Main Microdata User Guide

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Funding for this project was provided by Health Canada

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1.0 Introduction

The Youth Smoking Survey (YSS) is undertaken with the cooperation, support and funding of the Tobacco Control Program, Health Canada. Dr. Steve Manske of the Centre for Behavioural Research and Program Evaluation (CBRPE) at the University of Waterloo served as Principal Investigator to implement the 2006-07 YSS, Drs. Steve Brown and Mary Thompson from the Statistics and Actuarial Science Department at the University of Waterloo acted as co-principal investigators. Two groups at the University of Waterloo coordinated the 2006-07 YSS: the Centre for Behavioural Research and Program Evaluation (CBRPE) and the SHAPES team (School Health Action, Planning and Evaluation System). The investigators and staff were assisted by a consortium of university and non-governmental organizations across the country:

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This manual has been produced to facilitate the manipulation of the Public Use Microdata File of the survey results.

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PLEASE BECOME FAMILIAR WITH THE CONTENTS OF THIS DOCUMENT BEFORE PUBLISHING OR OTHERWISE RELEASING ANY ESTIMATES DERIVED FROM THE MICRODATA FILE OF THE 2006-07 YOUTH SMOKING SURVEY, ESPECIALLY WHEN USING THE SURVEY WEIGHTS.

2.0 Background

The Youth Smoking Survey (YSS) is a classroom-based survey of a representative sample of schools in the ten Canadian provinces. When first administered in 1994, it was the largest and most comprehensive survey on youth smoking behaviour since 1979. The YSS was repeated in 2002 and 2004 in order to track changes in the attitudes and behaviour of Canadian children and adolescents with respect to tobacco. Previously, YSS was only administered to students in grades 5 through 9. In the 2006-07 YSS, the survey was extended to include all secondary students in a province (i.e., grades 5 to 12 in most provinces and in Quebec, Primaire 5, 6 and Secondaire I to V).

The 2006-07 YSS was coordinated by Centre for Behavioural Research and Program Evaluation (CBRPE) and the SHAPES team (School Health Action, Planning and Evaluation System) at the University of Waterloo. Data were collected during the fall, winter, and spring of the 2006-07 school year.

The main objective of the YSS is to provide benchmark data on national prevalence rates for students in grades 5 through 12. In addition, it provides a unique opportunity to advance our knowledge of the psychosocial correlates of smoking behaviour, including initiation and cessation. Further, it can assist in exposing individual differences in the influence of tobacco marketing, purchasing controls, and other policy initiatives. YSS offers a detailed snapshot of purchasing behaviour, knowledge and awareness of warning labels, and information about the effect of continued tobacco marketing. 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.

Schools that participated in the YSS received a school-specific feedback report and executive summary within 8 to 10 weeks of data collection. This report provided valuable, customized information to the schools including the school smoking rate plus other behavioural and environmental information. Throughout the feedback report, we compared 2006-07 school results to provincial and national estimates based on the 2004-05 YSS.

Another unique aspect of the 2006-07 YSS was its collaboration with three other surveys: the *Healthy* New Brunswick *en santé* project, Project Impact, and the Canadian School Smoking Policy Survey.

YSS and *Healthy* New Brunswick *en santé* collaborated on data collection in that province. *Healthy* New Brunswick *en santé* sampled all students in grades 6 through 12 (grade 5 students only in YSS sampled schools) in the province. Administration of this survey was sponsored by the New Brunswick Department of Wellness, Culture, and Sport as part of the implementation of the NB Wellness Strategy. The 2006-07 YSS sample design included a total of 32 schools (with a target of obtaining 24 schools) in NB. The *Healthy* New Brunswick *en santé* Survey sampled an additional 171 elementary (middle) and secondary schools in New Brunswick. In all schools, students in eligible classes were randomly assigned to complete one of three separate modules: 1) Youth Smoking Survey; 2) Healthy Eating; or 3) Physical Activity. Staff at the Universities of Waterloo and of New Brunswick adapted YSS protocols, project materials, and the online database (Online Survey Implementation System [OSIS]) to accommodate seamless data collection in this province alongside the YSS. All YSS module data collected were incorporated to create a richer, more comprehensive YSS dataset for this province.

Likewise, the 2006-07 YSS collaborated with the CIHR-funded Project Impact headed by Dr. Chris Lovato, University of British Columbia. Project Impact collected data in five provinces. Nine schools were sampled in common between the two projects. YSS procedures were followed in all these schools. In addition, schools were asked to provide a copy of their written smoking policy. Participating schools received a customized school smoking policy feedback report.

Finally, the 2006-07 YSS collaborated with a School Smoking Policy survey, funded by the Canadian Tobacco Control Research Initiative (CTCRI) and headed by Dr. Chris Lovato, University of British Columbia. In this survey, the YSS sample overlapped completely with the School Smoking Policy sample. In addition to the usual YSS procedures, school administrators were asked to complete an online survey of their school smoking policy. Participating schools also received a customized school smoking policy feedback report.

3.0 Concepts and Definitions

Definitions of 1) currently smokes; 2) formerly smoked; and 3) non smoker are derived based on smoking questions contained in the student questionnaire. See section 6.3 (Creation of Derived Variables) for more detailed information about the derived variables reflecting these definitions. Definitions are consistent with those used in the 2004-05 YSS.

Currently smokes

Has smoked at least 100 cigarettes in his/her lifetime, and has smoked in the 30 days preceding the survey.

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.

Non 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 Survey Methodology

The 2006-07 Youth Smoking Survey (YSS) was administered to collect data from sampled public and private schools in Canada for children in grades 5 to 12 (Primaire 5, 6 and Secondaire I to V in Québec).

4.1 Population Coverage

All 10 provinces participated in this study. Sampling frames for each province began with a list of all schools in each of the provinces. This information was gathered from the Ministry of Education of each respective province. Each provincial sampling frame consisted of a range of information about each eligible school, including the school board name (alternately called school divisions and school districts[1]), city, address, and school enrolment numbers by grade.

The target population for the 2006-07 YSS consisted of all young Canadian residents attending private, public, and Catholic schools enrolled in grades 5 to 12 inclusively. Those residing in the Yukon, Nunavut and Northwest Territories and those living in institutions or on First Nations reserves were not included in the target population. Young persons who were attending special schools (e.g., schools for visually-impaired and hearing-impaired individuals) or who were attending schools located on military bases were also excluded from the target population.

4.2 Sample Design

The sampling of schools for the 2006-07 YSS was based on a stratified multistage design. Within each province, stratification was based on two classifications: 1) health region smoking rate (above or below median); and 2) type of school (elementary or secondary).

Stratum 1: Health Region

The school's six-digit postal code was used to identify its health region. From there, the smoking rates for 15-19 year olds in each health region were determined based on the Canadian Community Health Survey (CCHS) data. The CCHS sampled sufficient adults in each health region to allow for an estimate of the region's current smoking rate. Within each province, each school was assigned an estimate of the adult smoking rate from the CCHS for the school's public health region.

Next, the total eligible grade enrolments were used as a weight to compute the median smoking rate for each province by using the health region's smoking rate. Schools that were located in a health region with a smoking rate lower than the median smoking rate were assigned to the "low" smoking rate stratum. Similarly, schools located in a health region with

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

a smoking rate more than or equal to the median were assigned to the "high" smoking rate stratum. Table 1 reflects the distribution of schools by health stratum and province.

Table 1: Number of Participating and Non-Participating Schools by Health Stratum and Province, 2006-07 YSS

Province	Target # Schools	Health Stratum	# of Participating Schools	# of Schools Not Participating
NL	24	Low	9	1
		High	17	1
NS	24	Low	10	6
		High	11	6
PE	24	Low	8	3
		High	17	1
NB[1]	24	Low	74	12
		High	109	8
QC	54	Low	22	12
		High	25	5
ON	54	Low	21	23
		High	27	15
MB	24	Low	11	1
		High	16	2
SK	24	Low	8	3
		High	16	2
AB	36	Low	11	3
		High	19	9
BC	36	Low	8	16
		High	28	36
Canada	**324**		**467**	**165**

[1] Please note that the target number of schools for New Brunswick was 24 but the combined number of participating and not-participating schools was much greater than this target. The target of 24 schools reported here relates to YSS sample only. The number of participating schools and not-participating schools for New Brunswick includes both the YSS and the *Healthy* New Brunswick *en santé* schools (described on pages 2-3 of this report).

Stratum 2: School Type

The second set of strata was created to differentiate between elementary schools and high schools. While this may sound simple, in reality, a variety of grade distributions occur in schools. Therefore, we established the following procedures. If the total enrolment of grades 5 to 8 students was greater than or equal to the total enrolment of students in grades 9 to 12, the school was assigned to the elementary school stratum. Similarly, if the total enrolment of students in grades 9 to 12 was greater than the total enrolment of students in grades 5 to 8, then the school was assigned to the secondary school stratum. Table 2 reflects the distribution of schools by school stratum and province.

