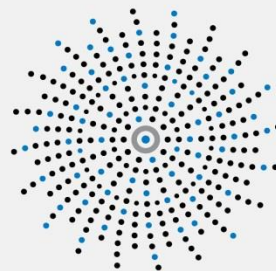# 2012/2013 YOUTH SMOKING SURVEY

MICRODATA USER GUIDE

DECEMBER 31, 2013

Prepared for Health Canada by

PROPEL
CENTRE FOR
POPULATION
HEALTH IMPACT

Suggested acknowledgement for publications or reports using YSS data

The Youth Smoking Survey is a product of the pan-Canadian capacity building project funded through a contribution agreement between Health Canada and the Propel Centre for Population Health Impact at the University of Waterloo from 2004 to 2007 and a contract between Health Canada and the Propel Centre for Population Health Impact from 2008-2013. The Propel Centre implements YSS with the assistance of a consortium that includes Canadian researchers from all provinces with expertise in youth health and connections with education and health sectors in their province. The views expressed herein do not necessarily represent the views of Health Canada.

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For information purposes, Health Canada would appreciate receiving advanced copies of planned publications arising from YSS data at least 3 weeks prior to the publication date. Copies can be sent by mail or email to the Technical Authority.

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> **PLEASE BECOME FAMILIAR WITH THE CONTENTS OF THIS DOCUMENT BEFORE PUBLISHING OR OTHERWISE RELEASING ANY ESTIMATES DERIVED FROM THE 2012/2013 YSS PUBLIC USE MICRODATA FILE.**

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1.0 Introduction

The 2012/2013 Youth Smoking Survey (YSS) is a Health Canada sponsored pan-Canadian[1], classroom-based survey of a representative sample of students in grades 6 through 12. Since 2004, the YSS has been coordinated centrally by the Propel Centre for Population Health Impact (Propel) at the University of Waterloo under the leadership of Dr. Steve Manske, YSS principal investigator. Drs. Steve Brown and Rashid Ahmed at the University of Waterloo act as YSS statisticians and co-investigators. Propel was also involved in the writing of the 2002 YSS Technical Report.

The 2012/2013 YSS was implemented in schools between November 2012 and June 2013 by provincial teams located in the participating provinces[1], under the leadership of the following YSS consortium members and co-investigators:

Dr. Antony Card	Memorial University of Newfoundland – Grenfell Campus
Dr. Donna Murnaghan	University of Prince Edward Island
Dr. Mark Asbridge	Dalhousie University
Dr. Marlien McKay	New Brunswick Health Council
Dr. Jennifer O'Loughlin	Centre de Recherche du CHUM, Université de Montréal
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 2012/2013 YSS Public Use Microdata File.

2.0 Background

The biennial YSS is a classroom-based survey of a representative sample of schools in the ten Canadian provinces. The 2012/2013 cycle of the YSS did not include the province of Manitoba. When first administered in 1994, the YSS was the largest and most comprehensive survey on youth smoking behaviour since 1979. The YSS has been repeated biennially since 2002 in order to track changes in the attitudes and behaviours of Canadian children and adolescents with respect to tobacco, drug and alcohol use. Until the 2004/2005 cycle of the YSS, the YSS was only administered to students in grades 5 through 9. Beginning in the 2006/2007 cycle of the YSS, the survey was extended to include all secondary students in a province (i.e., grades 5 to 12 in most provinces and primary 5, 6 and secondary I to V in Quebec). Beginning with the 2008/2009 YSS, the grade 5 population was eliminated from the YSS sample and has included grade 6 to 12 students.

The main objective of the 2012/2013 YSS is to provide benchmark tobacco use prevalence rates at national and provincial levels for students in grades 6 through 12. In

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[1] The province of Manitoba declined participation in the 2012/2013 YSS. Based on the comparative analysis conducted using 2010/2011 survey data, there were no statistically significant differences in national estimates with and without Manitoba.

addition, benchmark drug and alcohol use rates for students in grades 7 through 12 are also collected. The 2012/2013 YSS questionnaire included questions about physical activity, healthy eating, school connectedness, bullying and other behaviours to better understand youth and current school priorities, as well as to investigate the relationships between these other behaviours and tobacco, drug and alcohol use. The YSS also captures issues influencing tobacco, alcohol and drug use (e.g., knowledge, social influences, education-related behaviours and attitudes). Consequently, the survey can assist policy, practice and research sectors understand individual responses to current and future policy and program initiatives (e.g., smoking in cars, use of flavoured tobacco). This information is critical to assessing the need for increased legislative controls on tobacco and bolstering public support for these policy options. Without this type of monitoring, the effectiveness of our prevention efforts cannot be gauged.

All participating schools received a school-specific profile and two summaries of their survey results within 8 to 10 weeks of their data collection date.[2] The one-page (two-sided) summaries were targeted to the general school population and the parent community to facilitate the distribution and sharing of results with others. These school profiles and summaries provide valuable information for schools to address tobacco use and other social, school environment and health behaviour issues schools. Throughout the profiles and summaries, YSS school-specific results were compared to past provincial and national YSS data.

2.1 Collaborative Provincial Projects

The 2012/2013 YSS was implemented alongside seven collaborative projects. The collaborative projects included the:
- Healthy School Planner (all provinces),
- School Health Action, Planning and Evaluation System (SHAPES-PEI) (Prince Edward Island),
- Active Permission Protocol Project (Newfoundland & Labrador, Nova Scotia, Ontario, Alberta),
- New Brunswick Student Wellness Survey (NBSWS) (New Brunswick),
- Youth Gambling Survey (Newfoundland & Labrador, Ontario, Saskatchewan),
- Canadian Cancer Society – Quebec Questionnaire (Quebec), and
- The Alberta Supplement Project (Alberta).

The YSS Public Use Microdata file does not include data from the collaborative projects. Please see Appendix A for further details regarding these collaborative projects.

3.0   Concepts and Definitions

The terms and definitions used in this guide and the 2012/2013 YSS Public Use Microdata File are detailed in this section.

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[2] Schools with participating samples too small to receive school-level data, received regional or provincial level profiles in lieu of the school-specific profiles. All schools in New Brunswick received a provincial level YSS profile of results in addition to their school-specific New Brunswick Student Wellness Survey results profile.

3.1 Definitions Used in this Guide

Total Sampled Schools: Total number of schools sampled for the project, including schools sampled at project outset and schools added to the sample throughout the course of the project.

Eligible Sampled Schools: Schools in the sample that met the eligibility criteria of having at least 20 students in any of the eligible grades (grades 6-12). Federally funded schools, closed schools, schools for special needs children, native and charter schools were not eligible.

Targeted # of Schools: The total number of schools targeted to participate in the project in each of the participating provinces and in Canada. Please note that the targeted number of schools for Prince Edward Island and New Brunswick reflect the collaboration with SHAPES-PEI project and New Brunswick Student Wellness Survey, respectively.

Approached: Eligible sampled schools and their respective boards that were available to be contacted or to participate in the survey. Approached schools do not include sampled schools not approached due to sampling adjustments or schools that were part of refusing boards.

Refused: Includes boards or schools that refused to participate, did not give a response, were unable to be reached, backed out, withdrew their participation, or did not respond to recruitment efforts to participate in the survey.

Participation Rate[3] (%): 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.

Schools Participating: Eligible schools that were sampled for the project and completed a school data collection.

Boards Participating: Eligible boards that were sampled for the project and had schools within their board participate.

Schools Not Participating: Eligible schools that were sampled for the project and did not complete a school data collection, including sampled schools not approached for the survey.

Eligible Students: Students who were enrolled in a participating grade 6 to 12 classroom.

Response Rate (%): The number of grades 6 to 12 students who participated in the survey as a percentage of the total number of eligible students in participating grades 6 to 12 classrooms.

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[3] Note that in past cycles of YSS, participation rate was referred to as recruitment rate in the Microdata User Guides.

3.2 Definitions Used in the 2012/2013 YSS Public Use Microdata File

Currently smokes: Has smoked at least 100 cigarettes in his/her lifetime, and has smoked in the 30 days preceding the survey. This is a derived variable and is defined based on responses to smoking questions contained in the student questionnaires. See section 7.3 for further details regarding 2012/2013 YSS derived variables.

> Currently smokes daily: Has smoked at least 100 cigarettes in his/her lifetime, and has smoked at least one cigarette per day for each of the 30 days preceding the survey.

> Currently smokes occasionally: Has smoked at least 100 cigarettes in his/her lifetime, and has smoked at least one cigarette during the 30 days preceding the survey, but has not smoked every day.

Formerly smoked: Has smoked 100 or more cigarettes in his/her lifetime but has not smoked at all during the 30 days preceding the survey.

> Formerly smoked daily: Has smoked 100 or more cigarettes in his/her lifetime but has not smoked at all during the 30 days preceding the survey, and has at some time smoked every day for seven days in a row.

> Formerly smoked occasionally: Has smoked 100 or more cigarettes in his/her lifetime but has not smoked at all during the 30 days preceding the survey, and has never smoked every day for seven days in a row.

Never smoker: Has smoked fewer than 100 cigarettes in his/her lifetime.

> Experimental smoker (beginner): Has smoked between 1 and 99 cigarettes in his/her lifetime, and has smoked in the 30 days preceding the survey.

> Past experimenter: Has smoked between 1 and 99 cigarettes in his/her lifetime, but has not smoked in the 30 days preceding the survey.

> Puffer: Has smoked less than one whole cigarette in his/her lifetime, but has tried smoking.

> Never tried: Has never tried smoking, not even just a puff.

4.0 Sampling Design

The 2012/2013 YSS was administered to grades 6 to 12 students enrolled in schools in 9 of Canada's provinces[4].

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[4] The province of Manitoba declined participation in the 2012/2013 YSS. Based on the comparative analysis conducted using 2010/2011 survey data, there were no statistically significant differences in national estimates with and without Manitoba.

Sampling frames for each province began with a list of all schools in the participating provinces. The most up-to-date lists of schools were obtained from the Department of Education in each participating province and combined with information already in *Propel's School Database*. Each provincial sampling frame consisted of a range of information about each school, including the school board name[5], city, address, postal code, health region, and enrolment numbers by grade (when available).

The target population for the 2012/2013 YSS consisted of all young Canadian residents attending private, public, and Catholic schools enrolled in grades 6 to 12 inclusively, excluding schools in Manitoba, Yukon, Northwest Territories and Nunavut. Young persons who attend special schools (e.g., schools for the visually-impaired, special needs and hearing impaired), virtual schools, daycares or who attend schools located on military bases were excluded from the target population. In addition, schools with no eligible grades and schools that do not have at least 20 students in at least one eligible grade were excluded.

4.1 Sampling Stratification

The sampling of schools for the 2012/2013 YSS was based on a stratified single stage design. Within most provinces[6], stratification was based on two classifications: 1) health region smoking rate; and 2) type of school (elementary or secondary). Within each provincial sampling frame, two or three health region smoking rate strata and two school-level strata were defined.

Stratum 1: Health Region Smoking Rate

With the exception of Quebec, Ontario and Alberta, the list of all schools was divided into two strata based on the smoking rate for 15-19 year olds in the health region in which the school is located, as determined using the school's six-digit postal code and the current Canadian Community Health Survey data. Schools located in health regions with a smoking rate lower than the median smoking rate for the province were assigned to the "low" smoking rate health region stratum. The remaining schools were assigned to the "high" smoking rate health region stratum. Quebec, Ontario and Alberta schools were divided into three strata. Two strata parallel the smoking rate health region strata (high and low) described above, but excluded schools defined as being part of the urban areas of Montreal (Quebec), Calgary/Edmonton (Alberta), and Toronto (Ontario). This third stratum acknowledges the size of the metropolitan areas in these provinces, by sampling schools located in large urban centres and ensuring representation from these centres. In Quebec, the urban stratum was defined as all schools listed within the Greater Montreal including the entire Island of Montreal, Laval and the Urban Agglomeration of Longueuil. In Ontario, the third stratum consisted of all schools in the Greater Toronto Area, 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 Alberta, the third stratum consisted of all schools

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[5] For consistency, this guide will refer to school boards, school districts and school divisions by the term "school board".

