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FINAL REPORT

Qualitative Testing of Toxic Emissions Statements

Prepared for Health Canada

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Ce rapport est également disponible en français.

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EXECUTIVE SUMMARY

Health Canada is considering replacing the current toxic emissions statements for cigarettes with a series of new statements that would provide information about the toxic emissions in a clear and concise way. To that end, the department commissioned Phoenix SPI to undertake qualitative research to assess the effectiveness of 12 potential new toxic emissions statements for cigarettes. These mock-ups were assessed using focus groups with smokers. The target audiences were cigarette smokers, aged 18 to 24 years (youth), and aged 25 years and older (adults).

The main objective of the research was to obtain smokers' assessments of these new statements. More specifically, the research objectives included the following:

- To determine whether the statements are noticeable, credible, relevant, clear and easily understood, effective in informing and educating, and memorable.
- To gather feedback on different formats of the toxic emissions statements, including their effectiveness (i.e. two languages presented side-by-side vs. two languages presented top-bottom; format on slide and shell vs. flip top packages).
- To gather participants' views of background colours for the toxic emissions statements, including which colours are most effective.

In total, 12 focus groups were conducted October 22-25 2007, with four groups in each of the following three cities: Toronto, Calgary, and Montreal (French). In each city, two groups were conducted with each of the target audiences.

The statements were divided into two sets of six statements each, referred to as sets A and B for the purposes of the research. Each set was tested in six groups (once per audience per location). In addition, the order of the presentation of the statements within each set was rotated across the different focus groups. The table below identifies the statements included in each set.

	Set A
A1	Tobacco smoke contains over 4000 chemicals which over time add up in your body and increase your risk of disease and death.
A2	Nicotine, benzene, carbon monoxide, hydrogen cyanide, formaldehyde and toluene are some of the toxic chemicals present in the tobacco smoke that you inhale.
A3	Tobacco smoke contains over 4000 chemicals, more than 50 of these are cancer causing.
A4	10 puffs per cigarette x 20 cigarettes per day x 365 days = 73000 puffs containing over 4000 chemicals per year
A5	Some toxic chemicals, including lead, nitrosamines and nicotine, are found naturally in unburned tobacco. These chemicals are released as tobacco burns.
A6	Burning tobacco causes over 2500 chemicals in unlit tobacco to be transformed into more than 4000 chemicals in tobacco smoke.

	Set B
B1	Tobacco smoke is a deadly mixture of over 4000 chemicals.
B2	Unlit tobacco (over 2500 chemicals) + fire +oxygen = tobacco smoke (over 4000 chemicals)
B3	Nicotine occurs naturally in tobacco plants and is responsible for causing the addiction to tobacco products.
B4	Repeated exposure to tobacco smoke which contains over 4000 chemicals greatly increases the risk to your health.
B5	A lit cigarette = smoke containing over 4000 chemicals + one puff = your lungs full of smoke → chemicals enter your bloodstream → negative health impact
B6	Most of the toxic chemicals in tobacco smoke, including carbon monoxide, benzene, formaldehyde and hydrogen cyanide, are created when tobacco burns.

This research was qualitative in nature, not quantitative. As such, the results provide an indication of participants' views about the issues explored, but cannot be generalized to adult or youth smokers in Canada.

Recall of Message Content

Participants were each provided with a binder, the first section of which included a set of six toxic emissions statements (one per page). They were asked to open the binder and read the first six pages on their own and in silence. Once they had done this, they were asked to close the binder. When everyone was finished, participants were given a sheet of paper and were asked to write down what they could recall from the statements they read.

To the extent that statements in either set were recalled after their brief, initial review, they were much more likely to be remembered in part than in their entirety. Information that participants were most likely to recall in either set were numbers or quantities. The most frequently-remembered number, by far, was 4,000 chemicals (not surprising, since this number appears in four of six statements in each set). Most of the participants who remembered it focused exclusively on the figure itself and did not link it to any additional information from the statements in which it figured.

Apart from numbers/quantities, the other main aspect of statements that tended to resonate with participants in terms of recollection was health-related impacts (e.g. 'increased risk of disease/death', 'cancer-causing'). Aspects of statements participants were least likely to recall were references to specific chemicals and/or chemical processes.

Participants who reviewed the statements in set A were most likely to recall statements A4 and A3 or parts of them. Indeed, these two statements were most likely to be recalled in their entirety. That said, statement A3 was almost equally likely to be recalled by both youth and adults, while A4 was much more likely to be recalled by youth than by adults. Participants were least likely to recall statement A6. Recollection of statements A2 and A5 was mostly limited to recall of specific chemicals, and a small number of them at that

(usually nicotine and carbon monoxide). Recall of statement A1 was more likely among youth than adults.

Statements in set B were similarly likely to be recalled by youth and adults. Participants were most likely to recall statement B1, with a majority recalling it in its entirety or almost entirely. Between one-third and half of the participants remembered elements of the following statements: B2, B3, B5, and B6. That said, no more than few recalled any of these statements in their entirety. Participants were least likely to recall statement B4.

In general, the type of things that participants said they tend to recall in these types of statements is information that is personally relevant to them, information that is new to them, numbers/statistics, and equations (if they are short and uncomplicated).

Review of Content of Toxic Emissions Statements

A number of general themes and issues emerged through review of the toxic emissions statements (i.e. feedback provided by participants routinely for most if not all of the statements). These included the following:

- *Meaningful, easy-to-relate-to information – resonates most with participants.* In terms of their overall impressions of the toxic emissions statements, participants reacted most positively to information presented in what many referred to as a 'meaningful' 'relevant', or 'easy-to-relate-to' manner. This included the use of statistics/data, references to health impacts/consequences, use of strong/vivid words/text, and a short, direct style of presentation. These characteristics also made statements easier to remember. Conversely, participants were least likely to react positively to information that seemed abstract, irrelevant, long-winded, or to which they could not relate in a meaningful and comprehensible way .
- *Statements described as clear and easy to understand*: There was widespread agreement that the potential toxic emissions statements are clear and easy to understand. While participants occasionally offered suggestions to improve the text of certain statements, they tended to focus on the length of the statement or the possibility of adding emphasis (e.g. bolding, underlining), as opposed to improving clarity and ease of understanding.
- *Information considered credible and trustworthy*: There was also widespread agreement that the information provided in the statements is credible and trustworthy. A number of participants expressed surprise at the number of chemicals in tobacco smoke and/or unlit tobacco, but this did not tend to translate into scepticism or incredulity. The reason routinely given to explain why this information is credible is its source (i.e. Health Canada).
- *Some new information*: While some of the information provided in the statements was described by participants as information they already knew or simply took for granted, there was also some new learning. The information most likely to be new to participants was the number of chemicals in tobacco smoke and/or unlit tobacco. Related to this, many specified that they did not know that combustion increased the number of chemicals in tobacco smoke.

- *Statements usually described as long*: Participants described many of the toxic emission statements they reviewed as long or too long, and many indicated that they probably would not read them in their entirety because of this. This was especially the case with statements in set A. The length of statements was seen as limiting their impact, and many participants emphasized the importance of short, direct, to-the-point text in making a message effective.

Within Set A specifically, statements A3 and A4 were most likely to be rated as effective at informing and educating smokers about the toxic emissions of cigarettes, followed by A1. While all three were almost equally likely to be chosen as the number one choice, A3 and A4 were more likely to be rated as second choice than A1. In addition to being included most often among the top two choices, A3 was also most likely to be preferred by both adults and youth. By comparison, A1 was much more likely to be preferred by adults and A4 was much more likely to be preferred by youth. Statements A5 and A2 were most likely to be rated as ineffective, followed by A6.

Within Set B, statement B1 was most likely, by far, to be rated as effective at informing and educating smokers about the toxic emissions of cigarettes, with over two-thirds identifying it as their number one choice. Moreover, it was almost equally likely to be chosen by youth and adults. It was followed at a distance by B6, B3, B2, and B4, which were all similarly likely to be included among the top two choices. Statement B5 was most likely to be rated as ineffective, followed by B2.

Format and Colour Preferences

When it came to format, participants were much more likely to prefer placing the messages side-by-side than over/under one another. However, this is due in large part to a nearly unanimous preference for this format in Montreal (regardless of which language came first). Participants in other locations were more divided. Reasons for preferring the side-by-side format included a sense that it is more aesthetically pleasing, an impression that it makes the message stand out more distinctly, and that the message looks shorter. Some also said the side-by-side format is easier to read, but those who preferred the over/under format were more likely to say the latter.

Despite the overall preference for the side-by side format, a number of participants who preferred it said that for short messages, especially ones that would fit on one line, the over/under format is better. Those who preferred the over/under format said they preferred it regardless of the length of the message. The length of the statement was more likely to influence format preferences than the type of package (slide and shell, flip-top).

Perhaps not surprisingly, there was no consensus among participants when it came to preferred background colours. That said, yellow and white were most often identified as appropriate background colours for the toxic emission statements. Conversely, grey and pink were most likely to be considered inappropriate or colours to be avoided, followed by turquoise. Participants felt that different colours should be used (i.e. there should be a number of colour options), something that is being considered by Health Canada. The only frequently-made suggestion related to background colours was to include a black border or frame around the statements to draw attention to them.

Conclusions

The toxic emissions statements as a whole tended to test well in terms of clarity, ease of understanding, credibility, and the provision of some new information. However, when it came to perceived effectiveness at informing and educating smokers about the toxic emissions of cigarettes, participants expressed clear preferences. Moreover, these tended to be positive preferences (i.e. not reluctant choices).

Participants reacted most positively to information presented in what many referred to as a meaningful, relevant, or easy-to-relate-to manner. This included the use of statistics/data, references to health impacts/consequences, use of language to create strong images, information that they can personally relate to, and a short, direct style of presentation. The statements considered most effective included some combination of these factors. While participants also reacted positively to new information, this usually had to be presented in a meaningful or relevant manner to elicit a positive reaction. Conversely, participants were least likely to react positively to information that seemed abstract, irrelevant, or to which they could not relate in a meaningful way.

Perhaps not surprisingly, participant preferences tended to echo what they were most likely to recall from the various statements. Participants were most likely to recall numbers or quantities and health-related impacts. In other words, they were most likely to recall concrete information and information considered relevant to them. On the other hand, participants were least likely to recall references to specific chemicals and/or chemical processes (i.e. information that is abstract or meaningless to them).

With respect to the identification of specific chemicals, some participants suggested creating statements that identify the daily-life uses of some of the main toxic chemicals found in cigarette smoke (e.g. ‘formaldehyde is used to preserve dead bodies’). This suggestion elicited widespread support among participants. It was even suggested that an entire set of statements focus on this, dealing with different chemicals, one chemical at a time (i.e. ‘benzene is used for…’ carbon monoxide…’).

In terms of moving forward, Health Canada would be able to create a relatively strong set of statements using those that were tested. Concerning formatting, a preferred format – side-by-side – did emerge from the research, albeit without anything approaching a consensus. Similarly, a few of the colour options did elicit widespread support – yellow and white – with clear direction for the adoption of others (text needs to be easy to read against the colour background, colour needs to attract attention). There was also strong support for the use of multiple colours for the next generation of toxic emissions statements.

Based on this research, it appears that the new approach to toxic emissions statements will eventually be more effective than the current approach of listing six chemicals and their ranges.

More Information:

Supplier Name: Phoenix Strategic Perspectives Inc.
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To obtain more information on this study, please email por-rop@hc-sc.gc.ca

INTRODUCTION

Health Canada commissioned Phoenix Strategic Perspectives to undertake qualitative research to assess the effectiveness of potential new toxic emissions statements for cigarettes.

Background

Smoking is the most preventable cause of disease and premature death in Canada. More than 37,000 people will die prematurely this year in Canada due to tobacco use, and at least 800 of them will be non-smokers. It is essential that Canadians continue to be informed about the numerous debilitating and fatal diseases associated with tobacco use.