Table 2: Number of Participating and Non-Participating Schools by School Stratum and Province, 2006-07 YSS

Province	Target # Schools	School Stratum	# of Participating Schools	# of Schools Not Participating
NL	24	Elementary	18	1
		Secondary	8	1
NS	24	Elementary	13	6
		Secondary	8	6
PEI	24	Elementary	18	3
		Secondary	7	1
NB1	24	Elementary	125	13
		Secondary	58	7
QC	54	Elementary	36	11
		Secondary	11	6
ON	54	Elementary	32	24
		Secondary	16	14
MB	24	Elementary	19	1
		Secondary	8	2
SK	24	Elementary	16	3
		Secondary	8	2
AB	36	Elementary	18	7
		Secondary	12	5
BC	36	Elementary	29	31
		Secondary	7	21
Canada	**324**		**467**	**165**

[1] The target of 24 schools reported here relates to YSS sample only. The number of participating schools and refused schools for New Brunswick includes both the YSS and the *Healthy New Brunswick en santé* schools.

4.3 Sample Selection

Thus, within each provincial sampling frame, four school strata were created by crossing the health region strata ("low" and "high") and the two grade-level strata ("elementary" and "secondary"). Within each stratum, in each province, schools were randomly selected with probabilities proportional to the total enrolment in their boards. In an effort to reach our targets, we over-sampled schools in each province based on the provincial school recruitment rate from the 2004-05 YSS to accommodate school refusals in 2006-07. Based on the 2004-05 recruitment rate in British Columbia (BC), we raised our target by an additional 32 schools; however, BC collaborators requested that we add another 24 schools, resulting in a total of 56 additional schools sampled in this province.

Table 3 shows, by province, the target number of schools, the number of additional schools over-sampled based on the 2004-05 recruitment rate, and the final number of

schools in the sample at the outset of the project. Note that some schools were eliminated even before recruitment began. Explanation of exclusions and/or inclusions is provided in the notes below Table 3.

Table 3: Total Number of Schools Sampled, by Province, 2006-07 YSS

Province	Target # schools 06/07	School recruitment rate 04/05	# (%) Over-sampled 06/07	# of Schools added by request	Sample at project outset
NL	24	100%	4 (0%)[1]	0	28
NS	24	77%	8 (30%)	0	32
PE	24	96%	3 (0%)[2]	0	27
NB	24	71%	8 (30%)	171[3]	203
QC	54	60%	28 (40%)	0	82
ON	54	39%	32 (60%)	0	85[4]
MB	24	88%	8 (20%)	0	32
SK	24	69%	8 (35%)	0	32
AB	36	50%	20 (55%)	0	54[5]
BC	36	27%	32 (85%)	24[6]	92
Canada	**324**	**55%**	**151 (54%)**	**195**	**667**

[1] Although NL had 100% response rate in 04/05, we provided 4 additional schools (1 from each stratum) to their sample list to accommodate refusals in 06/07.
[2] PEI was originally not over-sampled. However, we decided to add an additional 3 schools (1 from each stratum - note there were no schools to select from for the 4th stratum [low smoking rate, secondary school stratum]) to the sample list to accommodate refusals in 06/07.
[3] An additional 171 schools were added to the sample as part of the *Healthy* New Brunswick *en santé* initiative. For a description, please see the "Background" section of this report (pages 2-3).
[4] One school was eliminated after sampling because the school was identified as an alternative school.
[5] Two schools were eliminated after sampling because they were identified as schools for the learning disabled.
[6] The additional 24 schools were part of the sampling for selecting 92 schools for BC.

Selection of Private and Independent Schools

Within each province, lists of private schools were obtained. A simple random sample of private schools was selected in each province from these lists. The number of schools originally selected was roughly proportional to the number of students enrolled in private schools in that province as compared to the total in public schools.

Selection of Students

Within each selected school, all students in the survey grades (5-12) were eligible for participation. Consent procedures are described in Section 5.4.

5.0 Data Collection

Data collection was conducted from November 2006 to June 2007 with school board recruitment beginning in one province (ON) as early as August 2006. Students were surveyed in their classrooms.

5.1 Questionnaire Design

Several key considerations guided the design of the student questionnaire:

- **Comparability** - the basis of the questionnaire was the 2002 and 2004-05 YSS with most items unchanged to allow for comparisons with the 2004-05, 2002 and 1994 data;
- **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 by a content team;
- **Relevancy** - to ensure value-added for participating schools, items were added significance to schools in order to enhance school-level feedback reports; and,
- **Feasibility** - to meet the criterion of being able to complete the survey in one class period, there was a key consideration to restrict length.

The 2006-07 YSS student questionnaires were adapted from the 2002 and 2004-05 YSS surveys. A Content Committee had participation from Research, Surveillance and Evaluation in the Tobacco Control Programme of Health Canada, interested provincial collaborators and persons with responsibility for evaluation of provincial tobacco control strategies. The questionnaire was finalized through a series of reviews and meetings. Appendix B provides information about questions that have been asked in all the survey years (1994, 2002, 2004, 2006) and those that have been asked in only certain survey years (e.g., 2004 and 2006).

In the 2006-07 YSS, the student survey data were collected using three instruments:

- **Module A** was administered to students in grades 5 and 6. This instrument contained 66 questions that were deemed relevant to students in these grade levels. Module A did not include drug and alcohol questions.
- **Module B1** was administered to students in grades 7 through 12. This instrument contained 76 questions including some new questions, some questions from Module A and drug and alcohol questions.
- **Module B2** was administered to students in grades 7 through 12. This instrument contained 84 questions including some new questions, some questions from Module A and drug and alcohol questions.

Procedures were common in all provinces except New Brunswick (see NB specific procedures below). All grades 5 and 6 students completed Module A. Grades 7-12 students (in Québec Secondaire I-V) completed either the B1 or B2 module (not both). Within a class, 50% of students were randomly selected to receive B1 and the other 50% received B2. Surveys were collated (i.e. alternating B1 and B2 modules) in advance and shipped to each provincial site.

In New Brunswick, YSS collaborated with the Health and Education Research Group (Dr. Bill Morrison) and the Departments of Wellness, Culture and Sport and of Education on a survey supporting the *Healthy* New Brunswick *en santé* project. This initiative collected data on smoking (YSS), healthy eating (HE), physical activity (PA), and mental fitness (MF).

Thus in New Brunswick, grades 5 and 6 students completed one of three modules (A, PA, HE). Grades 7-12 students completed one of four modules (B1, B2, PA, HE)[2]. Within each class in grades 5 and 6, and using the method described above, 50% of students completed Module A, 25% of students completed Module PA, and the rest of the students (25%) completed Module HE. Similarly, within each class in grades 7-12, 25% of students completed Module B1, 25% of students completed Module B2, 25% of students completed Module PA and 25% of students completed Module HE.

5.2 Pilot Testing

In August 2006, SHAPES staff implemented a pilot test of the student questionnaire and the protocols for data collection. As part of the pilot, students were asked to complete the questionnaire according to normal protocols, as well as provide feedback on any questionnaire items they found difficult to answer or did not understand. Three focus groups were held with a small group of students in order to explore reactions to the survey in more depth. The school contact and teachers also provided feedback. As a result of the pilot test, refinements were made to six questions (e.g., rewording, additional response options added) and to the explanatory text (e.g., definitions added, assurances of confidentiality repeated).

All project materials (including questionnaires) were translated into French for the 2006-07 YSS. French documents, including French surveys, were used in four provinces: New Brunswick, Ontario, Québec and Alberta. With the exception of New Brunswick, translation of all materials was conducted by *Services D'Édition Guy Connolly* and certain documents were reviewed by Québec project staff.

[2] Note that the HE and PA surveys contained YSS smoking behaviour questions and mental fitness questions. A collaborative decision was made to exclude all data from the PA and HE modules from the YSS datasets including the smoking variables.

5.3 Recruitment of Schools

The process of school recruitment started by sending project information letters to all provincial Ministries of Education and Health across the country to inform them of the planned Youth Smoking Survey in the upcoming (2006-07) school year. In return, several Deputy Ministers of Education and Health returned letters of support providing information on the importance of the YSS and describing how the survey "fits" within their mandate. When available, these support letters were used as a part of the recruitment package for schools and boards within the province.

In all provinces, staff approached school boards prior to contact with schools. Private schools were approached directly, as there was often no school board. School boards were typically contacted via a formal application (if applicable) or a board recruitment package and phone calls. Once a school board was successfully recruited, the schools within that school board were approached via a school recruitment package and phone calls. An invitation letter, a project summary, sample questionnaires, sample consent letters and forms, and a template feedback report were included in the standard recruitment package for both boards and schools. In addition, many boards and schools had formal application forms and procedures. Educators also had access to materials through the web (www.yss.uwaterloo.ca).

5.4 Recruitment of Students

Active Permission

Schools with elementary grades (e.g., grades 5-6) and in some cases high schools (based on school or board request) obtained signed parental permission for students to participate in the survey (i.e., active parental permission). For active permission an information letter and permission form were sent home with students. Parent information letters provided details about the project, contact information for project staff and referral to the website for further details including 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 resend permission materials, conduct phone follow-up to parents, and/or provide verbal or written reminders to students. Only those students whose parents indicated "yes" to participation on the student 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 that contained only secondary grades (e.g., 9-12 in ON, 8-12 in BC, and Secondaire I-V in QC), active information-passive permission procedures were used. In these schools, school staff sent information-permission letters to the student's home address. This letter provided detailed information about the student survey and requested parents to call a toll-free number or inform the school if they did not want their child to participate. If no call, email or letter was received, it was assumed that parents passively

provided permission for their child to participate. All students except those whose name appeared on the no-permission list received a survey on data collection day.