[6] A census of schools was surveyed in New Brunswick and Prince Edward Island as part of YSS partnerships with the New Brunswick Student Wellness Survey and SHAPES-PEI project, respectively.

located within 20 kilometres of Calgary and 20 kilometres of Edmonton, including schools located in Calgary, Edmonton, St. Albert and Sherwood Park.

Table 1 reflects the distribution of schools by smoking rate health region stratum and province.

Table 1: Number of Participating and Non-Participating Schools by Health Region Smoking Rate Strata and Province, 2012/2013 YSS

Province	Target # Schools[+]	Smoking Rate Stratum	# of Schools Participating[++]	# of Schools Non-Participating[++]
NL	24	Low	12	4
		High	14	0
PE[+]	61	Low	30	5
		High	23	3
NS	24	Low	12	7
		High	15	2
NB[+]	136	Low	60	10
		High	89	13
Qc	36	Low	16	31
		High	20	22
		Urban	5	39
ON	54	Low	18	45
		High	21	38
		Urban	10+	71
SK	28	Low	16	37
		High	17	33
AB	32	Low	10	31
		High	18	24
		Urban	12	30
BC	32	Low	17	67
		High	15	69
Canada	**427**		**450**	**581**

+ The target number of schools reflects the collaboration with SHAPES-PEI and New Brunswick Student Wellness Survey in Prince Edward Island and New Brunswick, respectively.
++ Find table definitions in Section 3.1.

Stratum 2: School Type

For all provinces, schools were defined as members of either an elementary or secondary school stratum. If the total enrolment of elementary grades[7] was greater than or equal to the total enrolment of the secondary grades[8] for a school, the school was assigned to the elementary school stratum. Otherwise, the school was assigned to the secondary school stratum. A list of private and independent schools within each province was obtained and included with the list of all public schools in the provinces.

Table 2 reflects the distribution of schools by school type stratum and province.

Table 2: Number of Participating and Non-Participating Schools by School Strata and Province, 2012/2013 YSS

Province	School Stratum	Target # Schools	# of Schools Participating	# of Schools Non-Participating
NL	Elementary	16	16	3
	Secondary	8	10	1
PE[+]	Elementary	49	43	6
	Secondary	12	10	2
NS	Elementary	16	17	6
	Secondary	8	10	3
NB[+]	Elementary	82	87	17
	Secondary	54	62	6
QC	Elementary	24	29	50
	Secondary	12	12	42
ON	Elementary	36	33	102
	Secondary	18	16	52
SK	Elementary	18	22	34
	Secondary	10	11	36
AB	Elementary	20	28	43
	Secondary	12	12	42
BC	Elementary	20	20	42
	Secondary	12	12	94
Canada		**427**	**450**	**581**

+ The number of schools reflects the collaboration with SHAPES-PEI and the New Brunswick Student Wellness Survey in Prince Edward Island and New Brunswick, respectively.

4.2 Sample Selection

Within each provincial sampling frame (excluding Prince Edward Island and New Brunswick), two (or three) health region strata ("low" and "high", and "urban" for Quebec, Ontario, and Alberta) and two school-level strata ("elementary" and

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[7] Elementary grades defined as grade 6 for Quebec, grades 6 to 9 in Alberta and grades 6 to 8 in all other provinces.

[8] Secondary grades defined as grades 7 to 11 in Quebec, grades 10 to 12 in Alberta and grades 9 to 12 in all other provinces.

"secondary") were defined. Crossing these stratifications yields six strata in Quebec, Ontario, and Alberta and four in each remaining province. Within each stratum, in each province, schools were selected based on simple random sampling. There are 2 elementary schools sampled for every 1 secondary school sampled to ensure appropriate distribution of schools across all grades, given that elementary schools have lower enrolments than secondary schools. In Prince Edward Island, all 61 public schools were included in the sample which includes 49 elementary and 12 secondary schools, as part of the YSS collaboration with the SHAPES-PEI project. In New Brunswick, all eligible public schools in the province were included in the sample which includes 104 elementary and 68 secondary, as part of the YSS collaboration with the New Brunswick Student Wellness Survey.

Selection of Schools

In total 1073 schools made up the 2012/2013 YSS sample, including schools added throughout the course of the project to ensure provincial representativeness in each province and to account for province-specific needs. Table 3 describes the sampling outcome by province for the 2012/2013 YSS and includes the target number of schools and the final number of sampled and eligible sampled schools. Some schools were eliminated from the sample at the project outset as they no longer met the school eligibility criteria. A total of 1031 of the sampled schools were eligible for participation in the survey.

Table 3: Sampling Outcomes by Province, 2012/2013 YSS

Province	Target # Schools	Total Sampled Schools	Eligible Sampled Schools
NL	24	32	30
PE[+]	61	61	61
NS	24	37	36
NB[+]	136	176	172
QC	36	146	133
ON	54	209	203
SK	28	112	103
AB	32	132	125
BC	32	168	168
Canada	**427**	**1073**	**1031**

[+] The number of schools reflects the collaboration with SHAPES-PEI and the New Brunswick Student Wellness Survey in Prince Edward Island and New Brunswick, respectively.

Selection of Students

Within each sampled participating school, all students in the eligible grades (grades 6-12) were eligible for participation. See Section 5.2 for details regarding questionnaire distribution by province.

5.0   Questionnaire Development

The final 2012/2013 YSS questionnaires (see Appendix B) were developed through a series of meetings and pilot testing sessions. The following details the measures taken to finalize the questionnaire. A list of questions included in the YSS over time can also be found in Appendix C.

5.1 Questionnaire Design

Several key considerations guided the design of the 2012/2013 YSS student questionnaire:

- **Comparability** - the basis of the questionnaire was past versions of the YSS questionnaire (2002, 2004/2005, 2006/2007, 2008/2009 and 2010/2011) with most items unchanged to allow for comparisons across cycles.
- **Responsiveness** - to meet the needs of users of the data, provincial collaborators and those responsible for federal and provincial tobacco strategies were given an opportunity to contribute topics/items for consideration at content meetings.
- **Relevancy** - to ensure value-added for participating schools, items and content areas (e.g., physical activity and bullying) were added in order to enhance the relevancy of reported results in the school-specific results profiles and summaries to school.
- **Feasibility** - to meet the criterion of students being able to complete the questionnaire in one class period (30-minutes), questionnaire length was restricted.

An expert Content Advisory Committee provided advice to Health Canada on questionnaire content. Advisory Committee members were experts in tobacco control and youth health, and included representatives from four provinces (NL, QC, ON, AB). Health Canada then made final decisions about what content to include. Copies of the final 2012/2013 YSS questionnaires can be found in Appendix B and online at www.yss.uwaterloo.ca.

In the 2012/2013 YSS, students completed one of two instruments in English or French:

- The **Module A questionnaire** was administered to students in grade 6. This instrument contained 48 questions (130 items) that were deemed relevant to students in this grade level. Module A did not include drug and alcohol questions. The questionnaire included:
    - 25 questions (77 items) that assess youth tobacco use and behaviours directly;

- o 9 questions (18 items) that assess measures predictive of or related to youth tobacco use;
- o 3 questions (12 items) about physical activity and eating behaviours;
- o 5 questions (10 items) on participant demographics; and,
- o 6 questions (13 items) regarding students and their school.

- The **Module B questionnaire** was administered to students in grades 7 through 12. This instrument contained 61 questions (201 items) including all questions from Module A detailed above, and additional drug and alcohol questions.
  - o 26 questions (78 items) that assess youth tobacco use and behaviours directly;
  - o 9 questions (18 items) that assess measures predictive of or related to youth tobacco use;
  - o 3 questions (12 items) about physical activity and eating behaviours;
  - o 5 questions (10 items) on participant demographics;
  - o 6 questions (13 items) regarding students and their school; and,
  - o 12 questions (70 items) on alcohol, marijuana and drug use.

5.2 Pilot Testing

Two rounds of questionnaire pilot testing (English and French) were conducted by YSS-Propel staff prior to implementing the 2012/2013 YSS questionnaire in schools. The English-language pilot testing was conducted in Toronto, Ontario and the French-language pilot testing occurred in Montréal, Quebec.[9] The pilot test was divided into two components:
- questionnaire completion (allotted 35-minutes), and
- discussion (allotted 75-minutes).

Grade 6 participants completed the Module A questionnaire and grades 7 to 12 participants completed the Module B questionnaire.

The primary objectives of the pilot testing sessions were to:
- assess student understanding of the questions – particularly new and revised questions,
- test student response to the logic and flow of the questionnaire, and
- determine the length of time students take to complete the questionnaire.

The samples for the English and French Pilot Tests were recruited by Opinion Search, a market research firm that uses panel/database procedures for recruitment. Parents who previously expressed interest in participating in market research were approached via online (panel) or phone (database) procedures. To supplement the panel and database recruitment, Opinion Search also obtained referrals from teachers in the focus group areas and conducted general population calling. For the last few hard-to-recruit respondents, Opinion Search enlisted the services of outside suppliers. Recruiters used a

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[9]University of Waterloo. 2010 (May). Youth Smoking Survey (YSS): 2010/2011 YSS English and French Pilot Tests Report. Waterloo: Propel Centre for Population Health Impact, 1-47.

standard script provided to them by YSS-Propel staff. This method of recruitment has been used for all YSS pilot testing sessions since 2008.

The sample for the English Pilot test was drawn from the city of Toronto, Ontario. Participants were clustered into five separate focus groups: one focus group for grade 6, two focus groups for grades 7-8, and two focus groups for grades 9-12. Attempts were made to recruit twelve participants per group, anticipating that eight to ten participants would attend on the day of pilot testing. A trained YSS-Propel staff person facilitated the pilot testing session in Toronto.

The sample for the French Pilot test was drawn from the city of Montreal, Quebec. Participants were clustered into three separate focus groups: one for primary 6 (grade 6), one for secondary I and II (grades 7-8), and one for secondary III-V (grades 9-11). Attempts were made to recruit thirteen participants per group, anticipating that eight to ten participants would attend on the day of pilot testing. The same bilingual facilitator from the 2008/2009 YSS and 2010/2011 YSS pilot testing sessions facilitated the Montreal pilot testing session.

Once recruiters obtained verbal agreement to participate from the parent and participant and the student smoking status was determined, the participants were assigned to a pilot test session. A parent information package, including a participant information letter and permission form, was emailed in advance of the sessions. Written parental permission was required for all participants under the age of 18.

To identify smokers, potential participants were asked three or four behavioural questions consistent with how smokers are defined in YSS smoking status reporting. Based on previous challenges recruiting participants with smoking experience, especially in grades 6 to 8[10], the first question asked participants "Have you ever tried smoking cigarettes, even just a few puffs?" Participants in grades 6 to 8 were defined as smokers if they had "ever tried", smoked, or shared cigarettes in the last 30 days. Participants in grades 9 to 12[11] were defined as smokers if they had "ever tried", smoked a whole cigarette, smoked cigarettes in the past 30 days, or had smoked 100 or more cigarettes in their lifetime. To increase the level of confidentiality in the event that a parent was listening to their child's responses, changes were made in the recruitment script instructing how participants verbally responded to each behavioural question.

Overall, the pilot test was effective in meeting its objectives. A total of 74 youth participated in the pilot testing sessions and most completed the questionnaire in less than 20-minutes. A number of modifications were made to the questionnaire as a result of the pilot tests including a few minor improvements to the front cover of the questionnaire as well as numerous modifications to wording and format in 13 of the 21 questions specifically targeted for considerations. No changes were made to the design or length of the questionnaires. It was confirmed in the French focus group that the quality of the translation was acceptable.

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[10] In Quebec, grade 6 is called primary 6 and grades 7 and 8 are referred to as secondary I and II.

[11] In Quebec, grades 9 to 12 are referred to as secondary III to V.

5.3 Questionnaire Distribution

In most provinces, all students in eligible grades in participating schools received a YSS questionnaire to complete. Questionnaire distribution was different in provinces with collaborative projects. Table 4 details the questionnaire distribution in all provinces. Appendix A contains further details regarding the collaborative projects and the distribution of questionnaires.

