



Survey Findings Regarding Infection Prevention and Control Behaviours

FINAL REPORT

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Public Health Agency of Canada

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1. INTRODUCTION

1.1 BACKGROUND

Among the priorities of PHAC is the prevention and control of infectious diseases. Because an influenza pandemic¹ will have national impacts, PHAC has taken leadership in planning and preparing Canada for an influenza pandemic. In February 2004, the Government of Canada and provincial and territorial jurisdictions developed the Canadian Pandemic Influenza Plan for the Health Sector. The Plan outlines a strategy to deal with the impact and implications of a potential influenza pandemic. This national Plan was based on input from over 200 experts and is updated on an ongoing basis as knowledge evolves. The goals of pandemic preparedness, as outlined in the Plan are, first, to minimize serious illness and overall deaths, and second to minimize societal disruption as a result of an influenza pandemic.

Canada's Pandemic Influenza Plan is comprehensive, including many strategies to prepare for a pandemic. A key element and foundation of the Plan is basic prevention measures such as hand-washing and respiratory hygiene/cough etiquette.² Infection prevention and control measures in the community are important in controlling the spread of infections, particularly in an influenza pandemic. Understanding Canadians' infection prevention and control behaviours – the purpose of the current assignment – will help further the state of pandemic preparedness.

PHAC does not currently have any comprehensive quantitative, national data on Canadians' knowledge and behaviours concerning infection prevention and control. Some research in Canada and the US in this area indicates the following:

- **Flu shot.** About one-half to 60 per cent of citizens get a seasonal flu shot (Ritvo et. al. (2003), EKOS (2007), CDC (2004)).³ Among the key positive predictors in obtaining a flu shot include perceptions of the vaccine's effectiveness, perceived safety risks, and recommendation by a physician or nurse was found to be a positive predictor in one study. Mitigating factors include access barriers (restricted supply, access to medical centre). Levels of knowledge about the vaccine are also important in predicting uptake. Some research has noted that a substantial portion of citizens have a misperception that the influenza vaccine causes influenza. According

¹ An influenza pandemic is a global outbreak that occurs when a new influenza virus strain appears that can spread easily from person to person with serious and sometimes even fatal consequences.

² Other strategies include: early detection and monitoring, other public health measures, and vaccines and antivirals. The national Plan is complemented by other emergency response plans such as those of municipal and provincial governments and health care institutions.

³ Ritvo, P. et. al., A Canadian national survey of attitudes and knowledge regarding preventive vaccines, *Journal of Immune-based Therapies and Vaccines*, 2003, Vol. 1, No. 3; EKOS Research Associates, *The Use of Antivirals for Prophylaxis: Deliberative Dialogue Process*, Submitted to PHAC, 2007; CDC, *Experiences with Influenza-Like Illness and Attitudes Regarding Influenza Prevention – US 2003-04 Influenza Season*, MMWR, 2004.

to Ritvo et. al. (2003), as “substantive theories of behaviour change emphasize knowledge as a necessary factor in adoptive behaviours. If we had to immunize on an emergency basis, either locally or regionally, a stronger base of public knowledge could be a valuable and perhaps highly important asset.”

- **Hand-washing.** In the US, HarrisInteractive conducted a trend survey of hand-washing (2003, 2005 and 2007). In September 2007, while 92 per cent of adult Americans self-report always washing their hands after using a public restroom and 86 per cent self-report always washing their hands after using the bathroom in their home, only one-third (34 per cent) always wash their hands after coughing or sneezing (higher among women and those with lower income levels). Parallel observational research, however, suggests that a lower proportion of adults – 77 per cent – were observed to wash their hands after using a public washroom compared to self-reports (down from 83 per cent in 2005 and unchanged from 78 per cent observed in 2003).
- **Adopting precautionary measures.** According to Ho and Scheufele (2007),⁴ polls of Americans following public health coverage such as on avian flu, SARS, West Nile virus and anthrax showed that while the general public were attentive during the peak events, there were minimal sustained changes to behaviour and general knowledge. Ho and Scheufele conclude that informational and awareness campaigns have limited sustained impacts. Similarly, tracking of public knowledge and precautions during the SARS outbreak in Toronto in 2003 showed that individuals’ knowledge of aspects of SARS (e.g., contagious, effective precautions, spread) was quite strong and a substantial proportion of Toronto households took precautions such as hand-washing and social distancing).⁵ Interestingly, comparable surveys of individuals outside the high risk area of Toronto showed excessive concern relative to their level of risk and the authors suggest that the use of unnecessary precautions possibly had negative economic impacts.
- **Community mitigation.** There is debate in the research community about the probable effectiveness of community mitigation strategies during a pandemic such as school closures, cancelling of public events and voluntary home quarantine. A study by Blendon et. al. (2008) notes that cooperation from the public would be required for community mitigation strategies to be effective, but that reactions during an unprecedented event are difficult to predict.⁶ The majority of respondents in this survey indicated that they would be willing and able to comply with public health recommendations, but compliance would be more difficult for lower income citizens.