5.5 Data Collection Protocols

Ethics Review

Prior to implementation, the University of Waterloo Human Research Ethics Committee approved all protocols and materials. Local institutional review boards affiliated with the institutions of consortium members also reviewed the project at the provincial level where applicable (i.e., where collaborators were affiliated with universities). All methods received ethics approval by the appropriate institutions (e.g., in some cases, from three levels: the University of Waterloo, provincial host institution, and school board).

Each provincial collaborator hired a site coordinator to be responsible for school board and school recruitment, data collection preparation and implementation. Site coordinators attended a two-day training session, participated in additional web-based training sessions, received a comprehensive manual and had ready access to the Student Data Collection Coordinator for advice regarding day-to-day issues. Materials, an online database and protocols were centrally developed to ensure consistency across provinces. The online database permitted central coordinators to monitor progress and alignment with protocols.

Provincial site coordinators took responsibility for all board and school recruitment. Site coordinators worked with a school contact to arrange data collection at each school. School contacts were asked to provide a list of classes for the eligible grades that included: teacher name, course name and/or the classroom number, grade, room number (*optional)*, and the number of students enrolled. Staff used this information to prepare consent materials and entered it along with other school particulars (e.g., address, data collection date, etc.) into an online database. Upon receipt of consent materials, student information was entered into this database and questionnaire IDs were assigned. Questionnaires were bundled by classroom and couriered to the school contact for distribution to classroom teachers 1 to 2 days prior to the data collection date.

On the data collection date, teachers administered the survey according to detailed instructions, during a designated class period. On average, the survey took 30 to 40 minutes to complete. To protect confidentiality, teachers were asked not to circulate among the students. Students were also required to place their completed survey in an envelope and to seal this envelope before it was collected by the classroom teacher. Individual envelopes containing the completed student questionnaire were placed in a large classroom envelope.

A project staff member (site coordinator or data collector) attended each school data collection. The staff member set up a station in front of the school office or another central location. The data collector was available to answer questions and receive classroom envelopes 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 SHAPES team at the University of Waterloo.

5.6 Sample Size

The following tables provide recruitment outcomes by school board (Table 4) and school (Table 5). Table 6 provides the total number of students who completed the survey.

Table 4: Board Recruitment Outcomes by Province, 2006-07 YSS

Province	Board Recruitment Outcome			
	Approached	Agreed	Refused	Response rate
NL	4	4	0	100.0
NS	7	7	0	100.0
PEI	2	2	0	100.0
NB	14	14	0	100.0
QC	36	30	6	83.3
ON	34	28	6	82.4
MB	13	12	1	92.3
SK	17	16	1	94.1
AB	30	22	8	73.3
BC	41	25	16	61.0
Canada	**198**	**160**	**38**	**80.8**

Table 5: School Recruitment Outcomes by Province, 2006-07 YSS

Province	School Recruitment Outcome			
	Approached	Agreed	Refused	Response rate
NL	28	26	2	92.9
NS	33	21	12	63.6
PEI	29	25	4	86.2
NB	203	183	20	90.1
QC	64	47	17	73.4
ON	86	48	38	55.8
MB	30	27	3	90.0
SK	29	24	5	82.8
AB	42	30	12	71.4
BC	88	36	52	40.9
Canada	**632**	**467**	**165**	**73.9**

Table 6: Participating Students by Province and Grade, 2006-07 YSS

Province	Number of Students Participating, by Grade								
	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	Total
NL	532	515	275	192	191	545	528	487	3265
NS	400	483	337	202	476	919	887	672	4376
PE	470	524	400	436	450	874	877	831	4862
NB	823	1863	1676	1691	3721	3393	3356	2882	19405
QC	898	1016	2815	2938	1815	1808	1673	0	12963
ON	773	559	658	626	2180	2061	1969	2036	10862
MB	354	451	492	456	794	862	638	494	4541
SK	374	463	393	410	249	224	187	168	2468
AB	498	523	462	404	258	255	246	200	2846
BC	508	623	790	814	429	815	808	628	5415
Canada	**5630**	**7020**	**8298**	**8169**	**10563**	**11756**	**11169**	**8398**	**71003**

6.0 Data Processing

The main output of the Youth Smoking Survey (YSS) is a microdata file. This chapter presents a brief summary of the processing steps involved in producing this file.

6.1 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 scan data. First, 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 the same time, they separated the perforated questionnaire booklets and oriented them in preparation for the OMR scan. Second, staff inserted "standard surveys" to ensure that the calibration of the scanner remained constant.

Visual scanning aspects of survey processing ensure that the data on the surveys are correctly recorded by the electronic scanner. In the course of visually scanning a survey, a human scanner could "correct" a survey in a variety of ways, including: darkening marks that needed to be read by the electronic scanner but might have originally been drawn too lightly; 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); erasing marks made in any places reserved for "office use only"; and correcting answers on two-part questions where two different responses were given for the same question (i.e., for the number of times cigarettes were smoked / number of whole cigarettes smoked in the past 7 days).

All bundles of questionnaires were scanned twice and discrepancies were investigated. Staff were trained to make decisions according to strict criteria. For example, they had to distinguish between true uncodeable responses, not to be corrected (e.g., where the respondent chose two answers) and those which were machine errors that were to be corrected (e.g., where the respondent erased one mark and chose another answer, but the scanner picked up the erased mark as well). On average, between 10% and 15% of all surveys had one or more responses altered due to the visual scanning process. Due to these screening procedures, all invalid responses were corrected prior to data capture by the scanner. Logbooks and a quality control record were kept to track the number of corrections made and to monitor the progress of merging files to create a school-level file.

6.2 Editing and Imputation

The following standard codes were used in the microdata file:

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

Prior to data cleaning, the 2006-07 YSS student dataset contained 71,034 records. Questionnaires were scanned twice and duplicate files were removed. Two surveys that indicated students were not in grades 5-12 were removed from the data set, resulting in 71,032 eligible records. Twenty grade 6 students were removed from the dataset because they were listed as having passive consent. An additional 9 students were removed from the dataset where the student was the only participating individual from a certain grade in a certain school. The final number of records is 71,003. Québec grades Secondaire I, II, III, IV, and V were converted to grades 7, 8, 9, 10, and 11 respectively.

The following items required specific editing and/or imputation:

Grade

During the processes of determining permission form return rates and consent rates, we noted that several students indicated a grade on the survey that was inconsistent with the grades represented in the school. If a student indicated a grade that did not match the relevant grades in the school, the variable was recoded to the median grade of the class to which the student belonged if the class was known. If grade was missing, uncodeable, or improper for the province, then the student's grade was found from another source. For those students with active permission, the primary source was the student permission form. This form, which included a grade field, was completed by the parent or the student and then signed by the parent. The secondary source used to determine student grade was the student's class identification number. If multiple grades were listed in these fields then the first grade listed was used. If neither of the above methods was possible and the student's age was provided, then age was used to impute the grade.

Gender

As with a missing grade, if the student's gender was either missing or uncodeable, then gender was found from the student consent form (for students in active consent schools). The secondary source was the student's name. If the name was unclear for gender, then gender was left missing. Remaining missing data for gender were left as found for the user to decide how to treat these data.

Age-related Variables

If age-related variables 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 given a value of 99= Not Stated.

The variable GCANADA1, "How many years have you lived in Canada?" has several options including "11 or more years". Approximately one-hundred nine- and ten-year-olds chose this response option. We decided to leave these answers as they are since different users may have different ideas of how they will want to treat these variables.

Question 29 (B1 module) and Question 29 (B2 module)

These questions ask how many times cigarettes were smoked (B1 module) or how many whole cigarettes were smoked (B2 module) 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, Not Asked and Not Stated responses were set to 96, 9996 and 99 as in other variables.

Module

The variable MODULE was created to denote the appropriate module. The following lists the various modules and code assigned to each module.

Questionnaire Module	Code	Questionnaire Module	Code
Module A, English	1	Module A, French	2
Module B1, English	3	Module B1, French	4
Module B2, English	5	Module B2, French	6

- Module A completed by Grades 5, 6
- Modules B1 and B2 completed by Grades 7-12 (or equivalent)
- All grades 5 and 6 students who filled out a Module B1 or a Module B2 survey were given a 9996 = Not Asked for the questions that were not asked in Module A surveys. These records were given the value MODULE = 1 (i.e., Module A, English) or MODULE = 2 (i.e., Module A, French).
- All grades 5 and 6 students who filled out a Module B1 were given a 99 = Not Stated for the questions that only appear in Modules A and B2. All grades 5 and 6 students who filled out a Module B2 were given a 99 = Not Stated for the questions that only appear in Modules A and B1.
- All grades 7 to 12 students who filled out a Module A were given a 99 = Not Stated for all questions in both Module B1 and Module B2, but not Module A. These records were given the value MODULE = 3 (i.e., Module B1, English) or MODULE = 4 (i.e., Module B1, French). Therefore, respondents were given 9996 = Not Asked for all questions in Modules A and B2, and 99 = Not Stated for all questions in Module B1.