The Government of Canada's Federal Tobacco Control Strategy (FTCS) is championed by many parties working collaboratively towards reducing, possibly eliminating, tobacco use. Health Canada's Tobacco Control Programme (TCP) plays a leadership role in implementing the Strategy. The TCP is responsible for the administration and enforcement of the Tobacco Act (1997) as well as developing the policies and programmes needed to support the objectives of the FTCS.

The Tobacco Products Information Regulations (TPIR), which came into effect on June 26, 2000, outline the current tobacco labelling requirements for tobacco products sold in Canada. The purpose of these labelling requirements is to enhance public awareness of the health hazards of using tobacco products. They are a key part of the FTCS. Section 9 of the TPIR requires every manufacturer of cigarettes, cigarette tobacco, kreteks, leaf tobacco and tobacco sticks to display on the side of every package a list of six tobacco smoke emissions (tar, nicotine, carbon monoxide, formaldehyde, hydrogen cyanide and benzene) and their range.

Many people find these toxic emissions statements confusing. In particular, the ranges listed for each emission are not always well understood and few people can recall all six substances listed (tar, nicotine, carbon monoxide, formaldehyde, hydrogen cyanide and benzene).

Health Canada is considering replacing the current toxic emissions statements with a series of new statements that would provide information about the toxic emissions in a clear and concise way. To that end, the department developed 12 mock-ups of toxic emissions statements to test with young and adult smokers.

Research Objectives

The main objective of this research, therefore, was to obtain smokers' assessments of these new statements. More specifically, the research objectives included the following:

- To determine whether the statements are noticeable, credible, relevant, clear and easily understood, effective in informing and educating, and memorable.
- To gather feedback on different formats of the toxic emissions statements, including their effectiveness (i.e. two languages presented side-by-side vs. two languages presented top-bottom; format on slide and shell vs. flip top packages).

- To gather participants' views of background colours for the toxic emissions statements, including which colours are most effective.

Research Design

To address the research objectives, qualitative research in the form of 12 focus groups was undertaken.

Target Audience

The target audiences for this research were:

- Cigarette smokers, aged 18 to 24 years (youth); and
- Cigarette smokers, aged 25 years and older (adults).

For the purposes of this study, a smoker was defined as someone responding affirmatively to the following question: "At the present time, do you smoke cigarettes every day or occasionally?" In other words, the target audience included both daily smokers and non-daily smokers (also known as occasional smokers).

The following specifications applied to this research.

- A set of 12 groups was conducted, with four groups in each of the following three cities: Toronto, Calgary, and Montreal (French).
- Two focus groups in each city were conducted with youth smokers, and two with adult smokers.
- There was a mix of participants by age (within appropriate parameters), income, education, ethnicity, and length of time smoking, with an approximate gender split. There was also a mix in terms of smoking status, though priority was given to daily smokers.
- Participants were asked to review six of the 12 mock-ups of the toxic emissions statements developed for cigarette packages. The statements were divided into two sets of six warnings each, referred to as sets A and B for the purposes of this research.
- The research took place over two evenings in each location in order to ensure sufficient review of each set of statements. The result was that each set was tested in six groups (two per location). Set A was tested with each audience (i.e. youth smokers and adult smokers) on the first evening in each location, and Set B was tested with each audience on the second evening. In addition, the order of the presentation of the statements within each set was rotated across the different focus groups.
- In order to facilitate discussion of the content, format, and colour of the toxic emissions statements, each participant was given a binder divided into three sections. The first section included the six statements to be reviewed, with each statement appearing on a separate page. The second section presented the various format options for the statements, and the third presented alternative background colours for the statements.

- In-group exercises were used to assess recall of the statements and to obtain assessments of the statements preferred by participants.
- A total of 12 participants were recruited for 8-10 to show per group. Turnout was excellent, with 7-9 participants taking part in each group.
- All participants were paid incentives of $60 to participate.
- The groups lasted two hours in length and were conducted in regular focus group facilities in all locations.
- Sponsorship of the study was revealed (i.e. Health Canada).

Sets of Toxic Emissions Statements

As noted above, in order to minimize the response burden, participants were asked to review six (6) mock-ups of the new toxic emissions statements. The statements were divided into two sets of 6 statements each and the sets were rotated in order to ensure adequate review of each one. The tables below identify the statements included in each set.

	Set A
A1	Tobacco smoke contains over 4000 chemicals which over time add up in your body and increase your risk of disease and death.
A2	Nicotine, benzene, carbon monoxide, hydrogen cyanide, formaldehyde and toluene are some of the toxic chemicals present in the tobacco smoke that you inhale.
A3	Tobacco smoke contains over 4000 chemicals, more than 50 of these are cancer causing.
A4	10 puffs per cigarette x 20 cigarettes per day x 365 days = 73000 puffs containing over 4000 chemicals per year
A5	Some toxic chemicals, including lead, nitrosamines and nicotine, are found naturally in unburned tobacco. These chemicals are released as tobacco burns.
A6	Burning tobacco causes over 2500 chemicals in unlit tobacco to be transformed into more than 4000 chemicals in tobacco smoke.
	Set B
B1	Tobacco smoke is a deadly mixture of over 4000 chemicals.
B2	Unlit tobacco (over 2500 chemicals) + fire +oxygen = tobacco smoke (over 4000 chemicals)
B3	Nicotine occurs naturally in tobacco plants and is responsible for causing the addiction to tobacco products.
B4	Repeated exposure to tobacco smoke which contains over 4000 chemicals greatly increases the risk to your health.
B5	A lit cigarette = smoke containing over 4000 chemicals + one puff = your lungs full of smoke → chemicals enter your bloodstream → negative health impact
B6	Most of the toxic chemicals in tobacco smoke, including carbon monoxide, benzene, formaldehyde and hydrogen cyanide, are created when tobacco burns.

This research was qualitative in nature, not quantitative. As such, the results provide an indication of participants' views about the issues explored, but cannot be generalized to adult or youth smokers in Canada.

The principal investigators for this study were Stephen Kiar and Philippe Azzie. Stephen moderated the focus groups in Calgary and Toronto. Philippe moderated the focus groups in Montreal. Both contributed to the final report.

General Note on Findings:

With few exceptions, findings tended to be consistent across locations, language groups, and among members of both audiences (i.e. youth and adults). Any differences that emerged are identified at the appropriate places in the report.

Appended to this report are the following (in English and French):

- Recruitment screener
- Moderator's guide
- Recall exercise related to potential toxic emissions statements
- Ranking exercise for potential toxic emissions statements
- Toxic emissions statements tested.

CONTEXTUAL ISSUES

This section presents background information about participants, including their smoking habits, their concerns regarding the health implications of smoking, and their behaviour when it comes to reading warning messages on the cigarette packages they purchase.

Profile of Participants – Smoking Behaviour

Nearly all of the participants in the study said they smoke on a daily basis. While the average number of cigarettes smoked each day varies, most participants smoke at least 10 cigarettes a day. Moreover, many of them are heavy smokers, smoking the equivalent of at least a pack a day (i.e. 20-25 cigarettes), with a few saying they sometimes smoke up to two packs a day. A small number of participants smoke fewer than 10 cigarettes a day, and most of those who did said they smoke approximately five cigarettes a day.

Most of the occasional smokers described themselves as social smokers, explaining that they usually only smoke in the company of others during social get-togethers or outings. In terms of frequency, most of these participants said they smoke every few days and sometimes every other day. However, a few said they only smoke about once a week, usually on weekends.

The length of time participants have been smoking varies widely, ranging from as short as one year to as long as 50 years. As would be expected, adult participants were much more likely to have been smoking for a long time. A majority of them said they have been smoking for at least 10 years, and many have been smoking for 20 years or more. Most of the youth participants have been smokers for 3-5 years. A few are more recent smokers, having begun in the last year or so, while some others began in their early teens and have been smoking for a decade or more.

Participants' Views on Health Impact of Smoking

Most participants, regardless of their smoking behaviour, said they are concerned about the effect smoking will have or is having on their health. Perhaps not surprisingly, older participants were much more likely than youth to identify this as a top-of-mind concern, with some adding that they are already experiencing such effects (e.g. shortness of breath, coughing, sore throats). Younger smokers, as well as occasional smokers, were more likely to describe this as something they think about occasionally without worrying about it too much. That said, some youth did indicate that this preoccupies or concerns them.

Some participants, however, said they are not concerned about the health impact of smoking, or are no more concerned about this than they are about the health impact of other things in daily life. These participants explained that there are many things that affect our health these days. As an example, it was suggested that one might contract cancer from regularly breathing in car exhaust or other chemicals that exist in the air we breathe, a perspective raised in Toronto in particular, which was seen to have poor air quality.

Concerns about the health impact of smoking ranged from the general to the specific. General concerns included the impact of smoking on physical fitness and stamina/ endurance. This usually manifested itself as concern over the impact of smoking on the ability to accomplish day-to-day activities, such as walking up stairs, doing exercise, and playing sports.

Specific health concerns that were identified included a variety of conditions, ranging from shortness of breath, coughing, and sore throats to emphysema, heart attacks and strokes, and cancer. The latter included various forms of cancer, such as lung cancer, throat cancer, and cancer of facial organs/features (i.e. mouth, tongue). Some male youth participants expressed concern over the possible impact of smoking on their sex life (i.e. erectile dysfunction). Many participants, particularly but not exclusively youth, expressed concern about the impact of smoking on their appearance. Such concerns included preoccupation over yellow teeth, grey skin, tobacco smell, and facial lines, as well as facial disfigurement caused by cancer. Finally, some said they are more preoccupied by the impact their smoking has on others than on themselves (i.e. the impact of second-hand smoke).

Behaviour Regarding Health Warning Messages

Participants were asked about their behaviour when it comes to Health Canada messages on cigarette packages. Specifically, they were asked if they look at or read all of the Health Canada messages on the cigarette packages that they purchase.

A majority of participants in each group, said they look at or read Health Canada warning messages on the cigarette packages they purchase, though many specified that they do not do this each time they purchase a pack. Moreover, probing revealed that participants are more likely to look at or scan these messages than read them, though some said they read all the information. Probing on this issue also revealed that participants are much more likely to look at or read the main health warning messages or pictures than the message about the chemicals found in cigarette smoke on the side of cigarette packages. While virtually all participants were aware of the latter, most said they do not read them (though they may have in the past).

Those who said they read or look at the Health Canada warning messages provided various reasons to explain why they do this. These included curiosity about new information on the impact of smoking, interest/curiosity about the "content/ingredients" of cigarettes, boredom (i.e. nothing better to do), and inability to avoid looking at or reading this information. Those providing the latter explanation said that there is no way to avoid noticing this information since it is so prominently displayed.

Asked specifically what type of information draws their attention, participants typically identified the following:

- Pictures, especially ones focussing on the human face
- Statistics/numbers
- Short/pithy statements
- The expression 'warning'.

Some young males said that information on the impact of smoking on sexual performance attracts their attention. Some focused on form as opposed to content, saying that they tend to notice information that stands out or contrasts visibly with its background.

Familiarity with Content – Main Reason for Not Reading Health Canada Messages

Most of those who do not look at or read the Health Canada messages on the cigarette packages that they purchase said that they initially did so, but not any more. Participants were referring both to the main health warning messages or pictures and the message about the chemicals found in cigarette smoke on the side of cigarette packages, though they were more likely to focus on the former. The most common reason for not looking at/reading these messages was that they no longer contain new information (i.e. they know it already). In other words, they do not think they are going to learn anything new by reading these messages.

Some said they do not read these messages because it is depressing, with a few adding that they know smoking is bad for them and they do not need to be reminded of this on a regular basis. Some others said that there is no need to read this information on cigarette packages because smokers are constantly bombarded with this type of information. In other words, there is no way to avoid this information even if one does not read it on one's cigarette packages. Finally, one participant said he does not read this information because he does not consider it to be true.

Asked what, if anything, would encourage them to read the health warning messages, participants identified the following:

- Short/pithy/attention-grabbing statements
- New information (unspecified)
- Statistics
- Information on the impact of smoking on others
- Incentives to quit/benefits of quitting
- Calculation of the actual monetary cost of smoking (e.g. 'smoking a pack of cigarettes per day costs you $X a year').

