater cardio-respiratory fitness and have lower average BMIs.[37-38] We asked youth at your school if they usually get to school actively (e.g. walk, bike, skateboard), inactively (e.g., car, bus, public transit) or mixed (actively and inactively). Typically youth who are of a healthy weight commute actively or using mixed methods to school. The graph to the right shows your schools results.

COMMUTING TO SCHOOL AND BMI

Commuting and Tobacco Use

Youth who are smokers tend to be less physically active than non-smokers.[39] Research has shown that smokers are less likely than non-smokers to actively commute to school. The graph to the right shows that current smokers/triers at your schools are less likely to commute actively in comparison to non-smokers.
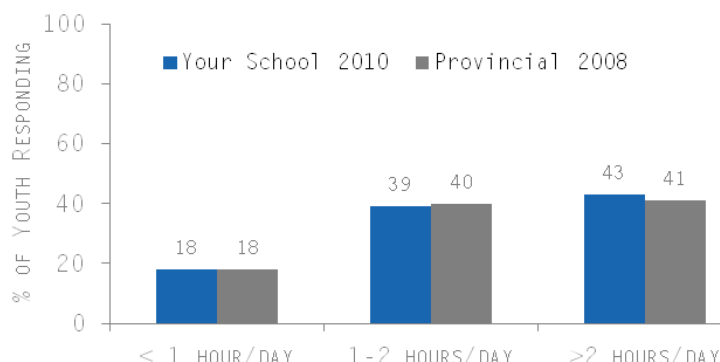
COMMUTING TO SCHOOL AND SMOKING STATUS
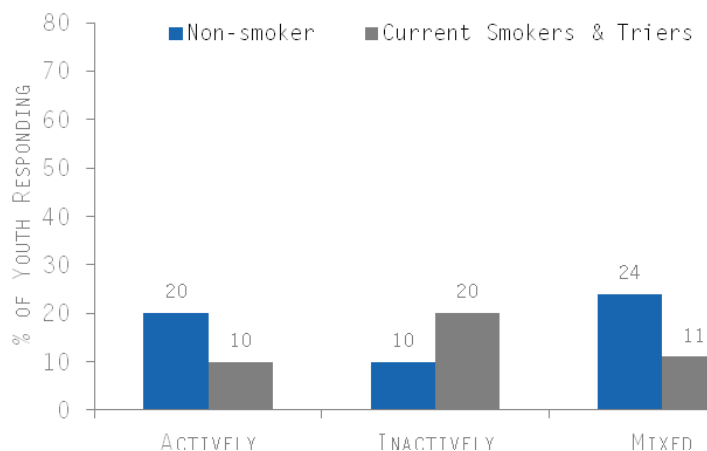
Your School Can encourage active commuting

Remind students that active transportation can help them achieve their daily physical activity requirements, and is also environmentally friendly. Schools can encourage active transportation by providing a safe bike lock area for students and providing secure areas where students can leave equipment. *Active & Safe Routes to School* (www.saferoutestoschool.ca) is a national program that encourages students to use active modes of transportation to and from school.

Screen Time, Reading Time and Tobacco Use

Sedentary behaviours such as watching television tend to be counterproductive to physical activity. Additionally, watching a lot of TV has been linked to higher rates of smoking uptake in youth.[40] TV is incompatible with healthier, more active choices for leisure time activities. At your school, 44% of males compared to 39% of females exceeded the two hour maximum recommended guidelines. The graph to the right shows the amount of time youth at your school reported watching TV as compared to youth in your province.
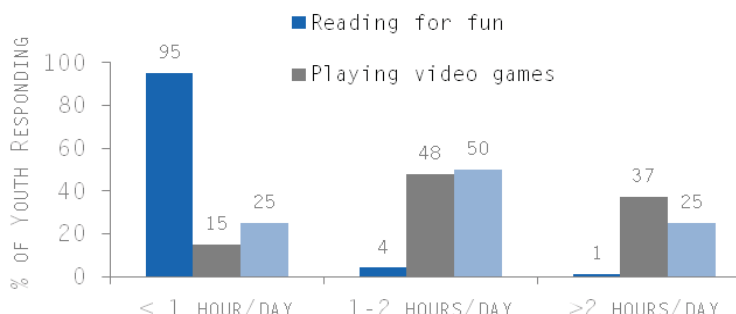
Besides the number of hours watching TV, youth are engaged in playing video games and playing/surfing on the computer in their leisure time. We asked youth about the amount of time they spend engaged in these activities as well as time spent reading for fun (not for school). The graph to the right shows the average number of hours per day youth at your school reported doing these activities.