Inconsistencies

The YSS survey was intentionally designed with no respondent-use skip patterns to avoid the identification of smokers by rate of survey completion during the classroom session. However, due to the logical flow of the questions, a number of questions were extraneous based on the answer to a previous question. In these cases, a skip pattern was imposed onto the data set. There are other instances, where inconsistencies in student response were present. In order to be consistent with the 2002 YSS dataset released by Statistics Canada, the responses as recorded by the student have been provided. Note, however, 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 seven days" and in another question, the same student responded "I have not smoked in the last 30 days." These types of inconsistencies were left in the data set for the user to decide how best to handle the case.

6.3 Creation of Derived Variables

A number of variables in the microdata file were derived by combining items on the questionnaire in order to facilitate data analysis. Examples of derived variables include the average number of whole cigarettes smoked daily and the number of whole cigarettes the respondent had smoked.

Main Data Set Derived Variables

Derived Variable	**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 a person who reports having smoked 100 cigarettes and has smoked in the past 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 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 <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)
	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 <u>whole</u> cigarettes in your life*? Valid response 2 (No) OR

Derived Variable	DVTY1ST		
			SWHOLEA1: Have you ever smoked a whole cigarette? Valid responses 2 (No) 96 (Valid Skip)

Derived Variable	DVTY2ST		
Response Options for DVTY2ST	1 = Current Daily Smoker 2 = Current Occasional Smoker 3 = Former Daily Smoker 4 = Former Occasional Smoker 5 = Experimental Smoker (Beginner) 6 = Past Experimental Smoker 7 = Puffer 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 <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 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 <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 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 seven days *in* a row but 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 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 seven 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 ever 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 ever tried cigarette smoking, even just a few puffs?* Valid response 2 (No)

Derived Variable	**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</u> smoking 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 questions, choose the answer that describes how you feel about the statement.* OHOWFLA1: *In general, I like the way I am.* OHOWFLB1: *When I do something, I do it well.* OHOWFLC1: *I like the way I look.*	1 = True 2 = Mostly true 3 = Sometimes true / Sometimes false 4 = Mostly false 5 = False
	Scale recoded as:	0 = False 1 = Mostly false 2 = Sometimes false / Sometimes true 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.	

Supplemental Data Set Derived Variables

The following three supplemental derived variables use the following questions from the B1 module.

Question	Variable Name	Response Options
Think back over the last 7 days. Find yesterday on the wheel and fill in the number of times you smoked cigarettes. Then follow the wheel backwards and fill in the number of times you smoked cigarettes on each of the last 7 days.		
a) Sunday	SLAST7B2	0 = 0 times cigarettes were smoked
b) Monday	SLAST7C2	1 : 36 times cigarettes were smoked
c) Tuesday	SLAST7D2	96 = Valid Skip
d) Wednesday	SLAST7E2	9996 = Not Asked
e) Thursday	SLAST7F2	99 = Not Stated
f) Friday	SLAST7G2	
g) Saturday	SLAST7H2	

Coverage: Respondents of the B1 module survey where SPUFF0A1=1 (Puffer)

Derived Variable	DVCIGWK1
Definition	Total number of times cigarettes were smoked in the 7 days prior to the survey.
Calculation of Responses for DVCIGWK1	SLAST7B2 + SLAST7C2 + SLAST7D2 + SLAST7E2 + SLAST7F2 + SLAST7G2 + SLAST7H2
Notes	• Not necessary for all component variables to have valid responses for derived variable to have valid response. • Zero value on a component variable has been treated as a valid response. • If all days have missing data then DVCIGWK1 = 999.

Derived Variable	DVNDSMK1
Definition	Number of days on which respondent smoked at least 1 time in the week prior to the survey.
Calculation of Responses for DVNDSMK1	A count of SLAST7B2, SLAST7C2, SLAST7D2, SLAST7E2, SLAST7F2, SLAST7G2, and SLAST7H2 excluding days with a missing or zero response.
Notes	• Zero has been treated as a valid response. • If all days have missing data then DVNDSMK1 = 999.

Derived Variable	DAVCIGD1
Definition	Average number of times cigarettes were smoked on the days that the respondent smoked.
Calculation of Responses for DAVCIGDI	$\frac{\text{DVCIGWK1}}{\text{DVNDSMK1}}$
Notes	• If DVCIGWK1 and DVNDSMK1 were both zero responses then DAVCIGD1 = 0. • If either DVCIGWK1 or DVNDSMK1 were missing then DAVCIGD1 = 99.

The following five supplemental derived variables use the following questions from the B2 module.

Question	Variable Name	Response Options
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	SLAST7B3	0 = 0 whole cigarettes
b) Monday	SLAST7C3	smoked
c) Tuesday	SLAST7D3	1 : 36 whole cigarettes
d) Wednesday	SLAST7E3	smoked
e) Thursday	SLAST7F3	96 = Valid Skip
f) Friday	SLAST7G3	9996 = Not Asked
g) Saturday	SLAST7H3	99 = Not Stated

Coverage: Respondents of the B2 module survey where SWHOLEA1=1 (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	$\frac{\text{SLAST7B3 + SLAST7C3 + SLAST7D3 + SLAST7E3 + SLAST7F3 + SLAST7G3 + SLAST7H3}}{7}$
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	DVCIGWK2
Definition	Total number of whole cigarettes smoked in the 7 days prior to the survey.
Calculation of Responses for DVCIGWK2	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 DVCIGWK2 = 999.

Derived Variable	DVNDSMK2
Definition	Number of days on which respondent smoked at least 1 whole cigarette in the week prior to the survey.
Calculation of Responses for DVNDSMK2	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 DVNDSMK2 = 99.

Derived Variable	DAVCIGD2
Definition	Average number of whole cigarettes smoked on the days that the respondent smoked.
Calculation of Responses for DAVCIGD2	$\frac{\text{DVCIGWK2}}{\text{DVNDSMK2}}$
Notes	• If DVCIGWK2 and DVNDSMK2 were both zero responses then DAVCIGD2 = 0. • If either DVCIGWK2 or DVNDSMK2 were missing then DAVCIGD2 = 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

6.4 Skip Patterns

The youth questionnaire was intentionally designed with no respondent-use skip patterns to avoid the identification of smokers by rate of survey completion during the classroom session. 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 a question could have been skipped, if this were allowable within the structure of the questionnaire, it was coded as 96 or 996 or 9996. The following explains each question that has a 96 or a 996 code and the logical reasoning for coding the question in that way. The code 9996 has only been used to identify those individuals who have not completed either module B1 or B2 variables.

Note that the module distribution corresponds to grade - for example, grades 5 to 6 received a Module A questionnaire and grades 7 to 12 received either a B1 or B2 Module questionnaire. The variables listed as "Modules B1 and B2" were only intended for respondents in grades 7 to 12.

Skip Patterns for Variables in Modules A, B1 and B2

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?*
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?*

Variable	Question	Valid Condition(s) if Respondent:	Skip Condition (Variable coded 96 [or 996])
SLAST7B1	*How old were you when you first smoked every day for at least 7 days in a row?*	Had smoked every day for at least 7 days	If SLAST7A1=2 (NO) or 96 (Valid skip) *Have you ever smoked every day for at least 7 days in a row?*
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?*
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?*
SBRNDUA1	*What brand of cigarettes do you usually smoke?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs?*
SBRNDYC1 to SBRNDYL1	*Why do you smoke the brand of cigarettes that you do?*	Had a usual brand	If SBRNDUA1 = 1 (I do not smoke), 2 (I do not have a regular brand), 96 (Valid Skip) or 99 (Not Stated) *What brand of cigarettes do you usually smoke?*
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?*
SEVRQTA1	*Have you ever tried to quit smoking cigarettes?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs?*
SSURQTA1	*Do you think you would be able to quit smoking cigarettes if you wanted to?*	Had smoked in the last 30 days	If SLST30A1 = 1 (None) or 96 (Valid Skip) *On how many of the last 30 days did you smoke one or more cigarettes?*
SHRULSC1	*Do you ever smoke inside your home?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs?*
DSUSCEPT	*Susceptible to smoking (See derived variables for items contributing to variable)*	Had not tried smoking	If SPUFF0A1 = 1 (YES) *Have you ever tried cigarette smoking, even just a few puffs?*

Skip Patterns for Variables in Modules A and B1

Variable	Questions	Valid Condition if Respondent:	Skip Condition (Variable coded 9996)
VARIABLES LISTED AS MODULES A AND B1	*All variables appearing only in Modules A and B1*	Completed Module A or B1	If MODULE = 5 or 6 (MODULE B2 ENGLISH / MODULE B2 FRENCH)

Skip Patterns for Variables in Modules A and B2

Variable	Questions	Valid Condition if Respondent:	Skip Condition (Variable coded 96 or 996 or 9996)
VARIABLES LISTED AS MODULES A AND B2	*All variables appearing only in Modules A and B2*	Completed Module A or B2	If MODULE = 3 or 4 (MODULE B1 ENGLISH / MODULE B1 FRENCH)
SLST12A1	*In the last 12 months, how often did you smoke?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs?*
SPLACEA1 to SPLACEI1	*How often do you smoke tobacco in each of the following places?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs?*
STIMESA1 to STIMESE1	*How often do you smoke tobacco at the following times?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs?*
SPEOPLA1 to SPEOPLD1	*How often do you smoke tobacco with the following people?*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs?*