Some said nothing would encourage them to read these messages. The reason, they explained, was that they already know that smoking is bad for them and no additional information will have any added impact in terms of changing their smoking behaviour.

RECALL OF CONTENT OF TOXIC EMISSIONS STATEMENTS

This section reports on participant recall of the content of the toxic emissions statements they were asked to read. As noted in the introduction, in order to reduce the response burden on participants, these statements were divided into two sets containing six statements each, and participants were asked to review one set only.

Description of Recall Exercise

Participants were each provided with a binder, the first section of which included a set of six toxic emissions statements (one per page). They were asked to open the binder and read the first six pages on their own and in silence. Once they had done this, they were asked to close the binder. When everyone was finished, participants were given a sheet of paper and were asked to write down what they could recall from the statements they read.

Recall of Toxic Emissions Statements

The findings for the recall exercise are based on the group discussion that followed this exercise and on a close review of what participants wrote on their exercise sheets. These sheets were collected at the end of each focus group. This allowed a comparison of what participants *said* they recalled in the discussion that followed this exercise with what they actually wrote down on paper. This helped ensure that participants' recollections were not influenced by the group discussion, specifically what others said they remembered. For the most part, the written record corroborated what participants said they recalled, although it also provided important details that did not emerge in the group discussion.

General Overview

Results of the recall exercise followed a similar pattern regardless of the set of emissions statements read by participants (i.e. set A or B). Moreover, with few exceptions (identified below), the results were similar for youth and adults. To the extent that statements in either set were recalled, they were much more likely to be remembered in part than in their entirety. Indeed, with the exception of statements A3 and B1, only a small number of participants recalled the full content of any of the statements they read.[*]

Information that participants were most likely to recall in either set were numbers or quantities. The number recalled most often, by far, was 4,000 chemicals. Over three-quarters of the participants who reviewed either set remembered this figure from the statements they read. This is not surprising since four of the six statements in each set refer to this number. However, most of the participants who remembered it abstracted it from the specific statements in which it appeared. In other words, most of them focused exclusively on the figure itself and did not link it to any additional information from the statements in which it appeared. Indeed, probing revealed that most participants did not associate this number with a specific statement, but remembered it because they came across it a number of times. Moreover, although a substantial majority of participants

[*] Complete recollection does not mean the ability to recall the statement word for word. Rather, it means the ability to identify all of the key elements of a statement.

recalled this number, most of them did not identify it specifically as the number of chemicals in tobacco smoke. More often than not, they simply wrote down '4,000 chemicals'.

Apart from numbers/quantities, the other main aspect of statements to resonate with participants in terms of recollection was health-related impacts. Examples include 'increased risk of disease/death', 'cancer-causing', and 'negative health impact'.

Aspects of statements that participants were least likely to recall were references to specific chemicals (i.e. benzene, hydrogen cyanide, formaldehyde, toluene, and nitrosamines) and/or chemical processes (e.g. 'chemicals are released as tobacco burns', 'Unlit tobacco + fire +oxygen = tobacco smoke').

Set A

Toxic emissions statements in set A included the following:

- **A1:** Tobacco smoke contains over 4000 chemicals which over time add up in your body and increase your risk of disease and death.
- **A2:** Nicotine, benzene, carbon monoxide, hydrogen cyanide, formaldehyde and toluene are some of the toxic chemicals present in the tobacco smoke that you inhale.
- **A3:** Tobacco smoke contains over 4000 chemicals, more than 50 of these are cancer causing.
- **A4:** 10 puffs per cigarette x 20 cigarettes per day x 365 days = 73000 puffs containing over 4000 chemicals per year
- **A5:** Some toxic chemicals, including lead, nitrosamines and nicotine, are found naturally in unburned tobacco. These chemicals are released as tobacco burns.
- **A6:** Burning tobacco causes over 2500 chemicals in unlit tobacco to be transformed into more than 4000 chemicals in tobacco smoke.

Overview

Participants who reviewed the statements in set A were most likely to recall statements A4 and A3 or parts of them. Moreover, these two statements were most likely to be recalled in their entirety. That said, statement A3 was almost equally likely to be recalled by both youth and adults, while A4 was much more likely to be recalled by youth than by adults. Participants were least likely to recall statement A6. Moreover, those who did were much more likely to recall the difference between the number of chemicals in burned and unburned tobacco than the reason for it (i.e. the burning process). Recollection of statements A2 and A5 was mostly limited to recall of specific chemicals, and a small number of them at that (usually nicotine and carbon monoxide). Recall of statement A1 was more likely among youth than adults.

Recall of each statement is discussed more fully below. As a visual aid to the presentation of this information, the part or parts of statements most likely to have been remembered are

highlighted in red. Note that references to 4,000 chemicals are not included below unless they were clearly linked by participants to the specific statements in which they appear. For example, if someone wrote down '4,000 chemicals in tobacco' on their exercise sheet, this is counted as part of the general recollection of this figure reported above.

A1: Tobacco smoke contains over 4000 chemicals which over time add up in your body and increase your risk of disease and death.

Approximately one-third of the participants who read this statement recalled something specific about it or part(s) of it, though it was more likely to be remembered by youth than adults. Those who recalled aspects of this statement were almost equally likely to recall the reference to a build up of chemicals over time or an increased risk of disease or death. Only a few recalled both.

Asked what was memorable about this statement, participants identified the reference to incrementalism (i.e. growth or increase over time), as well as the specific impact on health (i.e. disease or death).

A2: Nicotine, benzene, carbon monoxide, hydrogen cyanide, formaldehyde and toluene are some of the toxic chemicals present in the tobacco smoke that you inhale.

Close to half the participants who read this statement recalled specific part(s) of it, though no one remembered it in its entirety. Recollection was generally limited mainly to recall of specific chemicals, followed by a reference to their toxic nature. No one noted specifically that these chemicals are present in inhaled tobacco smoke. Nicotine, carbon monoxide, and formaldehyde were the chemicals most likely to be remembered, with most recalling at least two of these. No more than a few identified the other chemicals by name and no one identified toluene.

Participants explained that the chemicals they recalled were remembered primarily because they tend to be commonly known, either because they are associated with cigarettes (i.e. nicotine) or with something in ordinary life (e.g. carbon monoxide = car exhaust). The expression 'toxic' was recalled because of its negative connotation.

A3: Tobacco smoke contains over 4000 chemicals, more than 50 of these are cancer causing.

This was one of two statements most likely to remembered, in whole or in part, by participants. Just over half recalled something from it, and it was equally likely to be recalled by youth and adults. In addition, close to half of those who recalled this message recalled it entirely or almost entirely (the omission being a specific reference to tobacco smoke). The other half remembered the reference to 50 cancer-causing chemicals. A few mistakenly recalled a reference to 50 types of cancer.

What was identified as memorable about this statement included the numbers/quantities, the newness of the information (i.e. they learned something), its brevity, and the specific reference to cancer.

A4: 10 puffs per cigarette x 20 cigarettes per day x 365 days = 73000 puffs containing over 4000 chemicals per year

This was the other statement most likely to be recalled in whole or in part by those who read it. As was the case with the previous statement, just over half the participants recalled something from it. That said, it was much more likely to be recalled by youth than by adults. Moreover, it was less likely to be recalled completely, with some only recalling it very vaguely (i.e. aware of an equation-type message). The part most likely to be remembered was the reference to 20 cigarettes a day over a period of one year (365 days) equalling 73,000 puffs a year. Those who recalled only one aspect of the statement tended to recall the reference to 73,000 puffs (i.e. the result of the equation). A few mistakenly recalled a reference to 73,000 chemicals.

Memorable aspects of this statement included the combination of numbers/quantities, the newness of the information, the meaningfulness/relevance of the expression 'puffs', and the equation-like form of the statement.

A5: Some toxic chemicals, including lead, nitrosamines and nicotine, are found naturally in unburned tobacco. These chemicals are released as tobacco burns.

Close to one-third of participants who read this statement recalled part(s) of it, though recollection was almost entirely limited to recall of specific chemicals. Only a few recalled a reference to chemicals being released as tobacco burns. While nicotine and lead were often both remembered, no one recalled nitrosamines.

As was the case with statement A2, participants explained that the chemicals they recalled were remembered because they are associated with cigarettes (i.e. nicotine) or are commonly known (i.e. lead).

A6: Burning tobacco causes over 2500 chemicals in unlit tobacco to be transformed into more than 4000 chemicals in tobacco smoke.

Participants were least likely to recall this statement or parts of it. Less than one-quarter remembered something specific from this statement. Nearly all of them recalled the *difference* between the number of chemicals in unburned and lit tobacco. This usually took some variation of the following: 'unburned tobacco has 2,500 chemicals while lit tobacco has 4,000'. Only a few referred specifically to the reason for this difference (i.e. that the burning of tobacco *causes* this difference).

General Information Remembered by Some

Some participants recalled general information from this set of statements. This included the following:

- There are many chemicals in cigarettes
- Cigarettes contain dangerous chemicals
- Cigarettes cause cancer
- Burning cigarettes causes more chemicals.
- Cigarettes release chemicals when burned

- Smoking 20 cigarettes a day is dangerous.

Set B

Toxic emissions statements in set B included the following:

- **B1**: Tobacco smoke is a deadly mixture of over 4000 chemicals.
- **B2:** Unlit tobacco (over 2500 chemicals) + fire +oxygen = tobacco smoke (over 4000 chemicals)
- **B3:** Nicotine occurs naturally in tobacco plants and is responsible for causing the addiction to tobacco products.
- **B4:** Repeated exposure to tobacco smoke which contains over 4000 chemicals greatly increases the risk to your health.
- **B5:** A lit cigarette = smoke containing over 4000 chemicals + one puff = your lungs full of smoke → chemicals enter your bloodstream → negative health impact
- **B6:** Most of the toxic chemicals in tobacco smoke, including carbon monoxide, benzene, formaldehyde and hydrogen cyanide, are created when tobacco burns.

Overview

Statements in this set were similarly likely to be recalled by youth and adults. Participants were most likely to recall statement B1, with a majority recalling it in its entirety or almost entirely. Between one-third and half of the participants remembered elements of the following statements: B2, B3, B5, and B6. That said, no more than few recalled any of these statements in their entirety. Participants were least likely to recall statement B4; those who did said it was because most of the information was already common knowledge.

Recall of each statement is discussed more fully below. As was the case with the discussion of statements in set A, the part or parts of statements in set B most likely to have been remembered are highlighted in red. Once again, note that references to 4,000 chemicals are not reported unless they were clearly linked to the specific statements in which they appear.

B1: Tobacco smoke is a deadly mixture of over 4000 chemicals.

This was the statement in this set most likely to remembered, in whole or in part, by participants. Well over half recalled something from it and a majority recalled it entirely or almost entirely (the omission being the specific reference to tobacco smoke). Most of those who did not remember it in its entirety remembered the reference to a ‘deadly mixture’ or to tobacco being deadly. A few misinterpreted the statement or recalled it incorrectly, stating that tobacco contains 4,000 deadly chemicals.

What was identified as memorable about this statement included the numbers/quantities, the newness of the information, the brevity and directness of the statement, and the health impact (i.e. deadly).

B2: Unlit tobacco (over 2500 chemicals) + fire +oxygen = tobacco smoke (over 4000 chemicals)

Approximately one-third of the participants remembered something specific from this message, but only a few remembered the equation in its entirety or all of its elements. As was the case with statement A6, most of them recalled the *difference* between the number of chemicals in unburned and lit tobacco (i.e. unburned tobacco has 2,500 chemicals while lit tobacco has 4,000). Some recalled simply that an unlit cigarette has 2,500 chemicals. Finally, some recalled parts of the equation or remembered it in a general way. These recollections included the following:

- Nicotine + fire + smoke = chemicals
- 2,500 chemicals + oxygen + fire
- Tobacco + fire + oxygen
- 2,500 chemicals + oxygen.

As was the case with statement A4, what was identified as memorable about this statement was the combination of numbers/quantities, the newness of the information, and the equation-like form of the statement.