Table 4: Questionnaire Module Distribution within Classes, by Province, 2012/2013 YSS

Provinces	Grades	Questionnaire Module Distribution within Classes
NL, ON, SK	Grade 6	Module A
	Grades 7 to 8	Module B
	Grades 9 to 12	Module B with YGS insert
PE	Grade 6	⅓ Module A with PEI insert, ⅓ HE Module, ⅓ PA Module
	Grades 7 to 12	⅓ Module B with PEI insert, ⅓ HE Module, ⅓ PA Module
NS, BC	Grade 6	Module A
	Grades 7 to 12	Module B
NB	Grade 6	1/9 Module A, 8/9 NBSWS primary module
	Grades 7 to 12	1/9 Module B, 8/9 one of two NBSWS secondary modules
Qc	Grade 6	Module A with CCS insert
	Secondary I to V	Module B with CCS insert
AB	Grade 6	Module A
	Grades 7 to 12	Module B with Alberta Supplement Insert

6.0   Recruitment and Data Collection

6.1 Ethics Review

Ethics approval for the project was obtained from the Office of Research Ethics at the University of Waterloo, Health Canada's Research Ethics Board and the provincial institutional ethics review boards affiliated with the institutions of provincial consortium members. As required, school board ethics review committees also reviewed and approved the project. All protocols and materials received ethics approval by the appropriate institutions (e.g., in some cases, from four levels: Health Canada, University of Waterloo, provincial host institution, and school board). Throughout the course of the project, all subsequent modifications to protocols and documents were also submitted to the appropriate ethics review committee(s) for approval.

6.2 Recruitment of Boards and Schools

The recruitment process began with sending project information letters to all provincial Ministries of Education and Health across the country, to inform them of the planned 2012/2013 YSS for the 2012-13 school year. In response to these letters, letters of support were received from several Ministers and Deputy Ministers of Education and Health, providing information on the importance of the YSS and describing how the survey "fits" within their mandate. When available, these support letters were included in project recruitment packages sent to school boards and schools across the country.

Each provincial consortium member hired a provincial site coordinator (and data collectors, as needed), to be responsible for school board and school recruitment and data collection implementation within their province. Provincial staff training was provided by YSS-Propel Central Coordinating staff via a two-day training session held at the University of Waterloo, web-based training sessions, a comprehensive manual and ready-access to a YSS-Propel point person for advice and support regarding day-to-day issues throughout the course of the project. Materials, protocols and an online, real-time database were centrally developed by YSS-Propel staff for use by all project staff (including provincial staff) to ensure consistency across provinces. The online database permitted the central coordinating staff to monitor progress, recruitment and participation rates, and alignment with protocols.

Provincial site coordinators took responsibility for recruiting all boards and schools within their province. Schools with no governing school board were approached directly regarding the project. School boards were typically contacted via a formal application (if required) or a YSS board invitation package and follow-up phone calls. Once a school board was successfully recruited, the schools within that school board were approached via a YSS school invitation package and follow-up phone calls. Boards, schools, parents and students also had access to all project materials via the YSS website (www.yss.uwaterloo.ca).

6.3 Recruitment of Students

A mix of active permission protocols and active information-passive permission protocols were used for the YSS project. Schools were encouraged to use the permission method most typically used to obtain parental permission in their school. Approximately 71% of students participated in the YSS with passive parental permission and 29% of students participated with active parental permission. See Table 10 for active and passive permission response rates.

Active Permission

For schools participating with active permission protocols, an information letter and permission form was sent home with students enrolled in eligible grade 6 to 12 classes. Parent information letters provided details about the project, contact information for project staff and referral to the project website for further details and copies of the questionnaires. Parents were given a minimum of two weeks to return permission forms. To improve permission form return rates, some schools chose to send permission

materials with report cards, resend permission materials, conduct phone follow-ups to parents and/or provide verbal or written reminders to students. The Active Permission Protocol project (described in Appendix A) also allowed for additional incentives to be used in secondary schools requiring active permission protocols. Only those students with "yes" indicated on a permission form were able to participate in the survey. Students also had the opportunity to decline participation on the day of data collection.

Active Information - Passive Permission

For schools participating with active information-passive permission protocols, school staff distributed information-permission letters to the parents. Schools were asked to distribute the letters to the parents in the method most effectively used within their school community, including mailing the letters directly to the students' home, emailing the letters to the parents and using a voice-relay system. Parent information letters provided details about the project, contact information for project staff and requested parents to call a toll-free number if they did not want their child to participate in the survey. Parents could also go to the project website for further details about the project and copies of the questionnaires. If no call or letter was received, it was assumed that parents passively provided permission for their child to participate in the survey. Students whose parents called or wrote to refuse their child's participation in the survey did not participate. Students also had the opportunity to decline participation on the day of data collection.

6.4   Arranging Data Collection

Data collections were implemented in participating schools between November 2012 and June 2013. Contacts at each school were asked to provide a list of classes for the eligible grades that included: teacher name, course name and/or the classroom number, grade, and the number of students enrolled. Project staff used this information to prepare permission materials and entered it along with other school particulars (e.g., address, data collection date, etc.) into an online database. Upon receipt of permission forms or calls from parents, student information was entered into this database to ensure only students with permission received a student questionnaire. Questionnaires were bundled by classroom and couriered or hand-delivered to the school contact for distribution to classroom teachers for the data collection date.

6.5   School Data Collection

On the day of the school data collection, teachers followed detailed project instructions to administer the questionnaire during a designated class period. The questionnaire administration, including instructions to the students, required 35 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 students were required to place their completed questionnaire in a sealable envelope before it was collected by a fellow student. Individual envelopes containing the completed student questionnaires were placed in a large classroom envelope and delivered to the YSS project staff person attending the data collection.

The YSS staff person attending the data collection typically set up a station in front of the school office or in another central location. The staff person was available to answer questions and receive classroom bundles of questionnaires at the end of the data collection period. Within a few days of data collection, the site coordinators shipped the completed questionnaires, organized by school and classroom, to the YSS team at Propel for processing.

6.6 Sample Size

Tables 5 and 6 provide board and school participation outcomes by province. Table 7 provides the total number of students who participated in the survey.

Table 5: Board Participation Outcomes by Province, 2012/2013 YSS

| Province | Board Participation Outcome | | | |
	Approached	Refused	Recruited (%)	Participated (%)
NL	4	0	4 (100%)	4 (100%)
PE	3	0	3 (100%)	3 (100%)
NS	6	0	6 (100%)	6 (100%)
NB	7	0	7 (100%)	7 (100%)
Qc	50	6	44 (88%)	26 (52%)
ON	57	18	39 (68%)	29 (51%)
SK	23	9	14 (61%)	13 (57%)
AB	47	18	29 (62%)	27 (57%)
BC	25	12	13 (52%)	12 (48%)
Canada	**222**	**63**	**159 (72%)**	**127 (57%)**

Table 6: School Participation Outcomes by Province, 2012/2013 YSS

Province	School Participation Outcome				
	Approached	Not Approached	Participated	Refused	Participation Rate (%)
NL	27	3	26	1	96%
PE	60	1	53	7	88%
NS	36	0	27	9	75%
NB	172	0	149	23	87%
Qc	87	46	41	46	47%
ON	129	74	49	80	38%
SK	61	42	33	28	54%
AB	84	41	40	44	48%
BC	48	120	32	16	67%
Canada	**704**	**327**	**450**	**254**	**64%**

Table 7: Participating Students by Province and Grade, 2012/2013 YSS

Province	Number of Students Participating, by Grade							
	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	Total
NL	649	495	419	537	702	774	689	4265
PE	273	308	302	366	450	436	390	2525
NS	581	471	447	507	945	821	828	4600
NB	490	576	564	544	514	557	471	3716
Qc	1087	1231	1139	787	967	947	0	6158
ON	1030	1304	1276	1136	1263	1021	1018	8048
SK	505	684	735	1197	956	796	765	5638
AB	810	773	744	1101	909	746	660	5743
BC	721	974	1211	891	974	1016	723	6510
Canada	**6146**	**6816**	**6837**	**7066**	**7680**	**7114**	**5544**	**47203**

7.0 Data Processing

The YSS produces a Public Use Microdata File that is made available to the public via the Data Liberation Initiative. This chapter presents a brief summary of the processing steps involved in producing this file. A list of questions and variables included in the YSS over time can also be found in Appendix C.

7.1 Data Capture

Student questionnaires were machine scanned using Optical Mark Read (OMR) technology. Procedures detailed several quality control measures to ensure the accuracy of the scanned data. First, processing staff visually scanned all questionnaires and darkened marks that were too light or incomplete (e.g., check marks instead of filled-in circles) to ensure that they would be recognized by the scanner. At this time, processing staff separated the perforated questionnaire booklets and oriented them in preparation for the OMR scan. Processing staff then inserted "standard questionnaires" to ensure that the calibration of the scanner remained constant.

The visual scanning aspect of questionnaire processing ensures that the data on the questionnaires are correctly recorded by the OMR scanner. In the course of visually scanning a questionnaire, processing staff could "correct" a questionnaire in a variety of ways, including: darkening marks that needed to be read by the OMR scanner; 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". As with all questions, if processing staff were unsure as to how to proceed with an answer, s/he would go to the questionnaire processing manager who would instruct the processing staff as to what to do, or would seek the advice of a data analyst to decide the appropriate action.

Once the questionnaires were OMR scanned, the data outputs were checked for uncodeable responses. Each uncodeable response was checked by trained staff to verify that a response was actually uncodeable (i.e., where the respondent chose two answers) or if OMR scanning errors needed to be corrected (e.g., where the respondent erased one mark and chose another answer, but the OMR scanning recorded both responses).

7.2 Editing and Imputation

The following standard codes are used in the YSS Public Use Microdata file:

> Valid skip - 96 and 996
> Not stated - 99 and 999
> Not asked - 9996

Prior to data cleaning, the 2012/2013 YSS student dataset contained 47,501 records. The final number of records is 47,203. All records for which gender was not given (288 records) or for which grade was not given and could not be imputed (12 records, 9 of

which also did not have gender) were removed. Seven records with only demographics and no other questions filled out were also removed. In addition, Quebec secondary I, II, III, IV, and V were converted to grades 7, 8, 9, 10, and 11, respectively.

Note to SPSS users: in the SPSS Public Use Microdata File, many variables have the values 96, 99 and 9996 defined as "Missing" and are therefore based on SPSS commands. 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' Option

There are several variables in the dataset that require attention with regards to the "I do not know" option. These variables include the following:

- SPUFF0B1 ("How old were you when you first tried smoking cigarettes, even just a few puffs?")
- SWHOLEB1 ("How old were you when you smoked your first <u>whole</u> cigarette?")
- ADRINKA1 ("In the last 12 months, how often did you have a drink of alcohol that was more than just a sip?")
- AEVRETB1 ("How old were you when you first had a drink of alcohol that was more than a sip?")
- A5DRNKC1 ("In the last 12 months, how often did you have 5 drinks of alcohol or more on one occasion?")
- A5DRNKB1 ("How old were you when you first had 5 drinks or more of alcohol on one occasion?")
- ANRGDKA2 ("In the last 12 months, have you had <u>alcohol</u> mixed or pre-mixed with an energy drink such as Red Bull, Rock Star, Monster, or another brand, on the same occasion (for example, during a party)?")
- AOFTMJA1 ("In the last 12 months, how often did you use marijuana or cannabis? (a joint, pot, weed, hash…)")
- AEVRMJB1 ("How old were you when you first used marijuana or cannabis?")

In the Public Use Microdata File, the "I do not know" option is not considered to be a valid response for the above variables. These are questions that relate to something specific to the respondent, such as their age when they first did a behavior. The "I don't know" option for all other variables is considered valid. In this case, the questions are more opinion or knowledge related, such as whether a sibling smoked. **Note to SPSS Users:** In the SPSS version of this file, this response is defined as "Missing" (along with values 96, 99 and 9996) 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 'Mark all that Apply' questions

The following lists all variables that are multi-response questions, where the respondent can select more than one response. **Note to SPSS Users:** In the SPSS version of this file,

for these questions, option 99 = "Not Stated" was NOT coded as a missing value because it is an equivalent of "No" and it will 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.