Skip Patterns for Variables in Modules B1 and B2

Variable	Questions	Valid Condition if Respondent:	Skip Condition (Variable coded 96 or 996 or 9996)
VARIABLES LISTED AS MODULES B1 AND B2	*All variables appearing only in Modules B1 and B2*	Completed Module B1 or B2	If MODULE = 1 or 2 (MODULE A ENGLISH / MODULE A FRENCH)
AEVRETB1	*How old were you when you first had a drink of alcohol that is more than a sip?*	Had tried alcohol	If AEVRETA1 = 2 (NO) or 99 (Not Stated) *Have you ever had a drink of alcohol that is more than a sip?*
AOFTETA1	*In the last 12 months, how often did you drink alcohol?*	Had tried alcohol	If AEVRETA1 = 2 (NO) or 99 (Not Stated) *Have you ever had a drink of alcohol that is more than a sip?*
A5DRNKA1	*Have you ever had 5 drinks or more of alcohol on one occasion?*	Had tried alcohol	If AEVRETA1 = 2 (NO) or 99 (Not Stated) *Have you ever had a drink of alcohol that is more than a sip?*

Variable	Questions	Valid Condition if Respondent:	Skip Condition (Variable coded 96 or 996 or 9996)
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 A5DRNKA1 = 2 (NO), 96 (Valid Skip) or 99 (Not Stated) *Have you ever had 5 drinks or more of alcohol on one occasion?*
A5DRNKC1	*In the last 12 months, how often did you have 5 drinks of alcohol or more on one occasion?*	Had 5 drinks or more on one occasion	If A5DRNKA1 = 2 (NO), 96 (Valid Skip) or 99 (Not Stated) *Have you ever had 5 drinks or more of alcohol on one occasion?*
AEVRMJB1	*How old were you when you first used marijuana or cannabis?*	Had tried marijuana	If AEVRMJA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried marijuana or cannabis?*
AOFTMJA1	*In the last 12 months, how often did you use marijuana or cannabis?*	Had tried marijuana	If AEVRMJA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried marijuana or cannabis?*
AMIGHTA1	*Do you think in the future you might try marijuana or cannabis?*	Had not tried marijuana	If AEVRMJA1 = 1 (YES) or 99 (Not Stated) *Have you ever used or tried marijuana or cannabis?*
AUAMPHB1	*How old were you when you first used or tried amphetamines?*	Had tried amphetamines	If AUAMPHA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried amphetamines?*
AUMDMAB1	*How old were you when you first used or tried MDMA?*	Had tried MDMA	If AUMDMAA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried MDMA?*
AUHALUB1	*How old were you when you first used or tried hallucinogens?*	Had tried hallucinogens	If AUHALUA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried hallucinogens?*
AUDACSB1	*How old were you when you first used or tried DACS?*	Had tried DACS	If AUDACSA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried DACS?*
AUHEROB1	*How old were you when you first used or tried heroin?*	Had tried heroin	If AUHEROA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried heroin?*
AUCOCNB1	*How old were you when you first used or tried cocaine?*	Had tried cocaine	If AUCOCNA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried cocaine?*
AUSTERB1	*How old were you when you first used or tried steroids?*	Had tried steroids	If AUSTERA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried steroids?*
AUSOLVB1	*How old were you when you first used or tried this: sniffed glue, gasoline or other products (solvents) to get high?*	Had sniffed glue, gasoline or other products (solvents) to get high	If AUSOLVA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried this: sniffed glue, gasoline or other products (solvents) to get high?*

Variable	Questions	Valid Condition if Respondent:	Skip Condition (Variable coded 96 or 996 or 9996)
AUMEDSB1	*How old were you when you first used or tried medication like Ritalin NOT for medical purposes?*	Had tried medication like Ritalin NOT for medical purposes	If AUMEDSA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried medication like Ritalin NOT for medical purposes?*
AUPAINB1	*How old were you when you first used or tried painkillers to get high and NOT for medical purposes?*	Had tried painkillers to get high	If AUPAINA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried painkillers to get high and NOT for medical purposes?*
AUNATRB1	*How old were you when you first used or tried any other medications or natural health products to get high and NOT for medical purposes?*	Had tried other medications or natural health products to get high	If AUNATRA1 = 2 (NO) or 99 (Not Stated) *Have you ever used or tried any other medications or natural health products to get high and NOT for medical purposes?*

Skip Patterns for Variables in Module B1 only

Variable	Questions	Valid Condition if Respondent:	Skip Condition (Variable coded 96 or 996 or 9996)
VARIABLES LISTED AS MODULES B1 ONLY	*All variables appearing only in Module B1*	Completed Module B1	If MODULE = 1, 2, 5, or 6 (MODULE A ENGLISH, MODULE A FRENCH, MODULE B2 ENGLISH, or MODULE B2 FRENCH)
SLAST7A2 to SLAST7H2	*Think back over the last 7 days. Fill in the number of times you smoked cigarettes on each of the last 7 days.*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs?*
DVCIGWK1	*Total number of times cigarettes were smoked in the past 7 days prior to the survey.*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs?*
DVNDSMK1	*Number of days on which respondent smoked at least one time in the week prior to the survey.*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs?*
DAVCIGD1	*Average number of times cigarettes were smoked on the days that the respondent smoked.*	Had tried smoking	If SPUFF0A1 = 2 (NO) *Have you ever tried cigarette smoking, even just a few puffs?*

Skip Patterns for Variables in Module B2 only

Variable	Questions	Valid Condition if Respondent:	Skip Condition (Variable coded 96 or 996 or 9996)
VARIABLES LISTED AS MODULES B2 ONLY	*All variables appearing only in Module B2*	Completed Module B2	If MODULE = 1, 2, 3, or 4 (MODULE A ENGLISH, MODULE A FRENCH, MODULE B1 ENGLISH, or MODULE B1 FRENCH)
SLAST7A3 to SLAST7H3	*Think back over the last 7 days. 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?*
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?*
DVCIGWK2	*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?*
DVNDSMK2	*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?*
DAVCIGD2	*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?*

6.5 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. This is not the case for complex survey designs such as the method used with YSS. In complex survey designs, sample data must be multiplied by the appropriate weights. This survey weight appears on the microdata file and must 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_1) was created to account for the school selection within health region and school strata. A second weight (W_2) was calculated to adjust for student non-response. Finally, 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, page 34) were generated to attach to the data file.

Stage 1: Calculation of w_1

For all the provinces, all the schools in a given province were divided into four strata based on their grade levels and health region adult smoking rates as described earlier. Within each stratum, in each province, schools were randomly selected with probability proportional to the total enrolment in their boards. For school *j*, w_1 has been computed as

$$w_1 = 1/\pi_{j1}$$

where π_{j1} is the probability of inclusion for school *j* at stage 1, and where

$$\pi_{j1} = \ell M_j \Big/ \sum_{j=1}^{L} M_j$$

in this expression, M_j = total enrolment for the board of school *j*

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

L = Total number of schools in the stratum.

Table 7 below summarizes the number of schools participating per stratum.

Table 7: Number of Schools Participating by Province and Stratum, 2006-07 YSS

Province	Stratum		Total
	1 (Elementary)	2 (Secondary)	
NL	18	8	26
NS	13	8	21
PEI	18	7	25
NB	125	58	283
QC	36	11	47
ON	32	16	48
MB	19	8	27
SK	16	8	24
AB	18	12	30
BC	29	7	36
Canada	**324**	**143**	**467**

Stage 2: Calculation of w_2

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

$$\pi_{j2} = \frac{n_j(g)}{N_j(g)}$$

where

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

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

Hence $w_2 = 1/\pi_{j2}$

Stage 3: Un-calibrated Final Weight

The final un-calibrated weight is based on

$$w = MAIN\_WT = (w_1 * w_2)$$

Stage 4: Calibration of Survey Weights

The weights described above were then calibrated using school administrative datasets that include the total student enrolment by gender and grade (grades 5 through 12) for each province. 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 variables were designated as MAIN_WT.

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 was 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).[3]

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

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

The formula for the weight adjustment is obtained as follows. Let w_{ij} be the smoothed calibrated main weight for student *j* in school *i*.

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

Let $\lambda_{1i} = \sqrt{\frac{n_i}{n_i - 1}(1 - \frac{n_i}{N_i})}$ where N_i is the number of schools in a given stratum and n_i is the number of schools actually selected in that stratum.

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

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

6.6 Use of Survey Weights

Cautions

The survey weight (w) just described above is considered the MAIN_WT and is relevant to those variables that appeared in all three survey modules (A, B1, and B2). For those variables that appeared only in certain survey modules (B1 or B2), a second survey weight (SUPP_WT) variable was created. Due to this distinction between the two survey weights, the dataset was divided in two parts. The first set of data is known as the "MAIN" dataset and includes only those variables that have been asked in all three modules A, B1, and B2. The second set of data contains two sets of weights (MAIN_WT and SUPP_WT) and is known as the "SUPPLEMENTAL" dataset that includes all the variables. Users of the "MAIN" dataset will need to use MAIN_WT to perform all analyses.