In general, screen time tends to be higher among males when compared to females and playing video games

school, 35% of males and 29% of females reported playing video games or surfing on the computer for more than 2 hours a day.

HOURS SPENT PER DAY WATCHING TV/VIDEOS

appears to be responsible for this difference.[41] At your

HOURS SPENT READING, PLAYING VIDEO GAMES & PLAYING/SURFING ON THE COMPUTER

Quick Facts:

Canada's Report Card on Physical Activity for Children and Youth recommends restricting television (TV) or leisure-related screen time to no more than two hours per day.[41] Children with higher screen time tend to be obese, have low fitness levels, and lower levels of self-efficacy for physical

HEALTHY EATING

Sufficient daily consumption of fruit and vegetables in childhood and adolescence is associated with:[41-46]

- Healthy body weight
- Prevention of certain types of cancer
- Continued healthy eating patterns in adulthood
- Reduced risk for cardiovascular disease
- Improved growth and development during a time when nutrient needs are especially high

Canada's Food Guide recommends 6-8 servings of fruits and vegetables per day for children aged 9-18 years.[42]. The graph below and to the right shows the percentage of youth at your school who meet the Canada's Food Guide recommendations for fruit and vegetable consumption for a usual day.

Eating a regular and healthy breakfast in childhood and adolescence is associated with:[47-48]
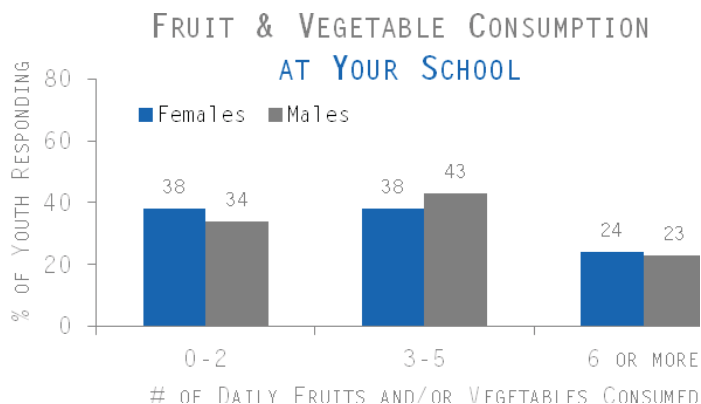- Healthy body weight and decreased obesity
- Improved academic performance
- Better memory functioning
- Increased school attendance

Regular consumption of breakfast is related to better overall nutrition.[47] Breakfast has a direct effect on academic performance, but youth tend to stop eating it as they transition from childhood to adolescence.[49] Youth were asked how many times they ate breakfast within the last 7 days. The graph to the right shows that only 29% of females and 32% of males eat breakfast on a daily basis. Most youth eat breakfast 3 to 5 days in a week, but 17% of females and 21% of males only reported eating breakfast 0-2 days in the previous week.
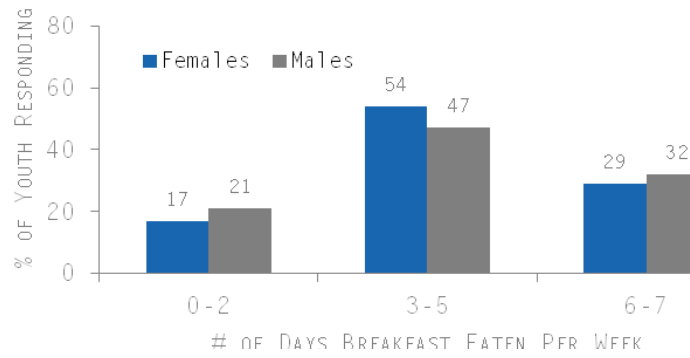
FRUIT & VEGETABLE CONSUMPTION AT YOUR SCHOOL

Bar chart: % of Youth Responding vs # of Daily Fruits and/or Vegetables Consumed. Females (blue), Males (gray).
- 0-2: Females 38, Males 34
- 3-5: Females 38, Males 43
- 6 or more: Females 24, Males 23

Breakfast Consumption

Bar chart showing % of Youth Responding by # of Days Breakfast Eaten Per Week, comparing Females (blue) and Males (gray):
- 0-2: Females 17, Males 21
- 3-5: Females 54, Males 47
- 6-7: Females 29, Males 32