- GETHNCA1, GETHNCB1, GETHNCC1, GETHNCD1, GETHNCE1, GETHNCF1 ("How would you describe yourself?")
- SLAST7A3 ("Think back over the last 7 days. Find yesterday on the wheel and fill in the number of whole cigarettes you smoked. Then, follow the wheel backwards and fill in the number of whole cigarettes you smoked on each of the last 7 days.")
- SBRNDYA1, SBRNDYB1, SBRNDYC1, SBRNDYD1, SBRNDYE1, SBRNDYF2, SBRNDYG1, SBRNDYH1, SBRNDYI1, SBRNDYK1, SBRNDSK1, SBRNDML1, SBRNDYL1 ("Why do you smoke the brand of cigarettes that you do?")
- SEVTRYA1, SEVTRYB7, SEVTRYC2, SEVTRYK1, SEVTRYC5, SEVTRYL1, SEVTRYG3, SEVTRYH5, SEVTRYN3, SEVTRYJ1 ("Have you ever tried any of the following?")
- SEVTRYA2, SEVTRYB8, SEVTRYB9, SEVTRYK2, SEVTRYC6, SEVTRYL2, SEVTRYG4, SEVTRYH6, SEVTRYN2, SEVTRYJ2 (In the last 30 days, did you use any of the following?")
- S30DFLA1, S30DFLB2, S30DFLC1, S30DFLF2, S30DFLG1 ("In the last 30 days, did you use any of the following flavoured tobacco products?")
- SHELTHA1, SHELTHB1, SHELTHC1, SHELTHH1, SHELTHD1, SHELTHE1, SHELTHF1, SHELTHG1 ("What health problems can people get if they smoke for many years?")
- MBULLDA1, MBULLDB1, MBULLDC1, MBULLDD1, MBULLDE1 ("In the last 30 days, in what ways were you bullied by other students?")
- MBULLGA1, MBULLGB1, MBULLGC1, MBULLGD1, MBULLGE1 ("In the last 30 days, in what ways did you bully other students?")
- A2NVRUA1, A2NVR1A1, A2ALCOA1, A2MARIA1, A2AMPHA1, A2MDMAA1, A2HALUA1, A2HEROA1, A2COCNA1, A2SPCKA1, A2BZPTA1, A2BSLTA1, A2TRNQA1, A2SLEPA1, A2STMSA1, A2PAINA1, A2DEXTA1, A2GLUEA1, A2SALVA1 ("Thinking about the most recent time you used 2 or more substances on one occasion, which ones did you use?")

Treatment of the 'Other' Option

No cleaning was done to the response option 'Other' in all variables with this response option. Written answers were not recorded. The following bullets comprehensively list all variables that include the response options 'Other':

- GETHNCF1 ("How would you describe yourself? Other")
- SBRNDYL1 ("Why do you smoke the brand of cigarettes that you do? Other")
- SGETCGA1 ("Where do you usually get your cigarettes?")

Treatment of the 'Not Applicable' Option

There are several variables in the dataset that require attention with regards to the "Not applicable" option. The following is a comprehensive list of all variables with the "Not applicable" option:

- SHMNYPA1, SHMNYSA1, SHMNYFA1 ("How many of the following family and friends smoke cigarettes?")

In the Public Use Microdata File, the "Not applicable" option is not considered to be a valid response for the above variables. **Note to SPSS Users:** In the SPSS version of this file, this response is defined as "Missing" (along with values 96, 99 and 9996) 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.

Grade

During the cleaning process, data analysts investigated cases where grade was missing, uncodeable, improper for the province 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, province or if grade was missing or uncodeable, the variable was recoded to the grade that the site coordinator assigned the class when they got the class lists. If that was not available, the median grade of the class to which the student belonged was used. If these options were not available, then student age was used to impute grade.

Age and Age-Related Variables

If age is out of range for grade then age is set to "99 = Not Stated". If age-related variables, as in SPUFF0B1 ("How old were you when you first tried smoking cigarettes, even just a few puffs?"), were reported to be greater than the actual age variable then they were given a value of "99 = Not Stated". If the actual age variable was "99 = Not Stated" then the age-related questions were compared to an imputed version of age based on median age per class and the grade. If this was found to be less than the age-related variable then the age-related variable was given a value of "99 = Not Stated".

Question 20 (The Smoking Wheel Question)

This question asks how many whole cigarettes were smoked on each of the last 7 days. The range that was allowed for each day was 0 - 36. All responses between 37 and 90 have been set to "99 = Not Stated". Valid skips were set to "96 = Valid Skip" as for other variables. If the respondent indicates that they smoked on none of the last 30 days (SLST30A1 = 1) and they had given a number between 1 and 36 for any of the response options then these response options will be set to "99 = Not Stated". If the respondent indicated that they did not smoke in the last 7 days (SLAST7A3 = 2) and they gave a number between 1 and 36 for any of the response options then these response options will be set to "99 = Not Stated".

Module Assignment

In the event of a protocol deviation and a grade 6 student completes a Module B questionnaire, the student record will be given a value of "9996 = Not Asked" for all drug and alcohol use questions (specific only to Module B). All grade 7 to 12 students who fill out a Module A questionnaire will be given a value of "99 = Not Stated" for all drug and alcohol use questions (specific only to Module B).

Core Smoking Questions

Missing values are imputed for the core smoking questions so that every record has a response. This includes SPUFF0A1 (Have you ever tried cigarette smoking, even just a few puffs?), SWHOLEA1 (Have you ever smoked a whole cigarette?), SHUND0A1 (Have you ever smoked 100 or more whole cigarettes in your life?), SLAST7A1 (Have you ever smoked every day for at least 7 days in row?) and SLST30A1 (On how many of the last 30 days did you smoke one or more cigarettes?). Imputations for each core question are based on the other core questions and other smoking variables in the questionnaire.

Inconsistencies

In order to be consistent with the 2002 YSS dataset released by Statistics Canada, the responses as recorded by the students are provided. However, note that in certain cases responses to one question may contradict a response to a previous question. In conducting analyses of these variables, it is recommended that the observations with inconsistent responses be taken into consideration. For example, a student may have responded in one question "having smoked in the last 7 days" and in another question, the same student may have responded "I have not smoked in the last 30 days."

Limitations of Pipe Tobacco Results

Data on pipe tobacco refer to the use of a traditional pipe to smoke tobacco. Pilot testing of the Canadian Student Tobacco, Alcohol and Drug Survey (CSTADS) 2014-2015 questionnaire revealed that the questions on pipe use may have been mistaken for questions on water-pipe use. Caution should be used when interpreting the results and comparing the estimates with earlier YSS cycles.

7.3 Creation of Derived Variables

A number of variables in the Public Use Microdata File were derived by combining items on the questionnaire in order to facilitate data analyses. Examples of derived variables include the average number of whole cigarettes smoked daily and the number of whole cigarettes the respondent had smoked in the past 7 days prior to the survey.

There was only one new derived variable included in the 2012/2013 YSS Public Use Microdata File since 2010. This derived variable (DVCRAFFT) is provided to identify respondents who are at risk of having an alcohol or drug-related disorder. Two derived variables previously included in the 2010/2011 YSS (BMI and BMI_ACAT) were not included in the 2012/2012 YSS Public Use Microdata File, as questions pertaining to BMI were not included in the 2012/2012 YSS questionnaires.

The following sections describe and define the derived variables in the 2012/2013 YSS Public Use Microdata File.

Derived Variables for Smoking Status

The following describes the derived variables in the 2012/2013 YSS Public Use Microdata File for smoking status and susceptibility to smoking. These derived variables are consistent with previous cycles of the YSS.

Derived Variables	DVTY1ST		
Response Options for DVTY1ST	1 = Current Smoker		
	2 = Former Smoker		
	3 = Never Smoker		
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	SHUND0A1: *Have you ever smoked 100 or more __whole__ cigarettes in your life?* Valid response 1 (Yes)
			AND
			SLST30A1: *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	SHUND0A1: *Have you ever smoked 100 or more __whole__ cigarettes in your life?* Valid response 1 (Yes)
			AND
			SLST30A1: *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	SHUND0A1: *Have you ever smoked 100 or more __whole__ cigarettes in your life*? Valid response 2 (No)

			OR
			SWHOLEA1: *Have you ever smoked a whole cigarette?* Valid responses 2 (No) 96 (Valid Skip)
Derived Variables	**DVTY2ST**		
Response Options for DVTY2ST	1 = Current Daily Smoker		5 = Experimental Smoker (Beginner)
	2 = Current Occasional Smoker		6 = Past Experimental Smoker
	3 = Former Daily Smoker		7 = Puffer
	4 = Former Occasional Smoker		8 = Never Tried
Derivation of Responses for DVTY2ST	**Current Daily Smoker**	Definition	A current daily smoker is a person who reports currently smoking cigarettes every day.
		Calculation	SHUND0A1: *Have you ever smoked 100 or more whole cigarettes in your life?* Valid response 1 (Yes)
			AND
			SLST30A1: *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	SHUND0A1: *Have you ever smoked 100 or more whole cigarettes in your life?* Valid response 1 (Yes)
			AND
			SLST30A1: *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)
	Former Daily Smoker	Definition	A former daily smoker is a person who smoked at least 100 cigarettes in his/her lifetime and smoked at least 7 days in a row but did not smoke in the last 30 days.
		Calculation	SHUND0A1: *Have you ever smoked 100 or more whole cigarettes in your life?* Valid response 1 (Yes)
			AND
			SLST30A1: *On how many of the last 30 days did you smoke one or more cigarettes?* Valid Response 1 (None)

			AND

			SLAST7A1: *Have you ever smoked <u>every day</u> for at least 7 days in row?*
			     Valid Response
			         1 (Yes)

	Former Occasional Smoker	Definition	A former occasional smoker is a person who smoked at least 100 cigarettes in his/her life time and did not smoke for at least 7 days in a row and also did not smoke in the last 30 days.

		Calculation	SHUND0A1: *Have you ever smoked 100 or more <u>whole</u> cigarettes in your life?*
			     Valid response
			         1 (Yes)

			AND

			SLST30A1: *On how many of the last 30 days did you smoke one or more cigarettes?*
			     Valid response
			         1 (None)

			AND

			SLAST7A1: *Have you ever smoked <u>every day</u> for at least 7 days in row?*
			     Valid response
			         2 (No)

	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	SWHOLEA1: *Have you ever smoked a <u>whole</u> cigarette?*
			     Valid response
			         1 (Yes)

			AND

			SHUND0A1: *Have you ever smoked 100 or more <u>whole</u> cigarettes in your life?*
			     Valid response
			         2 (No)

			AND

			SLST30A1: *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	SWHOLEA1: *Have you ever smoked a <u>whole</u> cigarette?*
			     Valid response
			         1 (Yes)

			AND
			SHUND0A1: *Have you ever smoked 100 or more <u>whole</u> cigarettes in your life?* Valid response 2 (No)
			AND
			SLST30A1: *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	SPUFF0A1: *Have you <u>ever</u> tried cigarette smoking, even just a few puffs?* Valid response 1 (Yes)
			AND
			SWHOLEA1: *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	SPUFF0A1: *Have you <u>ever</u> tried cigarette smoking, even just a few puffs?* Valid response 2 (No)
Derived Variables	**DSUSCEPT**		
Response Options for DSUSCEPT	1 = No		
	2 = Yes		
	96 = Valid Skip		
	99 = Not Stated		
Basis for Susceptibility Scale	SSUSMTA1	*Do you think in the future you <u>might try smoking</u> cigarettes?*	1 = Definitely yes 2 = Probably yes 3 = Probably not 4 = Definitely not 96 = Valid Skip 99 = Not Stated
	SSUSFOA1	*If one of your best friends was to offer you a cigarette would you smoke it?*	1 = Definitely yes 2 = Probably yes 3 = Probably not 4 = Definitely not 99 = Not Stated
	SSUSNYA1	*At any time during the <u>next year</u> do you think you will smoke a cigarette?*	1 = Definitely yes 2 = Probably yes 3 = Probably not 4 = Definitely not 99 = Not Stated

Derivation of Responses for DSUSCEPT	1 (No)	Calculation	If SSUSMTA1 = 4 and SSUSFOA1 = 4 and SSUSNYA1 = 4
	2 (Yes)	Calculation	If SSUSMTA1 = 1,2,3 or 99 or SSUSFOA1 = 1,2, 3 or 99 or SSUSNYA1 = 1,2, 3 or 99
	96 (Valid Skip)	Calculation	If SPUFF0A1 = 1
	99 (Not Stated)	Calculation	If SSUSMTA1 = 99 and SSUSFOA1 = 99 and SSUSNYA1 = 99 Only those students who had all three questions missing were given DSUSCEPT = 99.