Anyone using the SUPPLEMENTAL dataset MUST read the additional documents that have been provided with the second dataset before using the two sets of survey weights (see **2006-07 Youth Smoking Survey: Guide for Use of Supplemental Data Set**).

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.** 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 3,264,160, which represents all the students in Canada (grades 5-12) instead of 71,003, 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 (as explained earlier) 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:

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

6.7 Suppression of Confidential Information

It should be noted that the Public Use Microdata Files (PUMF) may differ from the survey master files held by the Centre for Behavioural Research and Program Evaluation, University of Waterloo. 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 PUMF:

- school board identifier
- school identifier
- class identifier
- stratum identifier
- postal code
- age
- responses from the parent interviews

7.0 Data Quality

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

7.1 Response Rates

There were various levels of non-response throughout the 2006-07 YSS. First, some degree of non-response was noted among school boards and schools. Refer to Table 4 and Table 5 for a listing of response rates at the school board and school level in 2006-07 YSS.

The third 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 collection. The final response rates at the student level are summarized in Table 8 below.

Table 8: Student Level Response Rates by Province, 2006-07 YSS

Province	Eligible students	Students with active permission	Students with passive permission	Completed questionnaires	Response rate (%)[1]
NL	6759	2062	1203	3265	48.3%
NS	7115	1761	2615	4376	61.5%
PEI	7718	2446	2416	4862	63.0%
NB	63631	12306[2]	26885[2]	39191[2]	61.6%
QC	18632	2358	10605	12963	69.6%
ON	18009	2895	7967	10862	60.3%
MB	7018	1462	3079	4541	64.7%
SK	4984	2468	0	2468	49.5%
AB	6353	2646	200	2846	44.8%
BC	8491	2027	3388	5415	63.8%
Canada	**148710**	**32431**	**58358**	**90789**	**61.1%**

[1] Based on completed questionnaires (numerator) and eligible students (denominator).
[2] These numbers include all students who filled out the YSS surveys as well as those that completed the surveys for the *Healthy* New Brunswick *en santé* survey. The full NB sample (rather than just students who completed YSS modules) was included in order to calculate student response rates.

7.2 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 is 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; 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 edit quality checks to verify the processing logic.

8.0 Guidelines for Tabulation, Analysis and Release

Please note that this section is adapted from the 2002 Youth Smoking Survey User Guide written by Statistics Canada.[4] It details guidelines for users when tabulating, analyzing, publishing or otherwise releasing any data derived from the survey microdata files. With the aid of these guidelines, users of microdata 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.

8.1 Rounding Guide

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

[4] Stats Canada (2002). Microdata User Guide: Youth Smoking Survey 2002. Accessible at: http://www.statcan.ca/english/sdds/document/4401_D2_T9_V2_E.pdf.

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.

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

8.3 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 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 buy them myself at a store / I buy them from a friend or 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 2006-07 YSS is the number of times cigarettes were smoked or the number of whole cigarettes smoked on each of the last seven days. The respondents of Module B1 were asked for the number of times cigarettes were smoked and the respondents of Module B2 were asked for the number of whole cigarettes smoked. 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 seven days and the denominator would be the number of days whole cigarettes were smoked in the last seven days. The average number of times cigarettes were smoked on the days the respondent smoked can be obtained in a similar manner.

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 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 seven days prior to the survey by students in grade 9 (Secondaire III in Québec) multiply the value reported in the derived variable DVCIGWK2 (number of whole cigarettes smoked in the past seven days prior to the survey) by the final weight for the record, then sum this value over all records with DVCIGWK2 < 996. Please note that for this particular example we must use SUPP_WT for the final weight since this question only appears in Module B2.

8.4 Guidelines for Statistical Analysis

Use of Weights for Producing Simple Estimates

The 2006-07 YSS is based upon a complex sampling design, with stratification, two stages 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 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 2006-07 YSS. All analyses were conducted using Stata 9[5]. 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[6]. This procedure creates reliable estimates of the variance for both simple estimates such as estimates of totals, proportions and ratios and more complex analyses such as linear or logistic regression. 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/datalib/survey/statscan/nphs/synthetic/cycle1/bootstrap/BTDOCENG.pdf

and bootstrap program for SPSS can be found at

http://prod.library.utoronto.ca:8090/datalib/codebooks/cstdli/nphs/2005_dummy/bootstrap/SPSS/Pgm/

[5] StataCorp. 2005. *Stata Statistical Software: Release 9*. College Station, TX: StataCorp LP.
[6] Judkins, D. 1990. Fay's Method for Variance Estimation. *Journal of Official Statistics*, 6(3), 223-239

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 a 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.

8.5 Coefficient of Variation Release Guidelines

Before releasing and/or publishing any estimate from the 2006-07 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 7. 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 9. 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 9: Quality Level Guidelines

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."**

Appendix A: Variables Common to Modules A, B1, B2 in 2006-07 YSS

Table A1: Questions and Variable Names Common to Modules A, B1 and B2 (MAIN Weight to be Applied when Estimating Population Totals), 2006-07 YSS.

MAIN Questions	Variable Name	Question #		
		A	B1	B2
What grade are you in?	GRADE	1	1	1
Are you a girl or a boy?	SEX	3	3	3
Are you an Aboriginal person?	GABORGA1	4	4	4
What language do you speak most often at home?	GLANGUA1	5	5	5
How many years have you lived in Canada?	GCANADA1	6	6	6
On average, how many hours a day do you watch TV or videos?	PSCRENA2	7	7	7
How often do you read for fun (not for school)?	PRDAVGA1	8	8	8
About how much money do you usually get each week to spend on yourself or to save? (Remember to include all money from allowances and jobs like babysitting, delivering papers…)	GMONEYA1	9	10	10
In general, I like the way I am.	OHOWFLA1	11	12	12
When I do something, I do it well.	OHOWFLB1	12	13	13
I like the way I look.	OHOWFLC1	13	14	14
Are you a smoker?	SSMKERA1	14	15	15
Have you ever tried cigarette smoking, even just a few puffs?	SPUFF0A1	15	16	16
How old were you when you first tried smoking cigarettes, even just a few puffs?	SPUFF0B1	16	17	17
Do you think in the future you might try smoking cigarettes?	SSUSMTA1	17	18	18
If one of your best friends was to offer you a cigarette would you smoke it?	SSUSFOA1	18	19	19
At any time during the next year do you think you will smoke a cigarette?	SSUSNYA1	19	20	20
Have you ever smoked a whole cigarette?	SWHOLEA1	21	22	21
How old were you when you smoked your first whole cigarette?	SWHOLEB1	22	23	22
Have you ever smoked 100 or more whole cigarettes in your life?	SHUND0A1	23	24	23
Have you ever smoked every day for at least 7 days in a row?	SLAST7A1	24	25	24
How old were you when you first smoked every day for at least 7 days in a row?	SLAST7B1	25	26	25
On how many of the last 30 days did you smoke one or more cigarettes?	SLST30A1	27	27	27
Thinking back over the last 30 days, on the days that you smoked, how many cigarettes did you usually smoke each day?	SLST30B1	28	28	28

MAIN Questions	Variable Name	Question #		
		A	B1	B2
When you smoke, how often do you share a cigarette with others?	SSHAREA1	29	30	30
What brand of cigarettes do you usually smoke?	SBRNDUA1	30	31	31
Why do you smoke the brand of cigarettes that you do?				
My friends smoke the same brand	SBRNDYC1	31	32	32
My parents smoke the same brand	SBRNDYD1	31	32	32
I like the packaging	SBRNDYE1	31	32	32
This brand costs less than other brands	SBRNDYF1	31	32	32
I like the image of this brand	SBRNDYG1	31	32	32
I like the taste	SBRNDYH1	31	32	32
They are the only ones I can get	SBRNDYI1	31	32	32
They have less tar	SBRNDYJ1	31	32	32
For the nicotine buzz	SBRNDYK1	31	32	32
Other	SBRNDYL1	31	32	32
Where do you usually get your cigarettes?	SGETCGA1	32	33	33
In the last 30 days, have you ever been asked your age when buying cigarettes in a store?	SLST30C1	33	34	34
In the last 30 days, have you ever been asked for ID when buying cigarettes in a store?	SLST30D1	34	35	35
In the last 30 days, has anyone in a store refused to sell you cigarettes?	SLST30E1	35	36	36
In the last 30 days, have you ever asked a stranger to buy you cigarettes?	SLST30F1	36	37	37
Have you ever tried to quit smoking cigarettes?	SEVRQTA1	41	38	42
Do you think you would be able to quit smoking cigarettes if you wanted to?	SSURQTA1	42	39	43
Have you ever tried any of the following?				
Smoking pipe tobacco	SEVTRYA1	43	40	44
Smoking cigars, cigarillos, or little cigars (plain or flavoured)	SEVTRYB1	43	40	44
Smoking bidis (tobacco product from India)	SEVTRYC1	43	40	44
Using chewing tobacco	SEVTRYD1	43	40	44
Using nasal snuff (tobacco powder people sniff)	SEVTRYE1	43	40	44
Using oral snuff (tobacco powder people hold between their lip and gum or cheek)	SEVTRYF1	43	40	44
Using nicotine patches, nicotine gum or nicotine lozenges	SEVTRYG1	43	40	44
Using a water-pipe, also known as hookah, sheesha, narg-eelay, hubble-bubble, or gouza, to smoke tobacco	SEVTRYH1	43	40	44
I have not tried these things	SEVTRYJ1	43	40	44
Do any of your parents, step-parents, or guardians smoke cigarettes?	SGRDANA1	47	43	50
Do any of your brothers or sisters smoke cigarettes?	SSIBLIA1	48	44	51
Do you ever smoke inside your home?	SHRULSC1	52	48	52