⁴ Ho, S. and D. Scheufele, *Public Reactions to Global Health Threats and Infectious Diseases*, Public Opinion Quarterly, 2007, Vol. 71, No. 4.

⁵ Blendon, R. et. al. The Public’s Response to Severe Acute Respiratory Syndrome in Toronto and the United States, *Clinical Infectious Diseases*, 2004, 38.

⁶ Blendon, R. et. al. Public Responses to Community Mitigation Measures for Pandemic Influenza, 2008, *EID*, Vol. 14, No. 5.

Taken together, these data underline the importance of this research assignment, as well as the challenges. PHAC requires a clear understanding of public perceptions and behaviours. This research is relevant in guiding policy and communications strategy development, including a public education campaign with targeted messages aimed at increasing awareness and prevention behaviour.

1.2 RESEARCH OBJECTIVES

The purpose of this research project is to assess Canadians' current behaviours relating to prevent infection or the spread of infection (for self or family), particularly when ill with seasonal colds and/or flu. These behaviours include hand-washing, seasonal flu vaccinations, cough and sneeze etiquette, use of antibacterial soaps, cleaning products, hand sanitizers and other precautions. This research will further assess Canadians' anticipated infection prevention and control behaviours in the event of any influenza pandemic.

This proposed survey is intended to provide quantitative results to support policy development, the tailoring of communication messages, strategies, and a public education campaign on infection prevention and control measures. This survey will support a Strategic Risk Communications Approach by providing the public with relevant information in advance of a public health emergency.

The more detailed objectives of the survey can be described as follows:

- To conduct a descriptive study of the knowledge and practices of adult Canadians' infection prevention and control behaviours;
- To explore the current behaviours of adult Canadians in normal day life related to hand-washing, seasonal flu vaccination, cough and sneeze etiquette, use of antibacterial soaps, cleaning products, hand sanitizers, social distancing and other precautions;
- To assess the barriers to and motivators for appropriate actions related to some of the aforementioned behaviours;
- To assess adult Canadians' anticipated infection prevention and control behaviours in the event of an influenza pandemic; and
- To establish a baseline of knowledge and practices in order to understand trends and monitor the outcomes of future public education and communication initiatives and activities.

1.3 METHODOLOGY

Results of this research are based on a nationally representative sample of Canadians who are 18 years of age and a permanent resident of Canada. The survey was administered over the telephone by a trained, bilingual interviewing team. The sample was randomly drawn using a Random Digit Dialling technique to ensure that unlisted numbers have an opportunity to be included in the sample. The instrument

was composed of primarily close-ended questions, with some open-ended questions to permit respondents to provide additional detailed response. There were roughly 80 items in the instrument and required an average of 18 to 20 minutes to complete for the general public. In order to accommodate the large number of questions within the 20 minute or less imposed time restriction on the interview administration, some batteries of questions were only administered to some respondents in the sample.

In terms of substantive content, the survey addressed the following:

- Knowledge relating to the nature and transmission of seasonal influenza;
- Current precautionary behaviours related to infection prevention and control (e.g., hand-washing, seasonal flu vaccination, cough and sneeze etiquette, use of cleaning products, sharing of personal items, social distancing and other precautions);
- Barriers to and motivators for infection prevention and control behaviours;
- Perceived effectiveness of prevention behaviours in general and according to specific prevention technique, for seasonal influenza and pandemic influenza;
- Perceived likelihood of contracting seasonal influenza or pandemic influenza and level of concern; and,
- Preferred and trusted sources for information on infection prevention and control measures and pandemic influenza.

Within the sample of 2,521 cases collected in the survey there were roughly 985 parents of children aged 18 years or younger. The overall sample provides a margin or error of 1.9 per cent. This is as wide as 3.1 per cent for the overall sample of parents and allows for exploration of differences within sub-groups of parents (e.g., by region, demographics, age of child, etc). This size of sample enabled results for parents to be contrasted to the overall sample (or non-parents) and different types of patterns than those found in the wider group (or among non-parents) were explored.