Derived Variable	DVSELF	
Objective	To measure the student's overall self-esteem.	
Questions	*For the next 3 statements, choose the answer that describes how you feel about each statement.* OHOWFLA2: *In general, I like the way I am.* OHOWFLB2: *When I do something, I do it well.* OHOWFLC2: *I like the way I look.*	1 = True 2 = Mostly true 3 = Neutral 4 = Mostly false 5 = False
	Scale recoded as:	0 = False 1 = Mostly false 2 = Neutral 3 = Mostly true 4 = True
Notes	• Following the re-coding of the scale, the scores were added up across the questions that were answered by the student, giving an overall score for variable DVSELF. • Only those records who had all three questions missing were given DVSELF = 99.	

Derived Variables for Amount Smoked

The following describes the derived variables for amount smoked in the 2012/2013 YSS Public Use Microdata File.

Derived Variables	SLAST7B3, SLAST7C3, SLAST7D3, SLAST7E3, SLAST7F3, SLAST7G3, SLAST7H3	
Question *Coverage: Respondents where SWHOLEA1=1 (Ever smoked a whole cigarette)*	Think back over the last 7 days. Find yesterday on the wheel and fill in the number of whole cigarettes you smoked. Then follow the wheel backwards and fill in the number of whole cigarettes you smoked on each of the last 7 days. a) Sunday	0 = 0 whole cigarettes smoked 1 : 36 whole cigarettes smoked 96 = Valid Skip 99 = Not Stated

	b) Monday c) Tuesday d) Wednesday e) Thursday f) Friday g) Saturday *Coverage: Respondents where SWHOLEA1=1 (Ever smoked a whole cigarette)*	
Derived Variable	**DVAMTSMK**	
Definition	The average number of whole cigarettes smoked per day in the past week as an integer value.	
Calculation of Responses for DVAMTSMK	$$\frac{SLAST7B3 + SLAST7C3 + SLAST7D3 + SLAST7E3 + SLAST7F3 + SLAST7G3 + SLAST7H3}{7}$$	
Notes	• All responses had to have valid responses for valid data. • If all responses have 99 or if any of the days are missing then DVAMTSMK = 99.	
Derived Variable	**DVCIGWK**	
Definition	Total number of whole cigarettes smoked in the 7 days prior to the survey.	
Calculation of Responses for DVCIGWK	SLAST7B3 + SLAST7C3 + SLAST7D3 + SLAST7E3 + SLAST7F3 + SLAST7G3 + SLAST7H3	
Notes	• Not necessary for all to have valid responses. • Zero value has been treated as a valid response. • If all days have missing data then DVCIGWK = 999.	
Derived Variable	**DVNDSMK**	
Definition	Number of days on which respondent smoked at least 1 whole cigarette in the week prior to the survey.	
Calculation of Responses for DVNDSMK	A count of SLAST7B3, SLAST7C3, SLAST7D3, SLAST7E3, SLAST7F3, SLAST7G3, and SLAST7H3 excluding days with a missing or zero response.	
Notes	• Zero has been treated as a zero response. • If all days have missing data then DVNDSMK = 99.	

Derived Variable	DVAVCIGD
Definition	Average number of whole cigarettes smoked on the days that the respondent smoked.
Calculation of Responses for DVAVCIGD	DVCIGWK DVNDSMK
Notes	• If DVCIGWK and DVNDSMK were both zero responses then DVAVCIGD = 0. • If either DVCIGWK or DVNDSMK were missing then DVAVCIGD = 99.

Derived Variable	DVSMKPTN
Definition	Smoking pattern in the last 7 days.
Calculation of Responses for DVSMKPTN	Calculated based on these variables: SLAST7B3, SLAST7C3, SLAST7D3, SLAST7E3, SLAST7F3, SLAST7G3, SLAST7H3
	1 = Smoked every day 2 = Smoked week days only 3 = Smoked weekend days only 4 = Did not smoke in the last 7 days 5 = Other pattern 99 = Not stated

DVCRAFFT Derived Variable

The following describes the derived variable (DVCRAFFT) for the 2012/2013 YSS Public Use Microdata File. The derived variable is used to measure the respondent's risk of having an alcohol or drug-related disorder. This derived variable is new to the YSS project.

Derived Variable	DVCRAFFT	
Objective	To measure the respondent's risk of having an alcohol or drug-related disorder.	
Questions	*Please mark whether or not you have ever done or do any of the following:*	1 = Yes 2 = No 99 = Not Stated 9996 = Not Asked
	ARIDEHA1: *Have you ever ridden in a CAR driven by someone (including yourself) who was "high" or had been using alcohol or drugs?* ARELAXA1: *Do you ever use alcohol or drugs to RELAX, feel better about yourself or fit in?* AALONEA1: *Do you ever use alcohol or drugs while you are by yourself, ALONE?* AFRGETA1: *Do you ever FORGET things you did while using alcohol or drugs?* ACTDWNA1: *Do your family and FRIENDS ever tell you that you should cut down on your drinking or drug use?* ATRBLDA1: *Have you ever gotten into TROUBLE while you were using alcohol or drugs*	

Response Options for DVCRAFFT	1 = Low or moderate risk 2 = High risk 99 = Not Stated 9996 = Not Asked
Notes	• All six variables were re-coded to 1 = Yes and 0 = No. • The re-coded variables were added up, giving an overall score ranging from 0 to 6. • A score of 0 or 1 was coded to 1 (Low or moderate risk) • A score of 2 to 6 was coded to 2 (High risk) • Those records that had three or more questions answered had a valid response for DVCRAFFT and those records that had two or less questions answered were given DVCRAFFT = 99 (Not Stated) unless the record had two questions answered and both were "Yes" then DVCRAFFT = 2 (High risk) • Records for all grade 6 students (Module A) were coded to 9996 = Not Asked

7.4 Skip Patterns

The questionnaire was intentionally designed with no respondent-use skip patterns to avoid the identification of smokers by rate of questionnaire completion time in the classroom. Thus all smoking behaviour items included a response option such as, "*I do not smoke*". However, due to the logical flow of the questions, a number of questions are extraneous based on the answer to a previous question. In these cases, a skip pattern has been imposed onto the data set. If, within the structure of the questionnaire, a question could have been skipped, it was coded as "96 = Valid Skip", "996 = Valid Skip" or "9996 = Not Asked". The following explains each question that has a 96 or a 996 code and the logical reasoning for coding the question. The code 9996 has only been used to identify those individuals who have not completed the additional questions in Module B. Note that the questionnaire distribution corresponds to grade whereby, grade 6 students received a Module A questionnaire and grades 7 to 12 students received a Module B questionnaire (see section 5.1).

Table 8: Skip Patterns in Public Use Microdata File, 2012/2013 YSS

Variable	Question	Valid Condition(s): If Respondent	Skip Condition (Variable coded 96 or 996)
SPUFF0B1	*How old were you when you first tried smoking cigarettes, even just a few puffs?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs*?
SSUSMTA1	*Do you think in the future you might try smoking cigarettes?*	Had not tried smoking	If SPUFF0A1 = 1 (YES) *Have you ever tried cigarette smoking, even just a few puffs?*
SWHOLEA1	*Have you ever smoked a whole cigarette?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs?*

Variable	Question	Valid Condition(s): If Respondent	Skip Condition (Variable coded 96 or 996)
SWHOLEB1	*How old were you when you smoked your first __whole__ cigarette?*	Had smoked a whole cigarette	If SWHOLEA1 = 2 (NO) or 96 (Valid Skip) *Have you ever smoked a __whole__ cigarette?*
SHUND0A1	*Have you ever smoked 100 or more __whole__ cigarettes in your life?*	Had smoked a whole cigarette	If SWHOLEA1 = 2 (NO) or 96 (Valid Skip) *Have you ever smoked a __whole__ cigarette?*
SLAST7A1	*Have you ever smoked __every day__ for at least 7 days in a row?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you __ever__ tried cigarette smoking, even just a few puffs?*
SLST30A1	*On how many of the last 30 days did you smoke one or more cigarettes?*	Had smoked a whole cigarette	If SWHOLEA1 = 2 (NO) or 96 (Valid Skip) *Have you ever smoked a __whole__ cigarette?*
SLST30B1	*Thinking back over the last 30 days, on the days that you smoked, how many cigarettes did you __usually__ smoke each day?*	Had smoked a whole cigarette	If SWHOLEA1 = 2 (NO) or 96 (Valid Skip) *Have you ever smoked a __whole__ cigarette?*
SLAST7A3 to SLAST7H3	*Think back over the __last 7 days__. Find yesterday on the wheel and fill in the number of __whole__ cigarettes you smoked. Then, follow the wheel backwards and fill in the number of __whole__ cigarettes you smoked on each of the last 7 days.*	Had smoked a whole cigarette	If SWHOLEA1 = 2 (NO) or 96 (Valid Skip) *Have you ever smoked a __whole__ cigarette?*
SSHAREA1	*When you smoke, how often do you share a cigarette with others?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you __ever__ tried cigarette smoking, even just a few puffs?*
SSDRNKA1	*When you first tried smoking cigarettes, were you drinking alcohol at the same time?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you __ever__ tried cigarette smoking, even just a few puffs?*
SBRNDYA1 to SBRNDYL1	*Why do you smoke the brand of cigarettes that you do?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you __ever__ tried cigarette smoking, even just a few puffs?*
SGETCGA1	*Where do you __usually__ get your cigarettes?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you __ever__ tried cigarette smoking, even just a few puffs?*

Variable	Question	Valid Condition(s): If Respondent	Skip Condition (Variable coded 96 or 996)
SEVRQTA1	*Have you <u>ever</u> tried to quit smoking cigarettes?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you <u>ever</u> tried cigarette smoking, even just a few puffs?*
SSDRNKA1, ADRINKA1 to ADIFSMA1	*All alcohol and drug use items*	Is a grade 7 to 12 student	If GRADE = 6 (GRADE 6 STUDENTS)
AEVRETB1	*How old were you when you first had a drink of alcohol that was more than a sip?*	Had tried alcohol	If ADRINKA1 = 1 (I have never drank alcohol), 3 (I have only had a sip of alcohol) or 99 (Not Stated) *In the last 12 months, how often did you have a drink of alcohol that was more than just a sip?*
A5DRNKC1	*In the last 12 months, how often did you have 5 drinks of alcohol or more on one occasion?*	Had tried alcohol	If ADRINKA1 = 1 (I have never drank alcohol), 3 (I have only had a sip of alcohol) or 99 (Not Stated) *In the last 12 months, how often did you have a drink of alcohol that was more than just a sip?*
A5DRNKB1	*How old were you when you first had 5 drinks or more of alcohol on one occasion?*	Had 5 drinks or more on one occasion	If A5DRNKC1 = 1 (I have never done this), 96 (Valid Skip) or 99 (Not Stated) *In the last 12 months, how often did you have 5 drinks of alcohol or more on one occasion?*
AEVRMJB1	*How old were you when you first used marijuana or cannabis?*	Had tried marijuana	If AOFTMJA1 = 1 (I have never used marijuana) or 99 (Not Stated) *In the last 12 months, how often did you use marijuana or cannabis?*
AUAMPHA2	*Have you used or tried amphetamines in the last 12 months?*	Had tried amphetamines	If AUAMPHB2 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried amphetamines?*