MAIN Questions	Variable Name	Question #		
		A	B1	B2
During the past 7 days, on how many days did you ride in a car with someone who was smoking cigarettes?	SINCARA1	53	49	53
Your closest friends are the friends you like to spend the most time with. How many of your closest friends smoke cigarettes?	S5FRNDA1	54	50	54
In the last 12 months, how many classes did you have that talked about the effects of smoking?	SLECSMA1	65	59	67
In the last 12 months, have you taken part in any other anti-smoking activities or events, either at school or in the community?				
School assembly or class with guest speaker	SANTISA1	66	60	68
School health fair	SANTISB1	66	60	68
Media production (poster, commercial, etc.)	SANTISC1	66	60	68
Community event outside of school	SANTISD1	66	60	68
Quit smoking contest	SANTISE1	66	60	68
Smoking cessation counselling or program	SANTISF1	66	60	68
I have not taken part in any of these activities or events in the last 12 months	SANTISG1	66	60	68
Susceptible to smoking	DSUSCEPT	D[1]	D[1]	D[1]
General score to measure the child's overall self-esteem.	DVSELF	D[1]	D[1]	D[1]
Smoking Status	DVTY1ST	D[1]	D[1]	D[1]
Smoking Detailed Classifications	DVTY2ST	D[1]	D[1]	D[1]
Language of the Survey	LANGUAGE	D[1]	D[1]	D[1]
Module the respondent filled out	MODULE	D[1]	D[1]	D[1]
Project which the respondent's school was recruited for	PROJECT	D[1]	D[1]	D[1]
Province ID Number	provID	D[1]	D[1]	D[1]
Student survey identification number	scanID	D[1]	D[1]	D[1]

[1]D refers to "derived variable", as described in Section 6.3 of this Guide.

Appendix B: Youth Smoking Survey Questions by Survey Year

Table B1: Questions in All Four Surveys (1994, 2002, 2004, 2006): 29 Items

Question	2006-07 Variable Name
1. Have you ever smoked 100 or more whole cigarettes in your life?	SHUND0A1
2. Have you ever tried to quit smoking cigarettes?	SEVRQTA1
3. Have you ever tried cigarette smoking, even just a few puffs?	SPUFF0A1
4. Have you ever smoked every day for at least 7 days in a row?	SLAST7A1
5. How old were you when you first smoked every day for at least 7 days in a row?	SLAST7B1
6. At any time during the next year do you think you will smoke a cigarette?	SSUSNYA1
7. Do you think in the future you might try smoking cigarettes?	SSUSMTA1
8. Why do you smoke the brand of cigarettes that you do? (Mark all that apply)	SBRNDYC1 to SBRNDYL1
9. What brand of cigarettes do you usually smoke?	SBRNDUA1
10. Do you think it would be difficult or easy for you to get cigarettes if you wanted to try smoking?	SHWHRDA1
11. Where do you usually get your cigarettes?	SGETCGA1
12. In the last 30 days, have you ever been asked your age when buying cigarettes in a store?	SLST30C1
13. In the last 30 days, has anyone in a store refused to sell you cigarettes?	SLST30E1
14. At your school, what are the rules about smoking tobacco?	SSRULSA1
15. How do the rules about smoking tobacco at your school affect you?	SSRULSC1
16. Do most students who smoke cigarettes obey the rules about smoking at your school?	SSRULSB1
17. Excluding yourself, how many people smoke inside your home every day or almost every day? Do not count those who smoke outside.	SHRULSB1
18. Do you ever smoke inside your home?	SHRULSC1
19. Your closest friends are the friends you like to spend the most time with. How many of your closest friends smoke cigarettes?	S5FRNDA1
20. Why do you think people your age start to smoke? (Mark all that apply)	SSTRTYA1 to SSTRTYM1
21. What health problems can people get if they smoke for many years? (Mark all that apply)	SHELTHA1 to SHELTHE1
22. In the last 12 months, how many classes did you have that talked about the effects of smoking?	SLECSMA1
23. Have you ever tried any of the following? (Mark all that apply)	SEVTRYA1 to SEVTRYJ1
24. Are you a... Girl? Boy?	SEX
25. What language do you speak most often at home?	GLANGUA1
26. Are you an aboriginal person?	GABORGA1

Question	2006-07 Variable Name
27. About how much money do you usually get each week to spend on yourself or to save? (Remember to include all money from allowances and jobs like babysitting, delivering papers…)	GMONEYA1
28. How old are you?	AGE
29. What grade are you in?	GRADE

Table B2: Questions in the 2002, 2004 and 2006 Surveys: 28 Items

Question	2006-07 Variable name
1. In the last 30 days, have you ever been asked for ID when buying cigarettes in a store?	SLST30D1
2. In the last 30 days, have you ever asked a stranger to buy you cigarettes?	SLST30F1
3. *Think back over the last 7 days. Find yesterday on the wheel and fill in the number of cigarettes that you smoked. Then follow the wheel backwards and fill in the number of cigarettes you smoked on each of the last 7 days. If you have not smoked mark one of the circles below.	SLAST7A2 to SLAST7H2 (B1) SLAST7A3 to SLAST7H3 (B2)
4. On average, how many hours a day do you watch TV or videos?	PSCRENA2
5. How often do you read for fun (not for school)?	PRDAVGA1
6. In general, I like the way I am.	OHOWFLA1
7. When I do something, I do it well.	OHOWFLB1
8. I like the way I look.	OHOWFLC1
9. How are you doing in school compared to other students in your class?	OSKLVGA1
10. Have you ever had a drink of alcohol that is more than just a sip? (a beer, wine cooler, glass of wine or shot of liquor)	AEVRETA1
11. How old were you when you first had a drink of alcohol that is more than a sip?	AEVRETB1
12. Have you ever had 5 drinks or more of alcohol on one occasion?	A5DRNKA1
13. How old were you when you first had 5 drinks or more of alcohol on one occasion?	A5DRNKB1
14. Have you ever used or tried marijuana or cannabis? (a joint, pot, weed, hash…)	AEVRMJA1
15. How old were you when you first used marijuana or cannabis?	AEVRMJB1
16. This chart asks about your drug use. First mark the circle if you have ever used or tried the drug. Then, mark your age when you first tried the drug.	
A) Amphetamines (speed, ice, meth…)	AUAMPHA1
B) MDMA (ecstasy, E, X…)	AUMDMAA1
C) Hallucinogens (LSD, PCP, acid, magic mushrooms, mesc…)	AUHALUA1
D) †DACS (links…)	AUDACSA1

* The wording for this particular item was slightly different in 2006. Respondents of Module B1 were asked to give the number of times they smoked cigarettes in the last 7 days and respondents of Module B2 were asked to give the number of whole cigarettes they smoked in the last 7 days.

Question	2006-07 Variable name
E) Heroin (smack, junk, crank…)	AUHEROA1
F) Cocaine (crack, blow, snow…)	AUCOCNA1
G) Steroids (testosterone, growth hormones, Dianbol, juice, 'roids…)	AUSTERA1
17. Mark the circle if you have ever used or tried any of the following. Then, mark your age when you first used or tried it.	
A) Sniffed glue, gasoline or other products (solvents) to get high?	AUSOLVA1
B) Used or tried medication like Ritalin NOT for medical purposes?	AUMEDSA1
C) Used or tried painkillers (Talwin, Oxycontin…) to get high and NOT for medical purposes?	AUPAINA1
D) [+]Used or tried any other medications or natural health products to get high and NOT for medical purposes.	AUNATRA1
18. Do people have to smoke for many years before it will hurt their health?	SOPINOA1
19. Is there any danger to your health from an occasional cigarette?	SOPINOB1
20. Can smoking help people when they are bored?	SOPINOC1
21. Does smoking help people relax?	SOPINOD1
22. Does quitting smoking reduce health damage even after many years of smoking?	SOPINOE1
23. Does smoking help people stay slim?	SOPINOF1
24. Can people become addicted to tobacco?	SOPINOG1
25. Can tobacco smoke be harmful to the health of non-smokers?	SOPINOH1
26. Can smokers quit anytime they want?	SOPINOJ1
27. Do you think smoking is cool?	SOPINOK1
28. Is it nicer to date people who do not smoke?	SOPINON1

[†]The item DACS was only included in the 2004 and 2006 surveys. This item was not on the 2002 survey.

[+] This question appeared in the manner above in both the 2004 and 2006 surveys. In 2002 two questions were asked in place of this one. They were: "Have you ever used or tried Ephedrine or Pseudoephedrine (Sudafed, Ephedra, Herbal ecstasy, …) to get high and NOT for medical purposes?" and "Have you ever used or tried Gravol to get high and NOT for medical purposes?". In addition, the corresponding age questions for the above two questions were asked in 2002.