Within the sample of 2,521 cases, the sample was stratified to ensure minimum numbers of cases in each of the jurisdictions where the population is the smallest. This distribution of the sample struck the best balance between need for precision for each jurisdiction and overall representativeness of the sample (limiting the distortion and degree of weighting required to restore the sample to population proportions).

The following table provides the proposed distribution of the sample by province and territory.

Province/Territory	2006 Census 18+	Random Sample Size	Stratified Sample	Approx. Sample Weight	Margin of Error
Nova Scotia	2.95	73.75	192	0.384	7.1%
Newfoundland	1.64	41	202	0.203	6.9%
New Brunswick	2.36	59	194	0.304	7.1%
Prince Edward Island	0.43	10.75	90	0.119	10.4%
Nunavut	0.07	1.75	90	0.019	10.4%
Quebec	24.26	606.5	301	2.015	5.7%
Ontario	38.19	954.75	411	2.323	4.8%
Manitoba	3.53	88.25	201	0.439	6.9%
Saskatchewan	2.97	74.25	220	0.338	6.6%
Alberta	10.17	254.25	214	1.188	6.7%
Northwest Territories	0.12	3	92	0.033	10.3%
British Columbia	13.22	330.5	221	1.495	6.6%
Yukon	0.09	2.25	93	0.024	10.2%
TOTAL	100	2500	2521		

In addition to the core sample of 2,521 cases in the general public, there also was a large over sample of 1,000 completed interviews conducted with Aboriginal Canadians. This carries with it a margin of error of 3.1 per cent. Including the Aboriginal cases collected naturally from the general public, then enabled the total collection of roughly 300 cases in each of the three larger Aboriginal populations: First Nations people living on-reserve; First Nations people living off-reserve; and Métis. Another 200 cases were also collected with Inuit living in the North. This means a margin of error of +/-5.7 per cent in each of the First Nations and Métis samples and 6.2 per cent on the Inuit sample in the North.

In sampling the broader general public, EKOS relies on Survey Sample, produced by ASDE in Hull, Quebec. The software uses the most up to date directories as they become available and is updated quarterly. It samples by Random Digit Dial (RDD) methodology and checks its samples against published phone lists to divide the RDD into "Directory Listed" (DL) and "Directory Not Listed" (DNL) RDD components. The software allows the researcher to set the tolerance level for DNL numbers to an acceptable risk level. The flexibility of this software allows you to sample nationally or within specific provinces, regions or cities. You can sample according to population representativeness or stipulate stratification parameters, as required.

EKOS Research relies on a sample frame of virtually the entire population of First Nations people living on reserves in Canada (also produced by ASDE). Postal codes for each of the reserves were entered into a program designed to isolate all listed telephone numbers associated with these postal codes and a random sample was drawn for the First Nations portion of this survey from this frame.

The Inuit sample was drawn from areas across the country where there is self-reported incidence of 20 per cent or greater in the population. The individual cluster that will be used is the smallest geographic unit for which there is Census information from Statistics Canada. This is the Dissemination Area (DA), which typically includes roughly 1,000 individuals or about 250 households.

For the off-reserve sample of First Nations and also for Métis, cases were sampled randomly from a similar frame of dissemination areas across the country where there is a self-reported incidence of being Aboriginal that is ten per cent or higher across the country. The sample was, however, stratified toward areas with higher population densities. The average incidence experienced in the data collection was roughly 15 per cent.

The survey data were collected over a 6-week period between mid-January and end of February, using standard monitoring and call-back techniques (e.g., six or more call backs at various time intervals). The survey collection obtained a response rate of 17 per cent for the general public and 21 in the Aboriginal oversample. Appendix B presents details of this calculation.

Prior to the conduct of the survey, the survey instrument was tested with 30 (15 in English and 15 in French) in the general public and another 30 cases in the Aboriginal populations, in iterations, with changes being made after the first 5 to 10 and then again after 10 interviews, to ensure that any changes were addressing particular issues experienced in the interviews. These related to small wording changes and skip logic. The survey instrument can be found in Appendix A.

2. FAMILIARITY WITH FLU

In order to better understand Canadians' prevention behaviour it is important to first understand what Canadians know about the flu. The following chapter explores what Canadians believe the flu to be and how they believe it is transmitted. The chapter also looks at respondents' own exposure to the flu, as well as any indirect exposure through other family members.

2.1 GENERAL AWARENESS AND UNDERSTANDING

The overwhelming majority of Canadians have some familiarity with or knowledge of the flu. Although one-quarter seem to be confusing influenza with the nausea, vomiting or diarrhea typically associated with a stomach virus or "stomach flu", virtually everyone else described symptoms usually associated with the flu. Respondents were allowed to provide more than one response to this question, and many identified multiple symptoms in describing the flu.