Variable	Question	Valid Condition(s): If Respondent	Skip Condition (Variable coded 96 or 996)
AUMDMAA2	*Have you used or tried MDMA in the last 12 months?*	Had tried MDMA	If AUMDMAB2 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried MDMA?*
AUHALUA2	*Have you used or tried hallucinogens in the last 12 months?*	Had tried hallucinogens	If AUHALUB2 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried hallucinogens?*
AUHEROA2	*Have you used or tried heroin in the last 12 months?*	Had tried heroin	If AUHEROB2 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried heroin?*
AUCOCNA2	*Have you used or tried cocaine in the last 12 months?*	Had tried cocaine	If AUCOCNB2 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried cocaine?*
AUSPCKA2	*Have you used or tried spice in the last 12 months?*	Had tried spice	If AUSPCKA1 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried spice?*
AUBZPTA2	*Have you used or tried BZP/TFMPP in the last 12 months?*	Had tried BZP/TFMPP	If AUBZPTA1 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried BZP/TFMPP?*
AUBTHSA2	*Have you used or tried bath salts in the last 12 months?*	Had tried bath salts	If AUBTHSA1 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried bath salts?*

Variable	Question	Valid Condition(s): If Respondent	Skip Condition (Variable coded 96 or 996)
AUSDTVA2	*Have you used or tried sedatives or tranquilizers to get high and NOT for medical purposes in the last 12 months?*	Had tried sedatives or tranquilizers to get high	If AUSDTVB2 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried sedatives or tranquilizers to get high and NOT for medical purposes?*
AUSLEPA2	*Have you used or tried sleeping medicine from a drugstore to get high and NOT for medical purposes in the last 12 months?*	Had tried sleeping medicine from a drugstore to get high	If AUSLEPB2 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried sleeping medicine from a drugstore to get high and NOT for medical purposes?*
AUSTIMA2	*Have you used or tried stimulants such as diet pills and stay awake pills or medicine that is usually used to treat ADHD to get high and NOT for medical purposes in the last 12 months?*	Had tried stimulants such as diet pills and stay awake pills or medicine that is usually used to treat ADHD to get high	If AUSTIMB2 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried stimulants such as diet pills and stay awake pills or medicine that is usually used to treat ADHD to get high and NOT for medical purposes?*
AUPAINA2	*Have you used or tried pain relievers to get high and NOT for medical purposes in the last 12 months?*	Had tried pain relievers to get high	If AUPAINB2 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried pain relievers to get high and NOT for medical purposes?*
AUDXM0A2	*Have you used or tried dextromethorphan such as cold or cough medicine to get high and NOT for medical purposes in the last 12 months?*	Had tried dextromethorphan such as cold or cough medicine to get high	If AUDXM0B2 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried dextromethorphan such as cold or cough medicine to get high and NOT for medical purposes?*

Variable	Question	Valid Condition(s): If Respondent	Skip Condition (Variable coded 96 or 996)
AUSOLVA2	*Have you used or tried glue, gasoline, or other solvents to get high in the last 12 months?*	Had sniffed glue, gasoline or other solvents to get high	If AUSOLVB2 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried glue, gasoline, or other solvents to get high?*
AUSALVA2	*Have you used or tried Salvia to get high in the last 12 months?*	Had tried Salvia to get high	If AUSALVB2 = 1 (I have never done this) or 99 (Not Stated) *If you ever used or tried, how old were you when you first used or tried Salvia to get high?*
DSUSCEPT	*Susceptible to smoking (See derived variables for items contributing to these variables)*	Had not tried smoking	If SPUFF0A1 = 1 (YES) *Have you ever tried cigarette smoking, even just a few puffs?*
DVAMTSMK	*The average number of whole cigarettes smoked per day in the past week.*	Had smoked a whole cigarette	If SWHOLEA1 = 2 (NO) or 96 (Valid Skip) *Have you ever smoked a whole cigarette?*
DVCIGWK	*Total number of whole cigarettes smoked in the past 7 days prior to the survey.*	Had smoked a whole cigarette	If SWHOLEA1 = 2 (NO) or 96 (Valid Skip) *Have you ever smoked a whole cigarette?*
DVNDSMK	*Number of days on which respondent smoked at least one whole cigarette in the week prior to the survey.*	Had smoked a whole cigarette	If SWHOLEA1 = 2 (NO) or 96 (Valid Skip) *Have you ever smoked a whole cigarette?*
DVAVCIGD	*Average number of whole cigarettes smoked on the days that the respondent smoked.*	Had smoked a whole cigarette	If SWHOLEA1 = 2 (NO) or 96 (Valid Skip) *Have you ever smoked a whole cigarette?*
DVSMKPTN	*Smoking pattern in the last 7 days.*	Had smoked a whole cigarette	If SWHOLEA1 = 2 (NO) or 96 (Valid Skip) *Have you ever smoked a whole cigarette?*

7.5 Additional Cleaning Around Skip Patterns

Additionally, cleaning has been done where the respondent has indicated that they have used/tried the activity in question, but for subsequent questions, respond that they have never tried it. For example, if the response is that they have tried smoking, even a few puffs but then in answer to "How old were you when you first tried smoking cigarettes, even just a few puffs?" they respond with "I have never done this". This second response is changed to "Not Stated". Any of the other responses are valid. Table 9 details the

additional data cleaning applied to responses in order to account for inconsistencies in the Public Use Microdata File.

Table 9: Data Cleaning Applied to Response Inconsistencies, 2012/2013 YSS

Variable	Question	Valid Condition(s): If Respondent	Change Variable to 99 = Not Stated
SPUFF0B1	*How old were you when you first tried smoking cigarettes, even just a few puffs?*	Had tried smoking	If SPUFF0A1 = 1 (YES) *Have you ever tried cigarette smoking, even just a few puffs?* AND If SPUFF0B1 = 1 (I have never done this) *How old were you when you first tried smoking cigarettes, even just a few puffs?*
SWHOLEB1	*How old were you when you smoked your first whole cigarette?*	Had smoked a whole cigarette	If SWHOLEA1 = 1 (YES) *Have you ever smoked a whole cigarette?* AND If SWHOLEB1 = 1 (I have never smoked a whole cigarette) *How old were you when you smoked your first whole cigarette?*
SLAST7A3	*Think back over the last 7 days. Find yesterday on the wheel and fill in the number of whole cigarettes you smoked. Then, follow the wheel backwards and fill in the number of whole cigarettes you smoked on each of the last 7 days. If you have not smoked, mark one of the circles below.*	Had smoked a whole cigarette	If SWHOLEA1 = 1 (YES) *Have you ever smoked a whole cigarette?* AND If SLAST7A3 = 1 (I have never smoked) *Think back over the last 7 days. Find yesterday on the wheel and fill in the number of whole cigarettes you smoked. Then, follow the wheel backwards and fill in the number of whole cigarettes you smoked on each of the last 7 days. If you have not smoked, mark one of the circles below.*
SSDRNKA1	*When you first tried smoking cigarettes, were you drinking alcohol at the same time?*	Had tried smoking	If SPUFF0A1 = 1 (YES) *Have you ever tried cigarette smoking, even just a few puffs?* AND If SSDRNKA1 = 1 (I have never tried smoking) *When you first tried smoking cigarettes, were you drinking alcohol at the same time?*

Variable	Question	Valid Condition(s): If Respondent	Change Variable to 99 = Not Stated
SEVRQTA1	*Have you <u>ever</u> tried to quit smoking cigarettes?*	Had tried smoking	If SPUFF0A1 = 1 (YES) *Have you <u>ever</u> tried cigarette smoking, even just a few puffs?* AND If SEVRQTA1 = 1 (I have never smoked) *Have you <u>ever</u> tried to quit smoking cigarettes?*
AEVRETB1	*How old were you when you first had a drink of alcohol that was more than a sip?*	Had tried alcohol	If ADRINKA1 = 2 (I did not drink alcohol in the last 12 months), 4 (Less than once a month), 5 (Once a month), 6 (2 or 3 times a month), 7 (Once a week), 8 (2 or 3 times a week), 9 (4 to 6 times a week), 10 (Every day) or 11 (I do not know) *In the last 12 months, how often did you have a drink of alcohol that was more than just a sip?* AND If AEVRETB1 = 1 (I have never drank alcohol) or 2 (I have only had a sip of alcohol) *How old were you when you first had a drink of alcohol that was more than a sip?*
A5DRNKB1	*How old were you when you first had 5 drinks or more of alcohol on one occasion?*	Had 5 drinks or more on one occasion	If A5DRNKC1 = 2 (I did not have 5 or more drinks on one occasion in the last 12 months), 3 (Less than once a month), 4 (Once a month), 5 (2 to 3 times a month), 6 (Once a week), 7 (2 to 5 times a week), 8 (Daily or almost daily) or 9 (I do not know) *In the last 12 months, how often did you have 5 drinks of alcohol or more on one occasion?* AND If A5DRNKB1 = 1 (I have never done this) *How old were you when you first had 5 drinks or more of alcohol on one occasion?*

Variable	Question	Valid Condition(s): If Respondent	Change Variable to 99 = Not Stated
AEVRMJB1	*How old were you when you first used marijuana or cannabis?*	Had tried marijuana	If AOFTMJA1 = 2 (I have used marijuana but not in the last 12 months), 3 (Less than once a month), 4 (Once a month), 5 (2 or 3 times a month), 6 (Once a week), 7 (2 or 3 times a week), 8 (4 to 6 times a week), 9 (Every day), 10 (I do not know) *In the last 12 months, how often did you use marijuana or cannabis?* AND If AEVRMJB1 = 1 (I have never used marijuana) *How old were you when you first used marijuana or cannabis?*

7.6 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 result for complex survey designs such as used in the YSS. In complex survey designs, the sample data must be multiplied by appropriate weights that reflect the different sampling fractions. This survey weight appears on the YSS Public Use Microdata File and <u>must</u> be used to derive meaningful population estimates from the survey. Please refer to the section on using survey weights.

The development of the survey weights was accomplished in two stages. 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. Third, the weights were calibrated to the provincial gender and grade distribution so that the total of the survey weights by gender, grade and province would equal the actual enrolments in those groups. Finally, bootstrap weights (see Stage 5) were generated to attach to the data file. An identical weight variable is included in the Restricted and Public Use data files.

Stage 1: Calculation of W_{1j}

Within each provincial sampling frame, two (or three) health region strata ("low" and "high", and "urban" for Quebec, Ontario and Alberta) and two school-level strata ("elementary" and "secondary") are defined. Crossing these stratifications yields six strata in Quebec, Ontario and Alberta and four in each of the other provinces. Within each stratum, in each province, schools were selected based on simple random sampling.

Stage 1: Calculation of W_{1j}:

Within each stratum, in each province, schools were randomly selected. For school *j*, W_{1j} 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 selected schools in the given stratum, and

L = Total number of schools in the stratum.

Please Note: All secondary schools in the Ontario urban stratum were equated to either the low or high smoking rate stratum depending on which they would have belonged to, for the purpose of calculating W_{1j}. This was done to prevent large weights.

Stage 2: Calculation of W_{2jg}

Calculation of W_{2jg} is different for elementary and secondary schools. In the elementary school strata, response rates were calculated based on the ratio of number of participating students (by school and by grade) to the number of eligible students (by school and by grade). 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 $W_{2jg} = 1/\pi_{2jg}$

In the secondary school strata for all provinces, response rates were calculated based on the ratio of the number of participating students (**by board and by grade**) to the number of eligible students (**by board and by grade**). Within each recruited board (where we have at least one school participating) we computed the response rate for the students by board and by grade. Some schools were merged with neighbouring schools for the calculation of this part of the weight. This was only done if they were the only participating school within a board, but not for all such cases, only where large weights occurred.