B3: Nicotine occurs naturally in tobacco plants and is responsible for causing the addiction to tobacco products.

Over one-third of participants recalled something from this statement. Nearly all of them recalled one or the other of its two main parts (i.e. nicotine occurs naturally in tobacco and is the addictive element), but only a few recalled both. Moreover, participants were almost equally divided between those who remembered that nicotine occurs naturally in tobacco and those who remembered that it is the addictive element in tobacco.

What was identified as memorable about this statement was primarily the newness of the information and its relevance. The latter (i.e. its relevance) was linked specifically to identification of the addictive element in tobacco.

B4: Repeated exposure to tobacco smoke which contains over 4000 chemicals greatly increases the risk to your health.

This was the statement in this set least likely to be remembered. Only a small number of participants recalled anything specific about it and those who did focused on repeated exposure to tobacco increasing the risk to one's health.

Those who remembered specific information from this statement said they remembered it because they already knew it.

B5: A lit cigarette = smoke containing over 4000 chemicals + one puff = your lungs full of smoke → chemicals enter your bloodstream → negative health impact

While well over one-third of participants recalled some element of this statement, no one recalled the entire statement or all of its elements. The elements or aspects most likely to be recalled were the reference to one puff, chemicals in the bloodstream, lungs full of smoke, the negative health impact, or some combination of these elements. These combinations included the following:

- 4,000 chemicals in bloodstream
- One puff = 4,000 chemicals in lungs
- One puff = chemicals in bloodstream = health impact.

Memorable aspects of this statement included its equation-like nature (even though no one remembered the full equation), the reference to one puff, which was described as a meaningful measure or reference point, and the reference to chemicals in the bloodstream, described as a vivid image.

B6: Most of the toxic chemicals in tobacco smoke, including carbon monoxide, benzene, formaldehyde and hydrogen cyanide, are created when tobacco burns.

While half of participants who read this statement recalled part(s) of it, recollection was almost entirely limited to recall of specific chemicals. Moreover, only two chemicals – formaldehyde and carbon monoxide – were routinely recalled. Only a few recalled the reference to any of these chemicals being released as tobacco burns.

As was the case with statements A2 and A5, participants explained that the chemicals they recalled were remembered because they are commonly known.

General Information Remembered by Some

Some participants recalled general information from this set of statements, including the information that cigarettes are harmful and that cigarettes endanger your health.

Types of Information Recalled

The type of things that participants said they tend to recall in these types of statements is:

- Information that is personally relevant to them
- Information that is new to them.
- Numbers/statistics
- Equations (particularly youth, and particularly if they are short and uncomplicated).

REVIEW OF CONTENT OF TOXIC EMISSIONS LABELLING

This section reports on participants' reactions to and impressions of the potential toxic emissions statements for cigarette packages. Following the recall exercise, participants reviewed and discussed each individual statement, one at a time.

General Themes and Issues

This section begins by reporting on general themes and issues that emerged through review of the various toxic emissions statements. By this, we mean feedback that was provided by participants routinely for most if not all of the statements. This will be followed by a section reporting on feedback related specifically to individual statements.

Meaningful, Easy-to-Relate-to Information – Resonates Most with Participants

In terms of their overall impressions of the toxic emissions statements they reviewed, participants reacted most positively to information presented in what many referred to as a 'meaningful' 'relevant', or 'easy-to-relate-to' manner. This included the use of statistics/ data, references to health impacts/consequences, use of strong/vivid wording, and a short, direct style of presentation. It was noted that these characteristics also made statements easier to remember. While they also reacted positively to *new* information, this usually had to be presented in a meaningful or relevant manner to elicit a positive reaction. Conversely, participants were least likely to react positively to information that seemed abstract, irrelevant, long-winded, or to which they could not relate in a meaningful and comprehensible way.

Perhaps not surprisingly, participants' preferences tend to be very similar to what they were most likely to remember or recall from the various statements.

Statements Described as Clear and Easy to Understand

There was widespread agreement that the potential toxic emissions statements are clear and easy to understand. While participants occasionally offered suggestions to improve the text of certain statements, they tended to focus on the length of the statement or the possibility of adding emphasis (e.g. bolding, underlining), as opposed to improving clarity and ease of understanding.

That said, a few statements in set B were identified as lacking clarity. Through probing, for example, it became evident that some participants assumed that the phrase 'repeated exposure to tobacco smoke' in statement B4 referred specifically to the effect of second-hand smoke on non-smokers. In explaining why they thought this, they focused on the term 'exposure' which suggested to them the idea of someone being subjected to tobacco smoke as opposed to someone who is subjecting himself/herself to it (i.e. inhaling it). As well, a few participants were confused by the difference between the number of chemicals in unlit tobacco and the number in lit tobacco in statement B2. They did not understand that the difference was due to the chemical reaction caused by combustion. Finally, a few participants described statement B1 as potentially confusing because, according to them, it gives the impression that all 4,000 chemicals in tobacco smoke are deadly.

Information Considered Credible and Trustworthy

There was widespread agreement that the information provided in the statements is credible and trustworthy. A number of participants expressed surprise at the number of chemicals in tobacco smoke and/or unlit tobacco, but this did not tend to translate into scepticism or incredulity. A few participants were sceptical about this or wondered how this was calculated, but no one expressed categorical disbelief. The reason routinely given to explain why this information is credible is its source (i.e. Health Canada). Participants tend to regard the department as a credible source of information on this topic. Some said they found the information credible or trustworthy because the government could not afford to be wrong about it. It was suggested that tobacco companies would sue the government if it gave false information about their products. Consequently, the government would not put out this information unless it was true.

A few participants were generally sceptical about the information included in the toxic emissions statements. While they did not take issue with specific content, they suspected that the government is intent on getting people to stop smoking and might therefore 'exaggerate' the potential dangers of smoking in order to influence smokers to quit smoking or to try to influence people not to start smoking.

Number of Chemicals in Tobacco/Tobacco Smoke – New Information to Most

While some of the information provided in the statements was described by participants as information they already knew or simply took for granted, there was also some new learning. The information most likely to be new to participants was the number of chemicals in tobacco smoke and/or unlit tobacco. Most participants did not know the number of chemicals in either. Related to this, many added that they did not know that combustion increased the number of chemicals in tobacco smoke.

Other information described as new included the nature of the chemicals in tobacco smoke and/or unlit tobacco. Participants who described this information as new to them were most likely to refer to these chemicals in general or collectively as opposed to identifying specific chemicals by name as new to them (i.e. carbon monoxide, benzene, formaldehyde, hydrogen cyanide, toluene, lead, nitrosamines, and nicotine). Regarding nicotine specifically, a few participants did not know that it exists naturally in tobacco plants; rather, they had previously assumed it was an additive (i.e. added by tobacco companies).

Statements Usually Described as Long. Short, To-the-Point Messages Preferred

Participants described many of the toxic emissions statements they reviewed as long or too long, and many said they probably would not read them in their entirety because of this. This was especially the case with statements in set A. The length of statements was seen as limiting their impact, and many participants emphasized the importance of short, direct, to-the-point text in making a message effective. In light of this, it is not surprising that shorter messages were generally preferred to longer ones.

Review and Ranking of Specific Toxic Emissions Statements

This section presents feedback related to specific toxic emissions statements and ranks them in terms of their perceived effectiveness at informing and educating smokers about the toxic emissions of cigarettes.

Overview

Within Set A, statements A3 and A4 were most likely to be rated as effective at informing and educating smokers about the toxic emissions of cigarettes, followed by A1. While all three were almost equally likely to be chosen as the number one choice, A3 and A4 were more likely to be rated as second choice than A1. In addition to being included most often among the top two choices, A3 was also most likely to be preferred by both adults and youth. By comparison, A1 was much more likely to be preferred by adults and A4 was much more likely to be preferred by youth.

Statements A5 and A2 were the most likely to be rated as ineffective at informing and educating smokers about the toxic emissions of cigarettes, followed by A6. Youth were more likely than adults to rate A5 and A2 as ineffective, while youth and adults were almost equally likely to rate A6 as ineffective.

Within Set B, statement B1 was, by far, the most likely to be rated as effective at informing and educating smokers about the toxic emissions of cigarettes, with over two-thirds identifying it as their number one choice. Moreover, it was almost equally likely to be chosen by youth and adults. It was followed at a distance by B6, B3, B2, and B4, which were all similarly likely to be included among the top two choices.

Statement B5 was most likely to be rated as ineffective at informing and educating smokers about the toxic emissions of cigarettes, followed by B2. Adults were more likely than youth to rate B5 as ineffective, while youth and adults were almost equally likely to rate B2 as ineffective. B3 and B6 were equally likely to be rated as ineffective, but B6 was much more likely to be rated as such in Montreal than anywhere else.

Feedback on each toxic emissions statement is provided below. They have been grouped according to their perceived effectiveness beginning with those considered to be the most effective.

Feedback on each statement includes the results of an exercise in which participants were asked to rank the six messages they reviewed in terms of their perceived effectiveness for informing and educating smokers about the toxic emissions of cigarettes. Participants were asked to use a '1' to identify the most effective message, a '2' for the next best, and so on until they had ranked all six of the statements they reviewed.

When reviewing the grouping of statements below (i.e. 'most effective', 'less effective', 'least effective'), the reader should keep in mind that the order of presentation of statements from different sets is not an indication of their effectiveness in relation to each other. For example, the fact that statement A3 follows statement B1 in the section on 'most effective toxic emission statements' does not indicate that statement B1 is better or more effective than statement A3. There was no comparison or assessment of statements

between sets (i.e. statements were only compared and assessed in relation to other statements within the same set). Consequently, their characterization as 'most effective', 'less effective', or 'least effective' is based on their perceived effectiveness in relation to other statements within the same set. By the same token, however, the fact that statement A4 follows statement A3 in the section on 'most effective toxic emission statements' does indicate that statement A3 was considered better or more effective than statement A4.

Most Effective Toxic Emissions Statements

B1: *Tobacco smoke is a deadly mixture of over 4000 chemicals.*

Reaction to this statement was almost entirely positive, with many reacting very favourably to it. Among the statements in set B, it was most likely, by far, to be rated as effective at informing and educating smokers about the toxic emissions of cigarettes. Approximately three-quarters of those who reviewed it ranked it among their top two choices, and almost all of these identified it as their first choice. Moreover, it was almost equally likely to be ranked as effective by youth and adults.

It was routinely described as succinct, clear, and to the point. Many also described it as attention-grabbing because it delivers a powerful self-explanatory message in a short, pithy statement. The power of the statement was greatly enhanced by the fact that it contains information that was new to virtually everyone (i.e. that tobacco smoke contains over 4000 chemicals).

Critical feedback on this statement was very limited. Specifically, some described it is potentially confusing because it gives the impression that all 4,000 chemicals in tobacco smoke are deadly.

Positive reaction to this statement was underscored by the fact that no suggestions were made for improving it except to highlight or bold the words 'deadly mixture' and 'over 4,000 chemicals'. It was also suggested by some that this and other statements referencing 4,000 chemicals use the standard or traditional technique of including a comma after the number '4'. To avoid repetition, this will not be included among the suggestions for improving other statements which include a reference to 4,000 chemicals. However, it should be taken for granted that this suggestion applies to them as well.

A3: *Tobacco smoke contains over 4000 chemicals, more than 50 of these are cancer causing.*

Reaction to this statement was also almost entirely positive, and for similar reasons as statement B1 – i.e. the perception that the message is succinct, clear, and precise. It was one of two statements in set A most likely to be rated as effective at informing and educating smokers about the toxic emissions of cigarettes. Over two-thirds ranked it among their top two choices, and it was similarly likely to be considered effective by adults and youth.

Most identified its main strength to be the reference to over 50 cancer-causing chemicals, with some describing this reference as a concrete number linked to a concrete health-related impact. Indeed, the main message of this statement was usually taken to be that

smoking causes cancer. Many also liked the reference to the over 4000 chemicals in tobacco smoke because this was new information to them. That said, this was not considered to be as important as the reference to the number of cancer-causing chemicals.