Healthy Eating and Academics

A healthy diet is important for school performance. Research shows that youth who eat an adequate amount of fruit, vegetables, protein, fibre and other beneficial dietary components, and those who eat breakfast daily perform better in school than those

below show the self-reported academic standing of youth at your school and how many servings of fruit and vegetables they consume per day as well as how many days per week they eat breakfast. Youth who have a less healthy diet report lower grades.
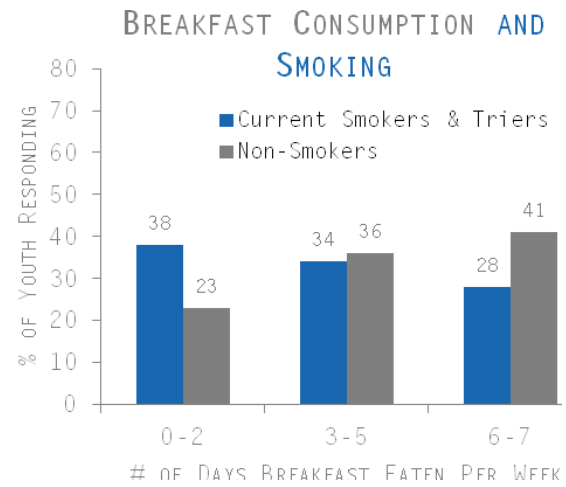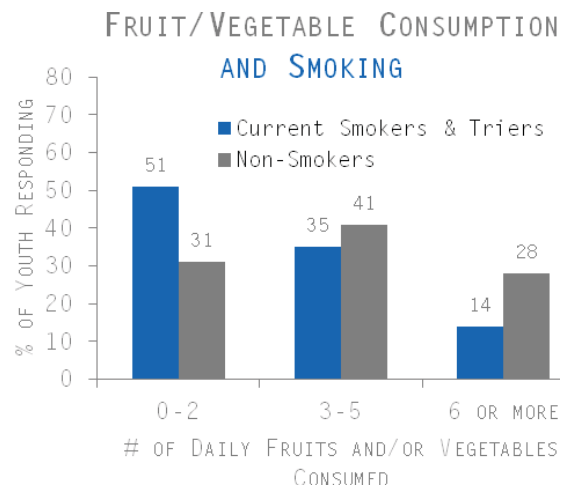
Grades	# of days breakfast is eaten per week		
	0-2 days	3-5 days	6-7 days
Mostly A's and B's	31%	49%	74%
Mostly B's and C's	47%	41%	22%
Lower than C's	22%	10%	4%

Grades	# of daily servings of fruits & vegetables consumed		
	0-2 days	3-5 days	6-8 or more
Mostly A's and B's	27%	42%	78%
Mostly B's and C's	56%	49%	18%
Lower than C's	17%	9%	4%

who do not follow these guidelines.[50] The tables

PLEASE NOTE: Mostly A's and B's is equivalent to 70% or higher and level 3 or 4; Mostly B's and C's is equivalent to 50-70% and level 2 or 3; and Lower than C's is equivalent to <50% and level 1.

Healthy Eating and Smoking

In adolescence, health risk behaviours tend to be clustered. Unhealthy eating tends to be associated with other unhealthy choices including smoking and binge drinking.[8, 19] Compared to non-smokers, youth smokers tend to consume fewer fruits and vegetables and more snack foods and soft drinks.[51] Additionally, youth smokers are less likely to eat breakfast on a daily basis than non-smokers.[51-52]

The first graph below to the left shows that 28% of non-smokers consume the recommended amount of daily fruit and vegetables servings versus only 14% of smokers. The second graph below to the right shows that 38% of smokers, in comparison to 23% of non-smokers, report eating breakfast as little as 0-2 days per week.

Fruit/Vegetable Consumption and Smoking

Legend:
- Current Smokers & Triers
- Non-Smokers

# of Daily Fruits and/or Vegetables Consumed	Current Smokers & Triers	Non-Smokers
0-2	51	31
3-5	35	41
6 or more	14	28

% of Youth Responding

Breakfast Consumption and Smoking

Legend:
- Current Smokers & Triers
- Non-Smokers

# of Days Breakfast Eaten Per Week	Current Smokers & Triers	Non-Smokers
0-2	38	23
3-5	34	36
6-7	28	41

% of Youth Responding

RECOMMENDATION & RESOURCE SUMMARY

Schools are not alone in having interest and responsibility in the health and well-being of students. In fact, health-promoting schools' frameworks suggest community connections (with parents, public health agencies, voluntary agencies, etc.) are critical to the success of schools to impact youth. **Ensuring local partners are aware of your interest in the health and well-being of students, and the information you have (such as this Profile) will help guide the planning of positive changes in your community.**

For information about your local (public health authority or proper name), visit (insert prov. website).