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

where

$n_j(g)$ is the number of students who completed a survey in grade g in **board** j

$N_j(g)$ is the total number of students in grade g in **board** j

Then $W_{2jg} = 1/\pi_{j2g}$

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: Calibration of Survey Weights

The weights described above were then calibrated using school administrative datasets that include the total student enrolment by grade (grades 6 through 12) for each province gathered from the site coordinators and the sampling frame and the previous survey cycle's data. Province, grade, and gender calibration were used to adjust the sampling weights so that estimated numbers of students in these domains reproduce known population numbers exactly. Final weight variable was defined as WTPP in the YSS Public Use Microdata file.

Stage 5: Construction of Bootstrap Weights

Statisticians use bootstrap methods to estimate sampling error. The bootstrap weights for each province were constructed separately as follows:

1) Within each stratum (health region smoking rate stratum crossed with grade-level stratum), the same number of schools were selected from the sample by simple random sampling (SRS) with replacement as was selected in the original sample design.

2) Then, within each re-sampled school, all eligible students who had consent to participate were selected.

3) The weights for re-selected units were recalculated and adjusted for the re-sampling inference based on the method of Rao and Wu (1988).[12]

4) Finally, the new weights were recalibrated to the provincial enrolment figures using the administrative datasets.

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

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

Let $\lambda_{1i} = \sqrt{\dfrac{n_i}{n_i - 1}(1 - \dfrac{n_i}{N_i})}$ 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.

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

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

7.7 Use of Survey Weights

Why should survey weights be used?

There are two reasons why a survey weight variable should be used when performing analyses.

1) **Total population versus sample size[13]**. Users may want results based on population figures instead of estimates based on the sample of individuals included in the study. For example, the YSS survey weight, when used, will produce results based on a population estimate of N, which represents all the students in the 9 participating provinces (grades 6-12) 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 YSS.

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. But in reality, YSS sampling was done in a more complex manner (described in section 4) and each individual who was selected in the survey did not have an equal probability of being selected. To correct for this unequal probability or chance of being selected, we created the survey weight variable. In short, using the survey weight variable permits the user to make generalizations to the population from which the sample was drawn.

Re-basing the survey weights

In some instances, users may want to maintain the sample size rather than the population estimate and ensure that adjustments for sampling methods are retained. For this reason, users need to re-base the survey weights. Re-basing the survey weight can be done as follows:

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

$$\text{Relative weight} = \frac{WTPP}{\sum WTPP} * \text{(sample size)}$$

7.8 Suppression of Confidential Information

It should be noted that the Public Use Microdata File may differ from the survey master files held at Propel. These differences usually are the result of actions taken to protect the anonymity of individual survey respondents. The most common actions are the suppression of file variables, grouping values into wider categories, and coding specific values into the "not stated" category.

Specifically, the following variables have been removed from the Public Use Microdata file:
- school board identifier
- school identifier
- class identifier
- strata identifiers
- postal code
- age

8.0 Data Quality

There are various factors that influence data quality. This section summarizes threats to data quality and steps taken to ameliorate these.

8.1 Response Rates

There were various levels of non-response throughout the 2012/2013 YSS. First, some degree of non-response was noted among school boards and schools. Refer to Table 5 and Table 6 for a listing of response rates at the school board and school level in 2012/2013 YSS.

The second level of response rate is based on individual student consent. The response rate at the student level is derived based on the number of eligible students as provided by school contacts for participating classes. Non-response at the student level can be attributed to several factors. Some parents/guardians refused to allow their child to take part in the survey. Even with parental permission, some students refused to participate or were absent from class on the day of data collection. The final response rates at the student level are summarized in Table 10.

Table 10: Student Level Response Rates by Province, 2012/2013 YSS

Province	Eligible students	Students with active permission	Students with passive permission	Completed questionnaires	Response rate [+]
NL	5991	1114	3151	4265	71%
PE[++]	3323	922	1603	2525	76%
NS	7382	2704	1896	4600	62%
NB[+++]	5392	0	3716	3716	69%
Qc	6728	430	5728	6158	92%
ON	13671	3754	4294	8048	59%
SK	7233	604	5034	5638	78%
AB	8155	2593	3150	5743	70%
BC	7594	521	5989	6510	86%
Canada	65812	12642	34561	47203	72%

[+] Based on completed questionnaires (numerator) and eligible students (denominator).
[++] The number of eligible students in PEI is 1/3 of all eligible students in schools participating in SHAPES-PEI and YSS.
[+++] The number of eligible students in NB is 1/9 of all eligible students in schools participating in both the NBSWS and YSS.

8.2 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 as those actually used in the survey. 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 which are not related to sampling may occur at almost every phase of a survey. 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.

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 collection around youth smoking; 2) detailed instructions for

teachers and participating students; 3) extensive training of project staff with respect to the survey procedures; 4) procedures to ensure that data capture errors were minimized; and 5) coding and editing quality checks to verify the processing logic.

9.0   Guidelines for Tabulation, Analysis and Release

Please note that this section is adapted from the 2002 YSS User Guide written by Statistics Canada.[14] It 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 YSS Public Use Microdata file 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.

9.1 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 one. 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 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.

9.2   Sample Weighting Guidelines for Tabulation

The sample design used for the Youth Smoking Survey (YSS) was not self-weighting. When producing simple estimates, including the production of ordinary statistical tables, users must apply the proper sampling weights. If proper weights are not used, the estimates derived from the Public Use Microdata file cannot be considered to be representative of the survey population, and will not correspond to estimates produced by Health Canada.

9.3   Definitions of Types of Estimates: Categorical and Quantitative

Before discussing how the YSS 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 Public Use Microdata file for the YSS.

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:
Q: Have you ever smoked a whole cigarette?
R: Yes / No

Q: Where do you usually get your cigarettes?
R: I do not smoke / I buy them myself at a store / 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.

The only example of a quantitative estimate in the 2012/2013 YSS is the number of whole cigarettes smoked on each of the last 7 days. If users want to estimate the average

number of whole cigarettes smoked on the days the respondent smoked, then the numerator is the total number of whole cigarettes smoked in the last 7 days and the denominator would be the number of days whole cigarettes were smoked in the last 7 days.

Tabulation of Categorical Estimates

Estimates of the number of people with a certain characteristic can be obtained from the microdata file 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 totals can be obtained from the YSS Public Use Microdata file 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 Quebec) 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, then sum this value over all records with DVCIGWK < 996.

9.4 Use of Weights for Producing Simple Estimates

The 2012/2013 YSS is based upon a complex sampling design, with stratification, single-stage of selection, and unequal probabilities of selection of respondents.

The calculation of more precise variance estimates requires detailed knowledge of the design of the survey. Such details cannot be given in this Public Use Microdata file since confidentiality must be respected. However, variances that take account for the sample design can be calculated from the bootstrap weights which are provided as a separate data file. Health Canada employed STATA for all analyses of the 2012/2013 YSS. All analyses were conducted using Stata 10[15]. The *surveyset* commands were used to account for the complex survey design and variance estimates were derived using balanced repeated replication (BRR) with Fay's method[16]. This procedure creates reliable estimates of the variance for both simple estimates such as estimates of totals, proportions

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[15] StataCorp. 2005. Stata Statistical Software: Release 9. College Station, TX: StataCorp LP.

[16] Judkins, D. 1990. Fay's Method for Variance Estimation. Journal of Official Statistics, 6(3), 223-239.

and ratios and more complex analyses such as linear or logistic regression. Another option is to use the Bootvar program available in both SAS and SPSS formats. It is made up of macros that compute variances for totals, differences between ratios and for linear and logistic regression. The bootstrap program for SAS can be found at http://data.library.ubc.ca/rdc/pdf/0702Bootdoc.pdf and bootstrap program for SPSS can be found at http://prod.library.utoronto.ca/datalib/codebooks/cstdli/gss/gss18/spssbootdoc_eng.pdf along with the documents explaining how to modify and use the program to meet users' needs.

When producing simple estimates including the production of ordinary statistical tables, users must apply the proper sampling weight. There is one method that makes using standard packages of analysis techniques such as linear regression, logistic regression and analysis of variance, more reasonable. This is done by rescaling the weights on the records so that the average weight is one. As a result of using this weight, the results produced by standard packages will take into account the unequal probabilities of selection and thus be more meaningful even if they do not take into account the stratification and clustering of the design of the sample. A rescaled weight can be calculated by dividing the original weight by the average of the original weights for the sampled units contributing to the estimator that one is interested in.

The method described in the above paragraph produces reliable estimates of the coefficients under consideration in the analysis; however, the stratification and clustering of the sample's design are still not taken into account. Consequently, the variance estimates calculated in this way are likely to be under-estimated.

9.5 Coefficient of Variation Release Guidelines

Before releasing and/or publishing any estimate from the 2012/2013 YSS, 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. 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 deviation divided by the mean, multiplied by 100) as shown in the table below. Nonetheless, users should be sure to read Section 7 to be more fully aware of the quality characteristics of these data.

First, determine the number of respondents who contributed to the calculation of the estimate. If this number is less than 30, consider the weighted estimate to be of *unacceptable* quality.

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 11. Apply these quality level guidelines to weighted rounded estimates.

All estimates may be released. However, those of *marginal* or *unacceptable* quality level must be accompanied by a statement of warning to caution subsequent users.

Table 11: 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: 2012/2013 Youth Smoking Survey Collaborative Projects

The 2012/2013 YSS was implemented alongside seven collaborating projects across the country. We engaged in the collaborative projects for three primary reasons. First, collaborative projects often facilitated access to schools, since they are conducted in partnership with Ministries of Education (e.g., SHAPES-PEI) or engage other provincial stakeholders. Second, collaborative projects added value to the YSS, such as funding a more robust sample or adding additional data. Finally, collaborative projects added value to future iterations of the YSS. For instance, the Active Permission Protocol project tested the value of different strategies to recruit participants. In each case, schools have a choice of participating in the collaborative project or not. We ensure that student and school burden are not excessive by restricting the collaborative project reach. In the 2012/2013 YSS, collaborative or affiliated projects included the:

- Healthy School Planner (all provinces),
- School Health Action, Planning and Evaluation System (Prince Edward Island),
- Active Permission Protocol Project (Ontario, Alberta, Newfoundland & Labrador, Nova Scotia),
- New Brunswick Student Wellness Survey in New Brunswick (New Brunswick),
- Youth Gambling Insert (Newfoundland and Labrador, Ontario, Saskatchewan),
- Canadian Cancer Society – Quebec Questionnaire (Quebec), and
- The Alberta Supplement Project (Alberta).

The following is a description of these projects and a brief summary of the results.

Project Name:	**Healthy School Planner**
Province(s):	All 9 participating 2012/2013 YSS provinces
Primary Contact:	Dr. Steve Manske
	Propel Centre for Population Health Impact University of Waterloo manske@uwaterloo.ca

Description: The Healthy School Planner (HSP) was led by Dr. Steve Manske. There are two purposes for this collaboration. First, the data from the Healthy School Planner (HSP) provides school teams with a school-level assessment that they can use to better understand the student-level data within their School Health Profile. In this way, it is intended to facilitate school recruitment. Second, as a valid and reliable tool, it helps the research community understand the context for the YSS student data.

The evolving HSP has accompanied the YSS since 2008. HSP assesses indicators aligned with the four pillars of the Comprehensive School Health: quality teaching and learning,

physical and social environments, healthy school policies, and community partnerships and services. As part of the 2012/2013 YSS, school staff from 112 (37%) eligible participating YSS schools completed HSP's Foundational Module, which assesses generic concepts related in creating a healthy school community. An additional 24 (8%) schools completed the Tobacco Use Express Module, which specifically assesses eight indicators for tobacco control at the school. Schools that completed a module received an individualized school report containing school results, recommendations for taking action and links to resources. Schools were encouraged to complete the foundational and tobacco use express modules as part of the YSS but could also complete modules on physical activity and healthy eating.

The implementation of the HSP alongside the YSS was funded by Propel.

Project Name: **School Health Action, Planning and Evaluation System – Prince Edward Island (SHAPES-PEI)**

Province(s): Prince Edward Island

Primary Contact: Dr. Donna Murnaghan

University of Prince Edward Island
dmurnaghan@upei.ca

Description: SHAPES-PEI has been a complementary research project for the YSS since 2008. SHAPES-PEI collects data across four health behaviours (smoking, healthy eating, physical activity and positive mental health). The 2008/2009 implementation of SHAPES-PEI alongside YSS provided baseline data for schools, boards, and the province and subsequent cycles aim to provide important comparability data.