Table B3 Questions in the 2004 and 2006 Surveys: 24 Items

Question	2006-07 Variable name
1. Are you a smoker?	SSMKERA1
2. How old were you when you first tried smoking cigarettes, even just a few puffs?	SPUFF0B1
3. If one of your best friends was to offer you a cigarette, would you smoke it?	SSUSFOA1
4. Do you think you would be able to quit smoking cigarettes if you wanted to?	SSURQTA1
5. Do any of your brothers or sisters smoke cigarettes?	SSIBLIA1
6. Have your parents, step-parents, or guardians ever talked to you about not smoking?	SGRDANB1
7. What are the rules about smoking in your home?	SHRULSA1
8. During the past 7 days, on how many days did you ride in a car with someone who was smoking cigarettes?	SINCARA1
9. How many people in your grade, from your school, do you think smoke cigarettes?	SESTIMA1
10. In the last 12 months, how often did you drink alcohol?	AOFTETA1
11. In the last 12 months, how often did you have 5 drinks of alcohol or more on one occasion?	A5DRNKC1
12. Why do you think people your age start to drink alcohol? (Mark all that apply)	AYALSTA1 to AYALSTN1
13. In the last 12 months, how often did you use marijuana or cannabis?	AOFTMJA1
14. Do you think in the future you might try marijuana or cannabis?	AMIGHTA1
15. Do you think it would be difficult or easy for you to get marijuana or cannabis if you wanted to use it?	AHWHRDA1
16. Why do you think people your age start to use marijuana or cannabis? (Mark all that apply)	AYMJSTA1 to AYMJSTL1
17. Which do you think is more harmful to your health, smoking cigarettes or marijuana (cannabis)?	AMRHRMA1
18. I feel close to people at my school.	OCONCTA1
19. I feel I am part of my school.	OCONCTB1
20. I am happy to be at my school.	OCONCTC1
21. I feel the teachers at my school treat me fairly.	OCONCTD1
22. I feel safe in my school.	OCONCTE1
23. Should smoking be allowed around kids at home?	SOPINOL1
24. Should smoking be allowed around kids in cars?	SOPINOM1

Table B4: Questions in the 2006-07 Survey: 44 Items

Question	Variable Name
1. In the last 12 months, how often did you smoke?	SLST12A1
2. When you smoke, how often do you share a cigarette with others?	SSHAREA1
3. In a typical week, how often do you see cigarettes advertised or promoted in stores near your school?	SSTRSPA1
4. How many of the stores that you visit near your school sell cigarettes?	SSTRSCA1
5. Do any of your parents, step-parents, or guardians smoke cigarettes?	SGRDANA1
6. In the last 12 months, have you taken part in any other anti-smoking activities or events, either at school or in the community? (Mark all that apply)	SANTISA1 to SANTISG1
7. In the last 30 days, where did you buy little cigars/cigarillos (plain or flavoured)? (Mark all that apply)	SWRBYCA1 to SWRBYCE1
8. How many students at this school smoke where they are not allowed to?	SNTSPDA1
9. You can be fined for smoking on school property.	SFINEDA1
10. I often see students smoking near this school.	SNEAR0A1
11. This school has a clear set of rules about smoking for students to follow.	SCLEARA1
12. If students are caught breaking the smoking rules at this school, they get into trouble.	SBREAKA1
13. How many years have you lived in Canada?	GCANADA1
14. Including graduated licenses, do you currently have a valid driver's license?	GLICNSA1
15. In a typical week, how often do you visit retail stores (e.g. convenience stores, supermarkets, grocery stores, gas stations) near your school?	SSTRSVA1
16. In the last 12 months, did you engage in any of the following activities (outside of school requirements and without being paid)?	
A) Supporting a cause (e.g. food bank, environmental group)	OVOLUNA1
B) Fund raising (e.g. charity, school trips)	OVOLUNB1
C) Helping in my community (e.g. hospital volunteering, work in a community organization)	OVOLUNC1
D) Helping neighbours or relatives (e.g. cutting grass, babysitting, shoveling snow)	OVOLUND1
E) Doing other organized volunteer activity	OVOLUNE1
17. In the last 4 weeks, how many days of school did you miss because of your health?	OMISSHA1
18. In the last 4 weeks, how many classes did you skip when you weren't supposed to?	OSKIP0A1
19. How often do you smoke tobacco at home?	SPLACEA1
20. How often do you smoke tobacco walking to and/or from school?	SPLACEB1

Question	Variable Name
21. How often do you smoke tobacco at school, but off school property?	SPLACEC1
22. How often do you smoke tobacco at school on school property?	SPLACED1
23. How often do you smoke tobacco at concerts/dances/clubs?	SPLACEE1
24. How often do you smoke tobacco at restaurants/coffee shops?	SPLACEF1
25. How often do you smoke tobacco at parties?	SPLACEG1
26. How often do you smoke tobacco at your friend's house?	SPLACEH1
27. How often do you smoke tobacco in a vehicle?	SPLACEI1
28. How often do you smoke tobacco before school?	STIMESA1
29. How often do you smoke tobacco during the school day?	STIMESB1
30. How often do you smoke tobacco after school?	STIMESC1
31. How often do you smoke tobacco in the evening?	STIMESD1
32. How often do you smoke tobacco on weekends?	STIMESE1
33. How often do you smoke tobacco by yourself?	SPEOPLA1
34. How often do you smoke tobacco with your parents?	SPEOPLB1
35. How often do you smoke tobacco with other family members?	SPEOPLC1
36. How often do you smoke tobacco with friends?	SPEOPLD1
37. How important is getting good grades to you?	OIMPORA1
38. How important is making friends to you?	OIMPORB1
39. How important is participating in school activities outside of class?	OIMPORC1
40. How important is getting to class on time to you?	OIMPORD1
41. How important is learning new things to you?	OIMPORE1
42. How important is expressing my opinion in class to you?	OIMPORF1
43. How important is getting involved in the student council or other similar groups to you?	OIMPORG1
44. Do people who smoke become more popular?	SOPINOI1

Appendix C: Differences in Derived Variables between 2004-05 YSS and 2006-07 YSS

Table C1: Differences in Derived Variables between 2006-07 YSS and 2004-05 YSS

2006-07 YSS Derived Variables			2004-05 YSS Derived Variables		
DSUSCEPT			**D_SUSCEPTIBLE**		
	Response options	1 = No 2 = Yes 96 = Valid Skip 99 = Not Stated Valid Skip = 96 if SPUFF0A1=1 (Yes) *Have you ever tried cigarettes smoking, even just a few puffs*?		Response options	1 = No 2 = Yes 99 = Not Stated "Valid Skips" were not assigned
	Rationale	This variable is not applicable to those who have already tried smoking			
DVSELF			**DVSELF**		
	Derived from three of the five 2004-05 questions	*Choose the answer that best describes how you feel.* a) In general, I like the way I am. b) When I do something, I do it well. c) I like the way I look.		Derived from five questions:	*Choose the answer that best describes how you feel.* a) In general, I like the way I am b) Overall, I have a lot to be proud of c) A lot of things about me are good d) When I do something, I do it well e) I like the way I look
	Response options for each item	1 = True 2 = Mostly true 3 = Sometimes true / Sometimes false 4 = Mostly false 5 = False		Response options for each item	1 = False 2 = Mostly false 3 = Sometimes false / sometimes true 4 = Mostly true 5 = True
	Recoded	0 = False 1 = Mostly false 2 = Sometimes false / sometimes		Recoded	0 = False 1 = Mostly false 2 = Sometimes false / Sometimes true

2006-07 YSS Derived Variables			2004-05 YSS Derived Variables		
		true 3 = Mostly true 4 = True			3 = Mostly True 4 = True
	Computation	Scores were summed and averaged across the questions that were answered resulting in an overall score for DVSELF (min = 0; max = 12)		Computation	Scores were summed and averaged across the questions that were answered resulting in an overall score for DVSELF (min = 0; max = 20)
	Rationale:	Factor analyses showed that use of three variables (rather than five) captured variation in responses sufficiently.			
DAVCIGD1			**DVAVCIGD**		
	B1 module	Average number of **times** cigarettes were smoked on the days that the respondent smoked			Average number of **whole** cigarettes were smoked on the days that the respondent smoked.
DAVCIGD2					
	B2 module	Average number of **whole** cigarettes smoked on the days that the respondent smoked			
DVNDSMK1			**DVNDSMK**		
	B1 module	Number of days on which respondent smoked at least one **time** in the week prior to the survey			Number of days on which respondent smoked at least one **whole** cigarette in the week prior to the survey.
DVNDSMK2					
	B2 module	Number of days on which respondent smoked at least one **whole** cigarette in the week prior to the survey.			

2006-07 YSS Derived Variables		2004-05 YSS Derived Variables	
DVCIGWK1		**DVCIGWK**	
B1 module	Total number of **times** cigarettes were smoked in the past 7 days prior to the survey.		Total number of **whole** cigarettes smoked in the past 7 days prior to the survey.
DVCIGWK2			
B2 module	Total number of **whole** cigarettes smoked in the past 7 days prior to the survey.		