Critical reaction to this statement was relatively limited and tended to focus on the reference to over 4000 chemicals. While many liked this reference, some felt that it did not add anything essential to the message. In fact, a few felt that its coupling with the reference to the number of cancer-causing agents raised questions that could potentially limit the effectiveness of the message. Specifically, some participants queried the status of the approximately 3,950 'other' chemicals, wondering if the statement was implying that they are not dangerous because they are not cancer-causing. A few others suggested that people comparing the two numbers might come to the conclusion that 50 dangerous chemicals out of 4000 is not that bad a ratio. The only other critical comment on this statement focused on the reference to cancer. While most reacted positively to this, a few participants felt that the reference to cancer was now too commonplace in tobacco messages to be effective.

The suggestion made most often for improving this statement was to remove the reference to the over 4000 chemicals and limiting it to 'Tobacco smoke contains over 50 cancer-causing chemicals'. The only other suggestion was to replace the word 'these' by the word 'which' (i.e. '…more than 50 of which are cancer-causing').

A4: *10 puffs per cigarette x 20 cigarettes per day x 365 days = 73000 puffs containing over 4000 chemicals per year*

This was the other statement in set A most likely to be rated as effective at informing and educating smokers about the toxic emissions of cigarettes. Well over half rated it among their top two choices, though it was much more likely to be preferred by youth than adults.

The main thing participants liked about this statement was the ability to personalize the information or relate to it. Many described the statement as providing concrete quantified information that is relevant to them. Many also liked the equation-like presentation, describing it as simple and clear. There was widespread agreement that the main message was to show the cumulative impact of smoking over a one-year period, and some described this message as the most thought-provoking one they read.

Critical reaction to this statement focused mainly on an inability to relate to the message. A number of participants said that many people will not feel addressed by this message because of the specific reference to smoking 20 cigarettes a day. These participants included lighter smokers as well as occasional smokers, who felt that the message is addressed to heavy smokers. It was suggested that this will limit the effectiveness of the message because people who are not heavy smokers might focus on the reference to 20 cigarettes a day and conclude that this does not apply to them. Other than this, critical reaction to this statement focused on two things. Some participants, mostly adults, found the equation too complicated, too long, and/or did not find it easy to remember because of the many numbers involved. As well, a few described the result of the equation as unclear. Specifically, it was not clear to them if there were 4000 chemicals in *each* of the 73,000 cigarette puffs or 4000 chemicals per year (i.e. cumulatively).

The only frequently made suggestion for improving this statement was to reduce the number of cigarettes per day referred to (e.g. 10 instead of 20) in order to make the information relevant to a greater number of smokers. Related to this, some suggested producing different versions of this statement each of which includes a different number of cigarettes smoked per day. Some suggested making it clearer that there are 4000 chemicals in *each* of the 73,000 cigarette puffs. Finally, it was suggested that the statement (or a variant of it) be shortened; for instance, to one cigarette puff = inhaling 4000 chemicals.

A1: *Tobacco smoke contains over 4000 chemicals which over time add up in your body and increase your risk of disease and death.*

Reaction to this statement tended to be positive or neutral. Half of the participants who assessed it in terms of effectiveness at informing and educating smokers about the toxic emissions of cigarettes included it among their top two choices. That said, it was much more likely to be preferred by adults than youth. Nearly all the others included it in the middle of the pack in terms of effectiveness (i.e. third and fourth place among the six statements).

Those who liked it focused mainly on the incremental aspect built into the message (i.e. the reference to a build-up of over 4000 chemicals over time) and the emphasis on the health-related implications of this build-up. Many also said they liked the statement because it is simple and clear. Some reacted positively to what they identified as the main message of the statement: that chemicals from smoking build up in the body over time.

Many others, however, especially youth, reacted to this statement in a neutral or indifferent way. They tended to view it as lacking vigour and/or not being hard-hitting enough. In explaining this impression, some pointed to the expressions ‘over time’ and ‘increase your risk’, describing them as vague or overly general. Interestingly, some also described the reference to over 4000 chemicals as vague in this specific statement. A few explained that that use of specific numbers is effective when dealing with small amounts, but less effective when dealing with very large ones because these tend to lack concreteness or relevance as referential points. Others said that the focus of the message is on the long-term effects of smoking, and that this limits its effectiveness. With this in mind, one participant paraphrased this statement as follows: ‘Some day you might get sick or even die from smoking’.

Suggestions for improving this statement focused on making the message more vivid and concrete. This included cutting the words ‘over time’, including more specific or definite health risks (e.g. cancer), focusing exclusively on the risk of death, and replacing the reference to over 4000 chemicals with the words ‘thousands of chemicals’.

Less Effective Toxic Emissions Statements

B4: *Repeated exposure to tobacco smoke which contains over 4000 chemicals greatly increases the risk to your health.*

Participants tended to react neutrally or indifferently to this statement, and this was reflected in their assessments of it in terms of perceived effectiveness. Participants tended to provide middling assessments of this statement. Approximately two-thirds placed it in the middle of the pack in terms of perceived effectiveness, with the rest almost equally split in ranking it among their top two or bottom two preferences.

Although described positively by some as simple and straightforward, this statement was often described as lacking vigour and/or not being hard-hitting enough (like statement A1). This was often linked to the vagueness of the reference to health-related impact (i.e. *greatly increases the risk to health*). Some said that, excluding the new information (i.e. the number of chemicals in tobacco smoke), this statement resembles the standard or stereotypical warning message about smoking, which was described as boring or predictable. Moreover, the reference to the number of chemicals in tobacco smoke did not increase the perceived effectiveness of the message. Indeed, many did not think it added anything substantial to the message, and some said that the structure of the statement gives the impression that the reference to the number of chemicals was included almost as an afterthought (e.g. 'can we squeeze in a bit more information').

The perceived effectiveness of the statement was also limited by two other factors. One was lack of clarity. As noted in the section on general themes and issues, some participants assumed that the phrase 'repeated exposure to tobacco smoke' referred specifically to the effect of second-hand smoke on non-smokers. The other was a sense among some participants that this message does not apply to them. Here as well, attention was drawn to the words 'repeated exposure to tobacco smoke'. To some occasional smokers, the emphasis on 'repeated exposure' suggested that this statement targets daily smokers, and therefore is not relevant to them.

Suggestions for improving this statement included removing the reference to over 4000 chemicals, removing the word 'repeated', removing the words 'repeated exposure', and being more specific and concrete in describing the health-related impacts of smoking.

B3: *Nicotine occurs naturally in tobacco plants and is responsible for causing the addiction to tobacco products.*

Reaction to this statement ranged from positive to neutral to critical, and participants provided mixed assessments of it. In terms of its perceived effectiveness, virtually identical proportions included it among their top two choices, their bottom two, and in the middle of the pack (i.e. in third and fourth place).

Those who liked it described it as clear, simple, and containing useful information they did not know; specifically, that the addictive element in tobacco is natural. Some also said they liked the fact that this statement does not rely on what they referred to as 'scare tactics'. Both neutral and critical reactions were based on the impression that the statement does not contain important information or information that would catch their attention. Those who

reacted neutrally tended to describe the information as interesting, but not very important. Some who reacted critically tended to describe the information as meaningless. Indeed, the reference to nicotine being natural perplexed some because of a tendency to associate 'natural' with 'good'. In other words, they did not draw from this the inference that nicotine is not an additive to tobacco.

Suggestions for improving this statement included the following: reversing the order of the information presented so that the information perceived as more important (i.e. nicotine is the addictive element in tobacco) appears first, removing the words 'is responsible for' since they are redundant, and simply shortening the statement to 'Nicotine causes the addiction to tobacco products'.

Least Effective Toxic Emissions Statements

B6: *Most of the toxic chemicals in tobacco smoke, including carbon monoxide, benzene, formaldehyde and hydrogen cyanide, are created when tobacco burns.*

While there was widespread agreement that this statement is clear and contains new information, overall reaction to it tended to be critical. The largest proportion of participants placed this statement in the middle of the pack in terms of perceived effectiveness. Critical reaction to it was more prevalent among Francophone participants, and it was much more likely to be rated among the bottom two choices in terms of effectiveness in Montreal than anywhere else.

The main reason for the critical reaction was a perceived lack of relevance, which was linked to two factors. In the first place, participants could not relate to most of the chemicals in this statement in a meaningful way due to the absence of any connection to referential points in their daily life. In other words, with the exception of carbon monoxide, these were just names that meant nothing to them. Secondly, the message focuses on a process, specifically a chemical process, which is equally devoid of meaning or relevance except perhaps as interesting information. Indeed, the only thing in this statement that tended to resonate with participants and which they commented on positively was the term 'toxic' which did provide a meaningful referential point.

Finally, while most participants described the statement itself as clear, some described it as too long and too 'scientific'. Some also queried why these specific chemicals were included as opposed to others (e.g. are they the most dangerous?, are their concentrations higher?).

Suggestions for improving this statement typically included focusing on the impact or effect of individual chemicals as opposed to the process through which they are created, as well as identifying what these chemicals are used for in daily life.

A2: *Nicotine, benzene, carbon monoxide, hydrogen cyanide, formaldehyde and toluene are some of the toxic chemicals present in the tobacco smoke that you inhale.*

Overall reaction to this statement tended to critical. Well over half the participants who reviewed it included it among their bottom two choices in terms of perceived effectiveness, with most of the rest rating it in the middle of the pack.

As was the case with the previous statement, participants could not relate to most of the chemicals in any meaningful way. Many described this statement as a list of chemical ingredients with no specific relevance. In particular, it was noted that there is no mention at all of health impacts. Echoing feedback on the previous statement, some described it as too long and queried why these specific chemicals were included in the statement as opposed to others. Finally, the part of the statement that was described as relevant, the reference to these chemicals being 'toxic', was described as buried in the middle of the statement.

As was the case with the previous statement, suggestions for improving this statement typically included focusing on the impact or effect of individual chemicals as well as providing uses of these chemicals in daily life. A few suggested replacing the term 'toxic' with the term 'poisonous' because it was felt this would resonate more with smokers and provide some reference to health implications.

A5: *Some toxic chemicals, including lead, nitrosamines and nicotine, are found naturally in unburned tobacco. These chemicals are released as tobacco burns.*

Feedback on this statement was very similar to feedback on statement B6. The reader is referred back to the latter for details. However, an additional critical comment on this statement had to do with its clarity. A few participants were unclear about whether the reference to 'some' chemicals being found naturally in unburned tobacco implied that other chemicals were added by manufacturers. Two-thirds of the participants who assessed this statement included it among their bottom two choices in terms of perceived effectiveness, with nearly all the rest rating it in the middle of the pack. Some did comment on this statement positively, noting that unlike statement A2, this one begins by referring to these chemicals as toxic and therefore includes important information at the beginning of the statement.

Suggestions for improving this statement included shortening it by removing the first few words (i.e. 'Some toxic chemicals including') and adding the word toxic to the second sentence.

A6: *Burning tobacco causes over 2500 chemicals in unlit tobacco to be transformed into more than 4000 chemicals in tobacco smoke.*

While this information was new to virtually all participants and many described it as interesting, feedback on this statement was almost entirely critical. Most participants rated this statement in the middle of the pack or among their bottom two choices in terms of its perceived effectiveness, with almost identical proportions doing each. Critical reaction was based almost entirely on the lack of relevance of knowing the information in this statement. Many said it reminded them of a chemistry lesson that has little if any relevance. As an example, participants routinely queried the relevance of knowing the

number of chemicals in unburned tobacco. As more than one participant put it: 'Unless I'm going to eat the tobacco, how will this affect me?'.

A few suggested that this statement could be improved by replacing the word 'burning' with the word 'lighting' or 'smoking' because the word 'burning' conjures up images of an experiment in a laboratory as opposed to someone lighting a cigarette. The only other suggestions for improving this statement were to shorten it and include some reference to health effects.