As a result of this collaboration, all Island schools with grades 5-12 were approached to participate in the SHAPES/YSS-PEI project. A total of 53 schools and 8,533 students participated in the collaborative project. Without this collaboration, the YSS sample would have only included 24 schools. Each grade 6 to 12 student participating in this collaborative project randomly received a YSS questionnaire with SHAPES-PEI insert, a SHAPES-PEI healthy eating questionnaire or a SHAPES-PEI physical activity questionnaire. As a result, one-third of the grade 6 to 12 population received a YSS questionnaire. The SHAPES-PEI questionnaires also collected data on core smoking behaviours. Grade 5 students only received one of two SHAPES-PEI questionnaires.

SHAPES-PEI is conducted by the Comprehensive School Health Research Group at the University of Prince Edward Island, with funding provided by the Prince Edward Island Department of Education and Early Childhood Development and the Prince Edward Island Department of Health and Wellness.

Project Name: **Active Permission Protocol Project**

Province(s):   Alberta, Ontario, Nova Scotia, Newfoundland & Labrador

Primary Contact: Dr. Steve Manske

Propel Centre for Population Health Impact
University of Waterloo
manske@uwaterloo.ca

Description: The Active Permission Protocol (APP) project employed an experimental protocol within the YSS to determine optimal configurations of incentives to maximize participation in four participating provinces (Alberta, Ontario, Nova Scotia and Newfoundland and Labrador). Across YSS cycles, more school boards have required Active Parental Permission for student participation. This significantly reduces student participation rates, especially in secondary schools. The results of this project were designed to inform protocols for future implementations of the YSS in order to optimize student participation rates in schools requiring active permission protocols.

A total of 15 of the 28 targeted schools participated in the project. Since we could not recruit the optimum number of schools needed to have confidence in results (i.e., at least 7 per group) we must interpret the results with caution. A summary of the results[17] for this project can be found on the project website at www.yss.uwaterloo\reports.

This project was funded by Propel.

Project Name: **New Brunswick Student Wellness Survey**

Province(s):   New Brunswick

Primary Contact: Michelina Mancuso
New Brunswick Health Council
michelina.mancuso@nbhc.ca

Description: The YSS was implemented alongside the New Brunswick Student Wellness Survey (NBSWS), a project with the backing of the NB Department of Wellness, Culture and Sport and the Department of Education (English and Francophone Sectors). The NBSWS is a key project of the Wellness Strategy for the New Brunswick Government. All schools in the province of New Brunswick were approached to participate in the NBSWS and the YSS accompanied the survey in the majority of schools. The YSS was not implemented in New Brunswick schools with school enrolment numbers less than 20 which did not allow for proper reporting of results to schools. One YSS questionnaire for every 8 NBSWS questionnaires was distributed to students with permission in each of the participating 149 schools.

The Government of New Brunswick (Wellness) funded this project.

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[17] Holtby L, Rynard V, Manske S, Brown S. (2013, August). Active Permission Protocol Project Summary Report. Propel Centre for Population Health Impact, University of Waterloo, Waterloo, ON.

Project Name: **Youth Gambling Survey**

Province(s): Saskatchewan, Ontario, Newfoundland & Labrador

Primary Contact: Tara Elton Marshall
Centre for Addiction and Mental Health
tara.eltonmarshall@camh.ca

Description: The Youth Gambling Survey (YGS) was implemented alongside the YSS in Saskatchewan, Ontario and Newfoundland & Labrador. Participating students in grades 9 to 12 in these provinces had the option to participate in the YGS as part of recruitment for the YSS. The one-page YGS questionnaire asked questions about youth gambling behavior and was completed by participating students following the completion of the YSS Module B questionnaire.

A total of 39 YSS schools with secondary grades and 10,035 students across the three provinces participated in the YGS.

The extent to which various risk behaviours concentrate in particular populations and /or individuals exhibit multiple risk behaviours (e.g., tobacco use, drug use and gambling) will be a primary focus of this work.

Project Name: Canadian Cancer Society – Quebec Insert Questionnaire

Province(s): Quebec

Primary Contact: Jacinthe Hovington
Canadian Cancer Society - Quebec
jhovington@quebec.cancer.ca

Description: In the province of Quebec, the Canadian Cancer Society-Quebec (CCS-Qc) questionnaire insert was implemented alongside the YSS. The survey consists of a one-page questionnaire that is completed by students in all eligible grades after they complete a YSS questionnaire. Participating schools had the option to decline participation in the questionnaire. The questionnaire included questions on age of initiation of smoking, use of electronic cigarettes and sun exposure behaviours and attitudes.

A total of 39 YSS schools and 5,880 students participated in the CCS-Qc questionnaire alongside the YSS.

Project Name: **Alberta Supplement Project**

Province(s): Alberta

Primary Contact: Dr. Cam Wild
University of Alberta
cam.wild@ualberta.ca

Description: The Alberta Supplement investigated student attitudes toward school policies related to tobacco, cannabis, and alcohol, as well as the receipt and delivery of interpersonal tactics to control the use of these substances. Dr. Cam Wild at the University of Alberta is the lead investigator for the project and can be contacted directly for access to the Alberta Supplement data set.

A total of 4,908 students in grades 7 through 12 from 25 schools participating in the 2012/2013 YSS completed the Alberta Supplement questionnaire, following completion of the YSS Module B questionnaire. Analysis of the data will be used to examine the utility of these items in a youth population and enable preliminary examination of support for school-based policies and practices aimed at controlling substance use, as well as the prevalence of interpersonal social control tactic usage.

Additional Collaborations

Additional schools implemented the YSS questionnaire that were not part of the sample of YSS schools and are not be included in the final 2012/2013 YSS Public Use Data File. These schools (or their health unit) requested to implement the YSS questionnaire to inform school policies and programs and improve the health of their youth. These data collections were funded by regional health authorities or school boards.

The YSS also worked closely with the COMPASS project, led by Dr. Scott Leatherdale, to ensure Ontario schools were not being contacted by both projects. Upon sampling schools for the YSS, COMPASS excluded all YSS sampled schools from their sampling frame and selected only non-YSS schools to be a part of their project.

Appendix B: 2012/2013 Youth Smoking Survey Student Questionnaires, Module A and B

Appendix C: Youth Smoking Survey Questions across Cycles

Table B-1: YSS Questions in all YSS cycles: 18 Items

Question	2012/2013 YSS Variable Name
1. Have you ever smoked 100 or more <u>whole</u> cigarettes in your life?	SHUND0A1
2. Have you <u>ever</u> tried to quit smoking cigarettes?	SEVRQTA1
3. Have you <u>ever</u> tried cigarette smoking, even just a few puffs?	SPUFF0A1
4. Have you ever smoked <u>every day</u> for at least 7 days in a row?	SLAST7A1
5. At any time during the <u>next year</u> do you think you will smoke a cigarette?	SSUSNYA1
6. Do you think in the future you <u>might try smoking</u> cigarettes?	SSUSMTA1
7. Why do you smoke the brand of cigarettes that you do? (*Mark all that apply*)	SBRNDYA1 SBRNDYB1 SBRNDYC1 SBRNDYD1 SBRNDYE1 SBRNDYF2 SBRNDYG1 SBRNDYH1 SBRNDYI1 SBRNDYK1 SBRNDYL1
8. Do you think it would be difficult or easy for you to get cigarettes if you wanted to smoke?¥	SHWHRDA1
9. Where do you <u>usually</u> get your cigarettes? (*Mark only one*)‡	SGETCGA1
10. Have you <u>ever</u> tried any of the following? (*Mark all that apply*) £	SEVTRYA1 SEVTRYB7 SEVTRYC2 SEVTRYK1 SEVTRYC5 SEVTRYL1 SEVTRYG3 SEVTRYH5 SEVTRYN3 SEVTRYJ1
11. Are you...? Female Male ǿ	SEX
12. About how much money do you usually get <u>each week</u> to spend on yourself or to save? (Remember to include all money from allowances and jobs like babysitting, delivering papers…)	GMONEYA1
13. How old are you today?	AGE
14. What grade are you in?	GRADE
15. On how many of the last 30 days did you smoke one or more cigarettes?	SLST30A1
16. Thinking back over the last 30 days, on the days that you smoked, how many cigarettes did you <u>usually</u> smoke each day?	SLST30B1
17. Have you ever smoked a <u>whole</u> cigarette?	SWHOLEA1

Question	2012/2013 YSS Variable Name
18. How old were you when you smoked your first <u>whole</u> cigarette? _____	SWHOLEB1

¥ "smoke" replaced "try smoking" in question text.

‡ (*Mark only one*) added to end of question text

£ response option wording changed from "Water-pipe to smoke tobacco (also known as hookah, sheesha, narg-eelay, hubble-bubble, or gouza)" (in 2010/2011 cycle) to "Using a water-pipe (hookah) to smoke sheesha (herbal or tobacco)"

Ø The question mark (?) was moved from the response options to the end of the question text. In previous cycles, the question read : Are you… Female? Male?

Table B-2: YSS Questions New to the 2012/2013 YSS Cycle: 15 items

Question	2012/2013 Variable Name
1. In the last 12 months, have you used 2 or more substances, such as alcohol, drugs, or medication, to get high, on one occasion (for example, during a party)?	A2HIGHA1
2. Thinking about the most recent time you used 2 or more substances on one occasion, which ones did you use? (*Mark all that apply*)	A2NVRUA1
	A2NVR1A1
	A2ALCOA1
	A2MARIA1
	A2AMPHA1
	A2MDMAA1
	A2HALUA1
	A2HEROA1
	A2COCNA1
	A2SPCKA1
	A2BZPTA1
	A2BSLTA1
3. Please mark whether or not you have <u>ever</u> done or do any of the following:	ARIDEHA1
	ARELAXA1
	AALONEA1
	AFRGETA1
	ACTDWNA1
	ATRBLDA1

Question	2012/2013 Variable Name
4. How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?	ADIFMJA1
	ADIFAMA1
	ADIFMDA1
	ADIFHLA1
	ADIFCNA1
	ADIFPRA1
	ADIFSMA1
5. In the last 30 days, in what ways were you bullied by other students? (*Mark all that apply*)	MBULLDA1
	MBULLDB1
	MBULLDC1
	MBULLDD1
	MBULLDE1
6. In the last 30 days, in what ways did you bully other students? (*Mark all that apply*)	MBULLGA1
	MBULLGB1
	MBULLGC1
	MBULLGD1
	MBULLGE1
7. Do you believe that using a water-pipe (hookah) to smoke sheesha (herbal or tobacco) is:	SHARMFA1
8. Have you ever read, seen, or heard about the 1-866-366-3667 quit line or the *gosmokefree.gc.ca/quit* website on a cigarette package?	SQLINEA1
9. Have you ever used/contacted the 1-866-366-3667 quit line or the *gosmokefree.gc.ca/quit* website?	SCONQLA1
10. How many of the following family and friends smoke cigarettes? (a) Your parents, step-parents, guardians (b) Your brothers, sisters (c) Your closest friends (i.e., the friends you like to spend the most time with)	SHMNYPA1 SHMNYSA1 SHMNYFA1

11. What health problems can people get if they smoke for many years? (*Mark all that apply*)
    Chronic Bronchitis/Emphysema
    Bladder cancer
    Vision loss / blindness
	SHELTHH1
	SHELTHF1
	SHELTHG1

12. Why do you smoke the brand of cigarettes that you do? (*Mark all that apply*)
    I like the slim (or super-slim) size
    I like the menthol flavour
	SBRNDSK1
	SBRNDML1

13. In the last 12 months, have you had alcohol and an energy drink, such as Red Bull, Rock Star, Monster, or another brand, on the same occasion (for example, during a party)? ȝ	ANRGDKA2

_____

ȝ wording change; previously "In the last 12 months, have you had alcohol mixed or pre-mixed with an energy drink such as Red Bull, Rock Star, or another brand?"