STUDENT SUSCEPTIBILITY TO SMOKING

Even when smoking rates are low, schools need to focus on preventing youth from becoming susceptible to and experimenting with smoking to reduce their risk of becoming addicted. In addition, established smokers need to be encouraged to quit to reduce the risk of serious long-term health problems. Schools can ensure there are consequences for smoking on school property, redesign smoking areas for more positive activities, and involve students in writing letters to local merchants reminding them that it is illegal to sell tobacco to minors.

For more information about tobacco control in Canada, visit:
http://www.hc-sc.gc.ca/hc-ps/tobac-tabac/index-eng.php

(insert prov. Website if appl.)

PEER AND FAMILY INFLUENCE

Schools can help students develop skills for resisting social pressures to smoke and provide an environment where smoking is not acceptable. Programs need to teach youth refusal skills and media literacy skills to educate them on how they are targeted by tobacco companies. Schools can also ensure designated smoking areas are not visible to other youth and are situated in an inconvenient location. Finally, schools need to provide parents with tips to keep a smoke-free environment to prevent their children from being exposed to second-hand smoke.

For more information about established programs to help children and youth quit smoking, visit:
- Kick the Nic: http://www.aadac.com/87_486.asp
- Teaming up for Tobacco-Free KIDS: http://www.tobaccostinks.com/home.html
- The Lung Association- Lungs are for Life: http://www.lungsareforlife.ca/
- ACT school resources: http://www.actnl.com/index2.php#loadPage=00034

THE SCHOOL ENVIRONMENT

Youth are less likely to start smoking and engage in other risky behaviours when they feel connected to and cared for by their school and those at their school. To create a sense of school connectedness, schools can support extracurricular activities, provide opportunities for student involvement in activities, promote a non-judgmental and understanding classroom atmosphere, and minimize pressure by avoiding coercive tactics.

For more information about the Joint Consortium for School Health visit: http://eng.jcsh-cces.ca/

To complete the **free online tool** to help assess how well your school environment promotes health, visit: www.healthyschoolplanner.uwaterloo.ca

PHYSICAL ACTIVITY

Schools can promote active living by posting *Canada's Physical Activity Guidelines and Food Guide* in cafeterias and other youth gathering locations, setting class or school goals for physical fitness, providing and maintaining facilities to encourage physical activity, and incorporating a daily activity time into the class schedule. Schools can also provide opportunities for extracurricular physical activities before and after school and remind students about activities and programs to increase student awareness and participation. Finally, schools can encourage students to use active methods to get to and from school to help them achieve daily physical activity goals.

For information about Canada's Physical Healthy Activity Guides for Children and Youth visit:
http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/pag-gap/index-eng.php

For more information about established programs to help encourage children and youth to use active modes of transportation, visit:
- Active and Safe Routes to School: www.saferoutestoschool.ca

HEALTHY EATING

Schools can promote healthy eating through various activities, including providing healthy alternatives to unhealthy food rewards such as class pizza parties, removing vending machines that sell junk food, providing school nourishment programs such as breakfast or snack programs, encouraging student participation in discussions about healthy eating, and partnering with local food producers to help youth learn about locally-grown foods.

For more information about Canada's Food Guide visit:
http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php

For more information about national breakfast programs, visit:
- Breakfast for Learning: http://www.breakfastforlearning.ca
- Breakfast Clubs of Canada: http://www.breakfastclubscanada.org

(insert prov. Website if appl.)

For more information about a school food policy that has worked in the province of Ontario visit: http://www.edu.gov.on.ca/eng/teachers/healthyschools.html

To access an electronic copy of this Profile Parent and School Summaries contact the project contact person at your school (insert school contact name) or follow these steps:

1. Visit: www.yss.uwaterloo.ca

2. School Login:

   Username: [insert username]

   Password: Canada (unless changed by project contact at school)

THANK YOU AGAIN FOR PARTICIPATING IN THE 2010/2011 YOUTH SMOKING SURVEY.

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