B2: *Unlit tobacco (over 2500 chemicals) + fire +oxygen = tobacco smoke (over 4000 chemicals)*

Feedback on this statement was very similar to feedback on the previous statement, with the focus of criticism on the relevance of knowing the difference between the number of chemicals in unburned vs. burned tobacco (i.e. what is the relevance of knowing that there are over 2,500 chemicals in unburned tobacco?). In addition to this, however, many described the equation-like presentation as distracting or confusing due to the use of mathematical symbols and parentheses. Many said they had to re-read it a few times in order to understand it. One participant described the experience of reading it as forcing him to think (i.e. it is difficult to understand) without being thought-provoking. Close to half the participants who assessed this statement included it among their bottom two choices in terms of perceived effectiveness. The rest were more likely to rate it in the middle of the pack as opposed to among their top two choices.

Suggestions for improving it included shortening it, cutting the reference to oxygen, removing the parentheses, and adding a reference to smoke being inhaled or going into one's lungs.

B5: *A lit cigarette = smoke containing over 4000 chemicals + one puff = your lungs full of smoke → chemicals enter your bloodstream → negative health impact*

The content and format of presentation in this statement did not resonate positively with participants. Close to two-thirds rated this statement among their bottom two choices in terms of perceived effectiveness, with adults much more likely to do this than youth.

This statement was widely regarded as too long and too detailed. There was a widespread sense that it contains too many parts and too many symbols, and some described it as a complicated a way of stating something simple. Indeed, suggestions for improving it involved shortening the equation to emphasize the key components and enhancing the statement's impact. These key components included the references to 'one puff', 'over 4000 chemicals in bloodstream', and 'negative health impacts'. Some also felt that the reference to the health impacts could be made more concrete or precise.

Additional Messages Perceived as Effective

Most participants were unable to identify additional messages about chemicals in cigarette smoke that would resonate with them. However, those who did, offered suggestions which tended to elicit support from other participants. These suggestions included the following:

- Create statements that identify other daily-life uses of chemicals found in cigarette smoke (e.g. 'formaldehyde is used to preserve dead bodies'). This suggestion elicited widespread support among participants. It was even suggested that an entire set of statements focus on this, dealing with different chemicals, one chemical at a time (i.e. 'benzene is used for…' carbon monoxide…').
- Focus on the short-term effects of smoking in order to have a greater impact on youth smokers.
- Target occasional smokers or create messages that clearly apply to them as well.
- Include harder-hitting, more graphic messages. This was suggested by youth participants.
- Explain the impact specific chemicals have on the human body (e.g. 'toluene will …').
- Identify specific types of cancer caused by these chemicals.
- Identify the number of people a year who die from exposure to these chemicals through smoking.
- Create an equation-like statement similar to A4 but which identifies the yearly cost in dollars of smoking a certain number of cigarettes per day.

FORMAT AND COLOUR PREFERENCES

This section reports on participant preferences regarding the format and background colours for the potential toxic emissions statements.

Format

The second section of the binders distributed to participants included two pages with examples of four different formats for the messages:

- Where English and French are side by side
- Where English and French are one on top of the other
- Both of these formats repeated twice, once for flip top packages and once for slide and shell packages.

On the first page, these formats were presented with the longest toxic emissions statement they had previously seen, and on the second page, the same formats were presented with the shortest statement so that participants could see how the formats work with statements of different length.

Findings

Side-by-Side Format Preferred to Over/Under Format

Participants were much more likely to prefer placing the messages side-by-side than over/under one another. However, this is due in large part to a nearly unanimous preference for this format in Montreal (regardless of which language came first). Participants in other locations were more divided.

Reasons for preferring the side-by-side format included a sense that it is more aesthetically pleasing, an impression that it makes the message stand out more distinctly, and an impression that the message looks shorter. Some also said the side-by-side format is easier to read, but those who preferred the over/under format were more likely to say the latter. Their reasoning was that when they read text their eyes tend to continue on the same level as long as they encounter words. The over/under format accommodates this tendency, whereas the side-by-side format interrupts it because the two-column format obliges one to switch lines before actually arriving at the end of a line.

Length of Statement More Likely to Influence Preferences Than Package Type

Despite the overall preference for the side-by-side format, a number of participants who preferred it said that for short messages, especially ones that would fit on one line, the over/under format is better. All those who preferred the over/under format said they preferred it regardless of the length of the message.

The length of the statement was more likely to influence format preferences than the type of package. Indeed, few participants said their preference would be influenced by the type of package. Those who did were participants who generally preferred the over/under format, but thought the side-by-side format looked better on flip top packages. It was

suggested that the cover on the flip top package creates a column-like effect on the side of the package (i.e. because of the diagonal line down the side of the package). Placing the statement in two separate columns tends to continue this column-like effect whereas the over/under format tends to clash with it.

Colour

The last section of the binder distributed to participants included examples of six background colours being considered for the toxic emissions statements (white, pink, grey, turquoise, green, and yellow). As in the previous section of the binder, this section included two pages. The first page presented these six colours with the longest statement and the second page presented the same colours with the shortest statement that participants had previously seen.

Findings

Yellow and White – Widely Considered Most Appropriate Colours

Perhaps not surprisingly, there was no consensus among participants when it came to preferred background colours, with each colour option having its supporters. That said, yellow and white were most often identified as appropriate background colours for the toxic emission statements. Conversely, grey and pink were most likely to be considered inappropriate or colours to be avoided, followed by turquoise.

While the length of the statements had no impact on participants' preferences, a number of participants indicated that the best colour would also depend in part on the actual colour of the pack of cigarettes.

As well, participants felt that different colours should be used (i.e. there should be a number of colour options), something that is being considered by Health Canada. More detailed feedback on each colour is provided below.

Yellow

Yellow was most frequently identified as an appropriate colour background for the toxic emissions statements. Reasons given to explain why typically focused on the perception that it is attention-grabbing, easy to read (black text against this colour background), and appropriate. Two factors were identified to explain its perceived appropriateness. One was that the colour yellow is often used to signal caution or warning (e.g. a yellow traffic light). The other was that yellow is the standard colour used for highlighting text. The common awareness that yellow is used to signal caution and to highlight things, it was argued, will immediately suggest to smokers that this is an important message. Those who did not like the use of yellow tended to focus on aesthetic reasons to explain why (e.g. not like the colour, view it as drab).

White

White was the second most frequently preferred background colour. Like yellow, many who liked it explained that it is easy to read black text against this colour background.

While it did not have the evocative power of yellow, many said they liked it because they are used to it as a background colour on their cigarette packages. In other words, they like it because they are familiar with it. On the other hand, some said they liked it because white is evocative of sobriety and neutrality. It was suggested that including the statement on a white background conveys a sense that the information is offered to inform, not to influence. Related to this, some said they liked it because they like the simple black text on white background format. Those who did not like the use of white described it as lacking in terms of ability to grab their attention.

Grey

While grey was the third most frequently preferred background colour, it was much more likely to be disliked than liked. Those who liked it tended to focus on what the colour evoked: sombreness and/or seriousness. In this sense, they felt that the colour would attract attention or be noticeable. Those who disliked it focused primarily on the difficulty reading the text (very hard to see black text on a grey background), and the perceived drabness and depressing nature of the colour.

Green

Green was liked as a background colour for two reasons: the facility to read the black text and its evocative nature. Regarding the latter, while participants agreed that green evokes nature and the environment, they disagreed about its appropriateness as a background colour for emissions statements on cigarette packages. Those who felt it was inappropriate felt that precisely because this colour evokes the environment or nature, it should not be used on cigarette packages. Others, however, felt that this would be attention-grabbing precisely because it is at odds with the product. It was added that this contrast could be thought-provoking and induce people to think about what they are releasing into the environment when they smoke. This prompted a reaction from others who felt that the environmental impact of smoking is insignificant when compared with the impact of car exhaust. Some participants did not like the use of green because it evokes a sense of permissibility (i.e. green traffic light means go). In other words, there was a sense that the use of green conveys the idea that it is alright to smoke.

Turquoise

Although turquoise was described by many participants as a colour that would grab their attention, it did not tend to seen as appropriate as a background colour for emissions statements. The main reason given was that text is difficult to read against this colour background. Others felt that this colour evoked the sky, water, or the environment in general, which makes it inappropriate as a background colour on cigarette packages. Those who liked it emphasized its attention-grabbing nature, with some adding that even if the colour is not entirely appropriate it will get peoples' attention.

Pink

Like turquoise, pink was widely described as attention-grabbing as a background colour. However, along with grey it was the colour most likely to be considered inappropriate as a background colour for emissions statements. Three reasons were routinely given to explain

why. One was difficulty reading text against this background colour – both the black text, but particularly the red 'warning' text. The other was the evocative power of pink. Pink was associated with a variety of things, all linked in some way to cheeriness, happiness, or light-heartedness, that were considered to be at odds with an emissions statement on cigarette packages. Specifically, this included candy, little girls, and health (e.g. healthy lungs, rosy cheeks). Finally, some did not like pink because it tends to be a gender-specific colour – i.e. for females. As was the case with turquoise, those who liked it emphasized the attention-grabbing nature of this colour.

Additional Colours Suggested by a Few – Orange Tops List

Only a few participants identified colours others than the six proposed that they thought would be effective as background colours for toxic emissions statements. These included orange, red, and black. The first two would be set against black text, while the black background would include white text. Orange was the only new colour that was identified with some frequency.

Statements Should be Framed to Draw Attention to Them

The only frequently-made suggestion with respect to the colours portion of the discussion was to include a black border or frame around the statements to draw attention to them.

APPENDIX

Testing of Mock-ups of Toxic Emissions Statements for Cigarettes (POR-07-34)

Recruitment Screener

Final: September 28, 2007

Profile characteristics:

- A set of 12 groups to be conducted, with four in each of Toronto, Calgary, and Montreal (French).
- Target audience: current smokers between 18 years of age and older.
- Participants to be recruited for two target audience groups with two each in each city:
  1. Cigarette smokers, aged 18 to 24 years (Youth)
  2. Cigarette smokers, aged 25 years and older (Adults).
- Each group to include a mix of participants by age (within appropriate parameters), income, education, ethnicity, and length of time smoking, with an approximate gender split.
- Twelve participants to be recruited for 8-10 to show per group.
- All participants to be paid $60 to participate.
- The following table presents the distribution and timing of the focus groups:

	Calgary (Series 1)	Calgary (Series 2)	Toronto (Series 1)	Toronto (Series 2)	Montreal (Series 1)	Montreal (Series 2)
	English	**English**	**English**	**English**	**French**	**French**
Date	Oct. 22	Oct. 23	Oct. 24	Oct. 25	Oct. 24	Oct. 25
6:00 pm	**Youth**	**Adults**	**Youth**	**Adults**	**Youth**	**Adults**
8:00 pm	**Adults**	**Youth**	**Adults**	**Youth**	**Adults**	**Youth**

Facility locations

Calgary
E-Style Studios
1011 1st Street SW
Suite 520
403.770.0296

Montreal
Ad Hoc Research
1250 Guy Street
Suite 900
514.937.4040

Toronto
Research House
1867 Yonge Street
2nd Floor
416.488.2328

Recruitment Screener

Hello, my name is _____. I'm calling on behalf of Phoenix, a public opinion research firm. We have been commissioned by Health Canada, a department of the Government of Canada, to conduct a series of discussion groups with smokers in your area.

Is there anyone in your household 18 years of age or older who smokes cigarettes, even if only on occasion? If so, may I speak with this individual?

Yes	1	
No	2	THANK/DISCONTINUE

⇒ IF THE SMOKER IS SAME PERSON, CONTINUE.
⇒ IF IT IS SOMEONE ELSE WHO IS AVAILABLE, ASK TO SPEAK WITH HIM/HER AND REPEAT INTRODUCTION.
⇒ IF IT IS SOMEONE ELSE WHO IS NOT AVAILABLE, SCHEDULE CALL-BACK.

The discussion group will last approximately two hours. People who take part will receive a cash payment for their time, and light refreshments will be served. Participation in the research is completely voluntary. All information collected in the discussion group will be used for research purposes only in accordance with laws designed to protect your privacy.

May I ask you a few questions to see whether you qualify for the research?

Yes	1	
No	2	THANK/DISCONTINUE

1. Do you, or does any member of your household or immediate family, work in any of the following fields? (READ LIST)

   Marketing research, public relations firm, or advertising agency
   The media (radio, television, newspapers, magazines, etc.)
   Federal, provincial or municipal government health department/agency
   Health care (e.g. hospitals, clinics, doctors, nurses, etc.)
   Tobacco industry

Yes	1	THANK/DISCONTINUE
No	2	

2. At the present time, do you smoke cigarettes every day or occasionally? (GET MIX; WANT MORE 'EVERY DAY' SMOKERS THAN 'OCCASIONAL')

Every day	1
Occasionally	2

3. How long have you been smoking? (GET MIX).

Less than 2 years	1
2-5 years	2
6-10 years	3
11-20 years	4
Over 20 years	5

4. Could you please tell me which of the following age groups you fall into…? (READ LIST. WATCH QUOTAS FOR BOTH GROUPS, GET MIX)

Less than 18 years of age	1	THANK/DISCONTINUE
18-21 years of age	2	CODE AS YOUTH
21-24 years of age	3	CODE AS YOUTH
25-34 years of age	4	CODE AS ADULT
35-44 years of age	5	CODE AS ADULT
45-54 years of age	6	CODE AS ADULT
55-60 years of age	7	CODE AS ADULT
Over 60 years of age	8	CODE AS ADULT

5. What is the highest level of education you have completed? (READ LIST IF USEFUL, GET GOOD MIX)

Less than high school	1
Completed some high school	2
Graduated high school	3
Some college/technical school/CEGEP	4
Graduated college/technical school/CEGEP	5
Some university	6
Graduated university	7

6. During the last 12 months, what was your total <u>household</u> income before taxes and deductions, from all sources? Was it…? (READ LIST; GET GOOD MIX)

Less than $20,000	1
$20,001 to 40,000	2
$40,001 to $60,000	3
$60,001 to $80,000	4
$80,001 to $100,000	5
More than $100,000	6

7. Do you consider yourself to be a member of a visible minority in Canada? (INCLUDE GOOD MIX).

Yes	1	
No	2	SKIP NEXT QUESTION (IF ALREADY HAVE 7 OR 8 NON-VIS-MIN FOR A GIVEN GROUP, THANK AND TERMINATE)

IF YES, ASK:

8. Do you consider yourself to be a member of any of the following groups? READ LIST; ACCEPT ONE RESPONSE ONLY (GET MIX)

Black (e.g. African, Caribbean)
Chinese
Japanese
South Asian (e.g. East Indian, Pakistani)
South-East Asian (e.g. Vietnamese, Cambodia, Indonesian)
Other (specify): _____

ASK ALL:

9. In the discussion group, there may be a short written exercise. Are you comfortable reading and writing in English (French)?

Yes	1	
No	2	(THANK/DISCONTINUE)

10. Have you ever attended a discussion group or interview which was arranged in advance and for which you received a small sum of money?

Yes	1	
No	2	(GO TO END)

11. Have any of these discussion groups or interviews been related to smoking, tobacco products, or tobacco package labeling or design?

Yes	1	(THANK/DISCONTINUE)
No	2	

12. When did you last attend one of these discussion groups or interviews?

Less than 12 months ago	1	(THANK AND DISCONTINUE)
Over 12 months ago	2	

13. Have you attended more than five discussion groups or paid interviews in your lifetime?

Yes	1	(THANK AND DISCONTINUE)
No	2	

RECORD GENDER BY OBSERVATION (GET MIX)

Female	1
Male	2

I would like to invite you to attend a discussion group on (DAY), (DATE), at (TIME). It will last approximately two hours. You will receive a cash payment of $60 for your time, and light refreshments will be served. Would you be willing to attend?

Yes	1	
No	2	(THANK/DISCONTINUE)

Do you have a pen handy so that I can give you the address where the discussion group will be held? It will be held at _____. Please tell people you are there for a focus group. I would like to remind you that the group is at (TIME) on (DATE). If you use glasses for reading, please bring them with you.

The group will be video-taped for research purposes. You will be asked to sign a waiver to acknowledge this. All information collected will be used for research purposes only and administered in accordance with laws designed to protect your privacy.

As we are only inviting a small number of people to attend, your participation is very important to us. If for some reason you are unable to attend, please call so that we can get someone to replace you. You can reach us at ____ at our office. Please ask for ____. Someone will call you the day before to remind you about the discussion group.

Could I please confirm your name and phone number?

RESPONDENT'S NAME: _____
HOME PHONE #: _____
INTERVIEW TIME/LOCATION: _____

Thank you.

Testing of Mock-ups of Toxic Emissions Statements for Cigarettes (POR-07-34)

Moderator's Guide

Final Version

Introduction (5 minutes)

- Introduce moderator/Phoenix
- Thanks for attending/value your being here
- Instruct participants not to open the binder in front of them until instructed to do so.
- Explain general purpose of focus group discussions:
  - Gauge *opinions* about issues/ideas/products
  - Not a knowledge test; no right or wrong answers (interested in opinions)
  - Okay to disagree; want people to speak up if hold different view
- Tonight, we're conducting research on behalf of Health Canada to explore some issues related to cigarette package labeling.
- Looking for candour and honesty; comments treated in confidence; reporting in aggregate form only; observers behind one-way glass; taping for note-taking purposes only.
- Duration: 2 hours
- Please turn off cell phones, pagers, etc.
- Any questions? ACCEPT BRIEF QUESTIONS BUT DO NOT LINGER.
- Roundtable introduction: please tell us your first name and one of your favourite interests or hobbies.

Contextual Issues (10 minutes)

What all of you have in common, and part of the reason each of you is here tonight, is that you are all cigarette smokers.

1. How many of you smoke on a daily basis? (HANDCOUNT) For those of you who do, approximately how many cigarettes do you smoke a day? For those who don't, how often do you smoke?

2. How long have you been smoking?

3. Are you concerned about the affect smoking will have or is having on your health?

   Probe: - quickly probe concerns
   - physical fitness, shortness of breath, exposure to toxic chemicals

4. In general, do you look at or read all of the Health Canada messages on the cigarette packages that you purchase? (HAND COUNT)

   ASK THOSE WHO READ MESSAGES:

   5. Why do you read the messages on these packages? What type of information draws your attention?

   ASK THOSE WHO DO **NOT** READ MESSAGES:

   6. Why don't you read the messages? What would encourage you to read the Health Canada messages?

Recall of Message Content (15 minutes)

As I mentioned, tonight we'll be talking about labeling on cigarette packages. The focus is not on the main health warning messages or pictures, but on the message about the chemicals found in cigarette smoke on the side of cigarette packages. Do you recall this type of message?

SHOW PICTURE OF MOCK-UP PACKAGE TO SHOW WHICH LABELS WE MEAN. WHEN PARTICIPANTS ARE CLEAR ABOUT THIS, CONTINUE.

ROTATE ORDER OF MESSAGES FOR EACH GROUP.

Please open the binder in front of you, and read the six pages in the first section of the binder. Each page has one message on it, so please read the message on your own and in silence. When you are done, please close the binder and put it down in front of you. Do not go beyond the first section (6 pages) of the binder.

On the exercise sheet (blank page) in front of you, I'd like you to write down the messages you can recall from the binder. Please write each message on a separate line. We'll talk about it when everyone has finished.

ALLOW 1-2 MINUTES FOR PARTICIPANTS TO FILL OUT THE SHEET, THEN CONTINUE.

7. What messages did people recall? Any others?

REVIEW ALL MESSAGES, ONE AT A TIME TO DETERMINE WHICH MESSAGES WERE RECALLED AND HOW CLEARLY. DO ROUNDTABLE TO ENSURE ALL RECALLED MESSAGES ARE DISCUSED

8. Looking at the messages you were able to recall, was there anything in particular that made these resonate with you more so than others?

   Probe: - order saw them in
   - statements grabbed attention
   - an interesting, discouraging, or previously unknown fact.
   - something they had heard before or recently

COLLECT COMPLETED EXERCISE SHEETS.

Review of Content of Toxic Emissions Labelling (50 minutes)

Health Canada currently requires labels on the sides of cigarette packages about the toxic substances in cigarette smoke. The department is considering replacing these messages with a series of new statements that would provide similar information in a different way. You have just seen six of the new statements being considered for this initiative. I'd now like to go through each of these statements with you, one at a time, and find out what you think about each one.

Please turn to the first page in your binder and read the message to yourself

MODERATOR READS MESSAGE ALOUD TO ENSURE ALL ARE LOOKING AT THE SAME MESSAGE.

Let's start with the first one.

9. What is your overall impression of this message? Why?

   Probe: - likes, dislikes
   - positive or negative perceptions

10. Is the message clear and easy to understand? Is any of the language confusing? Why/why not? Please explain.

    Probe: - clear and understandable.
    - clarity of main point
    - probe for potential confusion

11. What do you think of the length of the message? Would you read this message in its entirety?

Probe: - too long, too short

12. What information is this message trying to get across? What does this message mean to you? Is it communicated effectively? If not, why not?

13. Does this message catch your attention? Why or why not?

14. Is this message directed to someone like you? Is it appealing to you?

15. Does the message provide you with any information about smoking cigarettes that you did not already know?

16. Does this message sound credible? Do you believe it or trust that it is accurate? Why/Why not?

17. What changes would you make to this message to make it easier to understand or more effective?

INSTRUCT PARTICIPANTS TO TURN TO THE NEXT PAGE IN THEIR BINDER AND REPEAT QUESTIONS.

ONCE ALL SIX MESSAGES HAVE BEEN REVIEWED, CONTINUE.

On the exercise sheet (MODERATOR EXPLAINS), please rank the six messages in terms of their effectiveness for informing and educating smokers about the toxic emissions of cigarettes. Please use a '1' to identify the most effective message, in your, opinion, a '2' for the next best, and so on until you have ranked all six.

RECORD/REVIEW RANKINGS ON MASTER COPY, THEN CONTINUE.

18. Which messages do you think are the most effective at informing and educating smokers about the toxic emissions of cigarettes? (HAND COUNT) Why? What makes these messages more effective than the others?

19. Which messages do you think are the least effective in terms of informing and educating smokers about the toxic emissions of cigarettes? (HAND COUNT) Why? What makes these messages less effective than others?

20. Other than the statements presented here, are there any other messages about the chemicals in cigarette smoke that you think would resonate with you? If so, what might these be? Why?

Probe: - ask for examples

Format & Colour Preferences (40 minutes)

I'd now like to show you examples of what the toxic emissions labels might look like on an actual cigarette package. For this part of the discussion, I'd like you to focus on the format, not the content, of the messages.

Please turn to the next section in your binder. You should see two pages with examples of four different formats for the messages:

- where English and French are side by side,
- where English and French are one top of the other,
- with both of these formats repeated twice, once for flip top packages, and once for what are called slide and shell packages.

MODERATOR SHOWS PARTICIPANTS REAL PACKAGES IN ORDER TO SHOW DIFFERENCE BETWEEN SLIDE AND SHELL AND FLIP TOP PACKAGES.

On the first page, these formats are presented with the longest toxic emissions statement, and on the second page, the same formats are presented with the shortest statement just so that you can see how the formats work with statements of different length.

I'd like to know which format you think will be the most effective and why.

ENSURE PARTICIPANTS ARE ON THE SAME TWO PAGES

21. Which format version do you think is easier to read? Why is that?

    Probe: - font, spacing, length of message

Thinking about the bilingual design,

22. Which version do you prefer – the two languages side by side or one language on top of the other? Why?

23. Do any of these formats affect your ability to read the text? If so, which ones?

24. Does the length of the statement affect your preference? Are some formats better suited to the longer statement and others to the shorter one?

25. How about the package type? Does one format work best on the slide shell and another on the flip-top, or is there no difference? Why?

26. Which format would you be most likely to notice? Why?

I'd now like you to turn to the last section of the binder. Health Canada is considering six background colours for the toxic emissions labels. As with the last exercise, the first page

presents these six colours with the longest statement and the second page presents the same colours with the shortest statement.

I'd like to know which colours you think will be the most effective and why.

ENSURE PARTICIPANTS ARE ON THE SAME TWO PAGES.

Please look over the possible colours for both the short and long statements.

27. Which of these colours do you prefer? Why?

28. Are any of these colours more likely to grab your attention or make you feel a certain way about the toxic emissions statements?

    Probe: -colours that evoke an emotional response

29. Do any of these colours affect your ability to read the text? If so, which ones?

30. Are there any colours here that you think should be avoided? Which ones? (HAND COUNT) Why these colours?

31. Does the length of the statement affect your preference? Do some colours work better with the shorter statement and others with the longer one? If so, which ones and why?

32. Which colours would you be most likely to notice? Why?

33. Are any of these colors more likely to provoke an emotional impact?

34. Which colors would be most likely to be memorable?

35. Are there any other colours which you think would be more effective? If so, which colour(s)?

Conclusion

36. Do you have any final comments or suggestions about anything we've talked about tonight before we conclude the discussion?

THANK YOU VERY MUCH FOR YOUR TIME AND THOUGHTFUL FEEDBACK.
IT IS VERY MUCH APPRECIATED.

Recall Exercise

Please write down what you recall of the messages or statements you just read.

Ranking of Messages (A)

Please rank the six messages in terms of their effectiveness for informing and educating smokers about the toxic emissions of cigarettes. Please use a '1' to identify the most effective message, in your opinion, a '2' for the next best, and so on until you have ranked all six.

Ranking (1 to 6)	Messages
	Tobacco smoke contains over 4000 chemicals which over time add up in your body and increase your risk of disease and death.
	Nicotine, benzene, carbon monoxide, hydrogen cyanide, formaldehyde and toluene are some of the toxic chemicals present in the tobacco smoke that you inhale.
	Tobacco smoke contains over 4000 chemicals, more than 50 of these are cancer causing.
	10 puffs per cigarette x 20 cigarettes per day x 365 days = 73000 puffs containing over 4000 chemicals per year
	Some toxic chemicals, including lead, nitrosamines and nicotine, are found naturally in unburned tobacco. These chemicals are released as tobacco burns.
	Burning tobacco causes over 2500 chemicals in unlit tobacco to be transformed into more than 4000 chemicals in tobacco smoke.

Ranking of Messages (B)

Please rank the six messages in terms of their effectiveness for informing and educating smokers about the toxic emissions of cigarettes. Please use a '1' to identify the most effective message, in your opinion, a '2' for the next best, and so on until you have ranked all six.

Ranking (1 to 6)	Messages
	Tobacco smoke is a deadly mixture of over 4000 chemicals.
	Unlit tobacco (over 2500 chemicals) + fire +oxygen = tobacco smoke (over 4000 chemicals)
	Nicotine occurs naturally in tobacco plants and is responsible for causing the addiction to tobacco products.
	Repeated exposure to tobacco smoke which contains over 4000 chemicals greatly increases the risk to your health.
	A lit cigarette = smoke containing over 4000 chemicals + one puff = your lungs full of smoke → chemicals enter your bloodstream → negative health impact
	Most of the toxic chemicals in tobacco smoke, including carbon monoxide, benzene, formaldehyde and hydrogen cyanide, are created when tobacco burns.

Content Set A

Warning: Tobacco smoke contains over 4000 chemicals which over time add up in your body and increase your risk of disease and death.

Warning: Nicotine, benzene, carbon monoxide, hydrogen cyanide, formaldehyde and toluene are some of the toxic chemicals present in the tobacco smoke that you inhale.

Warning: Tobacco smoke contains over 4000 chemicals, more than 50 of these are cancer causing.

Warning: 10 puffs per cigarette x 20 cigarettes per day x 365 days = 73000 puffs containing over 4000 chemicals per year

Warning: Some toxic chemicals, including lead, nitrosamines and nicotine, are found naturally in unburned tobacco. These chemicals are released as tobacco burns.

Warning: Burning tobacco causes over 2500 chemicals in unlit tobacco to be transformed into more than 4000 chemicals in tobacco smoke.

Content Set B

Warning: Tobacco smoke is a deadly mixture of over 4000 chemicals.

Warning: Unlit tobacco (over 2500 chemicals) + fire + oxygen = tobacco smoke (over 4000 chemicals)

Warning: Nicotine occurs naturally in tobacco plants and is responsible for causing the addiction to tobacco products.

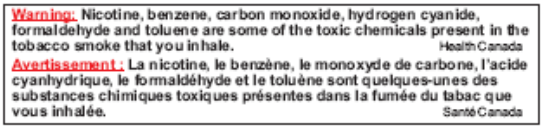
Warning: Repeated exposure to tobacco smoke which contains over 4000 chemicals greatly increases the risk to your health.

Warning: A lit cigarette = smoke containing over 4000 chemicals + one puff = your lungs full of smoke → chemicals enter your bloodstream → negative health impact

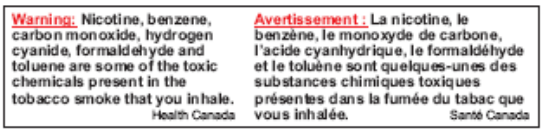
Warning: Most of the toxic chemicals in tobacco smoke, including carbon monoxide, benzene, formaldehyde and hydrogen cyanide, are created when tobacco burns.

Format and Colour

L1


Warning: Nicotine, benzene, carbon monoxide, hydrogen cyanide, formaldehyde and toluene are some of the toxic chemicals present in the tobacco smoke that you inhale. Health Canada
Avertissement : La nicotine, le benzène, le monoxyde de carbone, l'acide cyanhydrique, le formaldéhyde et le toluène sont quelques-unes des substances chimiques toxiques présentes dans la fumée du tabac que vous inhalée. Santé Canada

L2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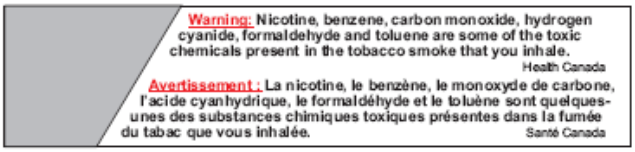
L3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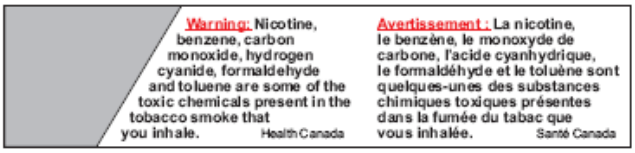
L4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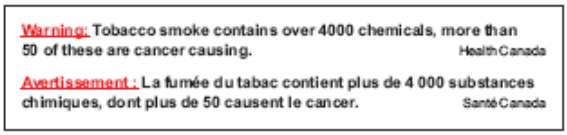
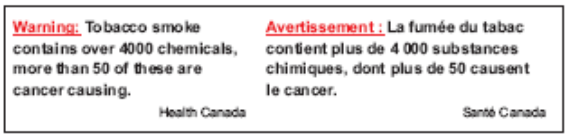
L5


Warning: Tobacco smoke contains over 4000 chemicals, more than 50 of these are cancer causing.
Health Canada
Avertissement : La fumée du tabac contient plus de 4 000 substances chimiques, dont plus de 50 causent le cancer.
Santé Canada

L6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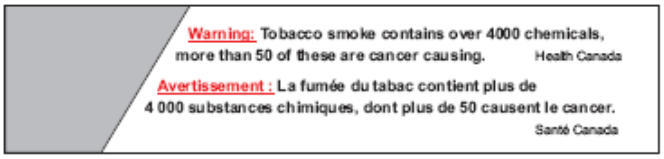
Santé Canada

L7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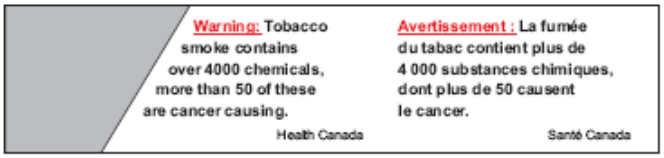
Santé Canada

L8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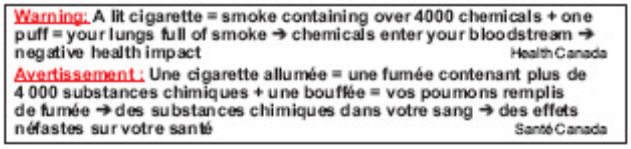
Santé Canada

C1



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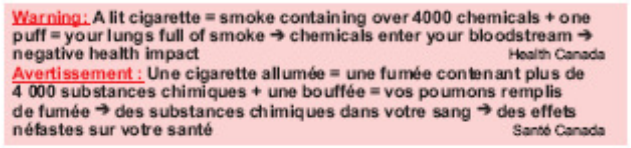

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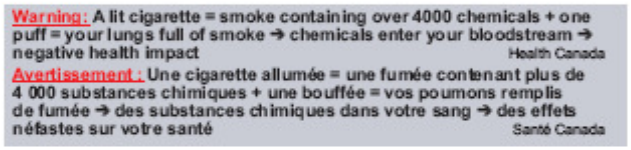

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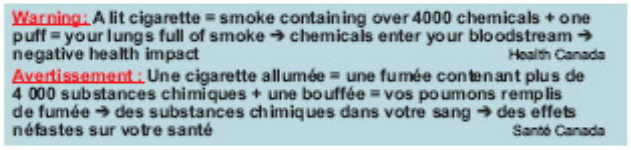

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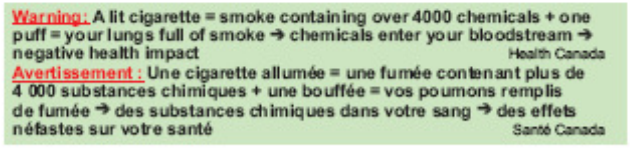

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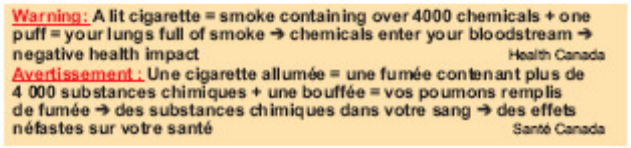

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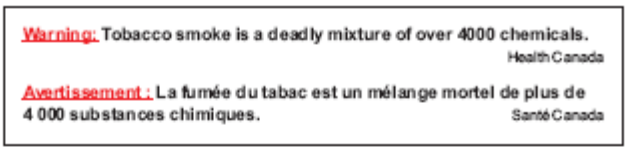

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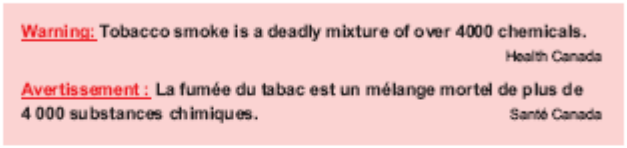

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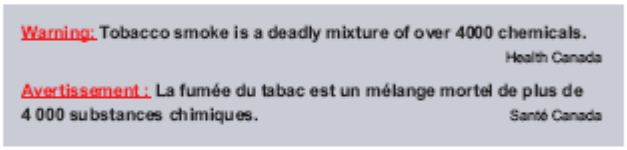

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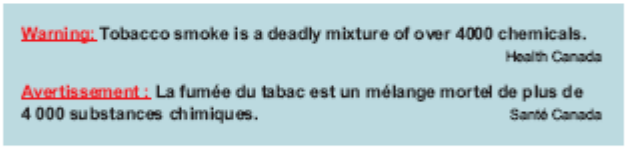

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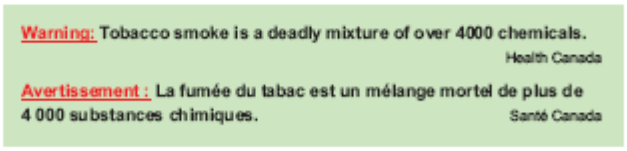

C12