The symptoms most often associated with the seasonal flu by Canadians are fever, chills, sweating and aches or pains (37 per cent). A similar number (36 per cent) correctly noted that the flu is viral in nature. Others associate the seasonal flu with cold-like symptoms, that are "like a cold but worse" (15 per cent) associate it with congestion and cold symptoms (13 per cent). One in ten or less also correctly link the seasonal flu to other individual symptoms such as cough, headache, fatigue, or sore throat. Only six per cent are not sure, or not able to describe seasonal flu.

A baseline survey in 2004 obtained a correct response from 87 per cent of Canadians surveyed. Again, fever was the most frequently mentioned symptom (according to 67 per cent), followed by general aches and pains (28 per cent), headache (24 per cent) and cough (23 per cent).⁷

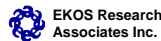
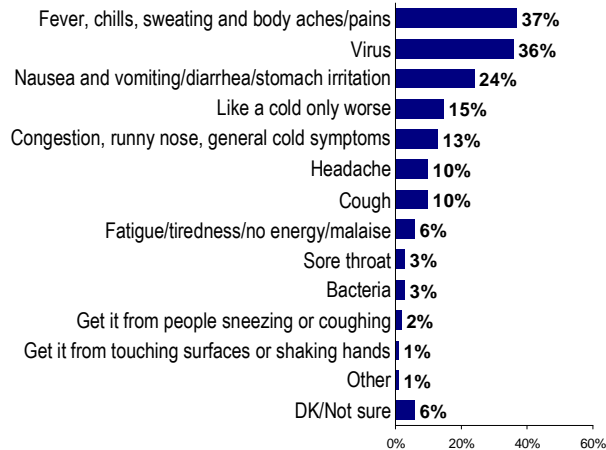
In a follow-up survey in 2007 88 per cent of Canadians were able to mention at least one symptom of influenza accurately. By far the most common symptom identified by Canadians responding to this survey was fever (mentioned by 68 per cent), followed by general aches and pains (26 per cent), headache (25 per cent) and cough (22 per cent).⁸

⁷ Pandemic Influenza: National Baseline Survey of Pandemic Influenza Attitudes and Awareness amongst Canadians, August 2004.

⁸ National Follow-Up Survey of Pandemic Influenza Attitudes and Awareness among Canadians. Environics, prepared for the PHAC, January 2008.

Understanding of the Flu

“Are you familiar with what the flu is. Sometimes it is called seasonal flu or influenza. Can you tell me what this is?”



n=2521

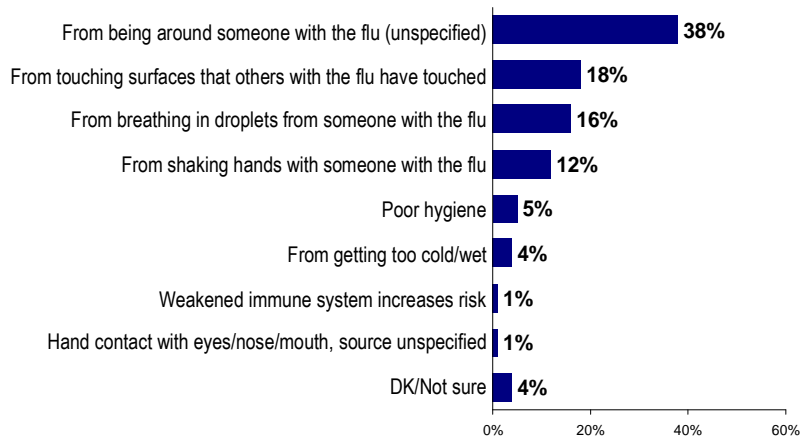
PHAC Personal Infection Prevention, 2009

- Describing the flu as viral in nature increases with education and income (e.g., from 25 per cent of those with high school education, to 47 per cent of those with university education).
- Proportionately fewer seniors and Aboriginal people are able to describe the flu relative to other Canadians. When they do, seniors are more apt to associate it with nausea. Canadian born respondents are also far more likely to link the flu to nausea (26 per cent, compared to 11 per cent of those born outside Canada). That said, more foreign-born Canadians are not able to describe the flu (11 per cent are not sure what the flu is).
- Parents exhibit greater familiarity with the flu, and are more apt than those who are not parents to link the influenza to a number of symptoms such as fever, nausea, and to describe it as viral.
- Residents of Ontario and Quebec are more apt to consider the flu to be like a cold (describing cold-like symptoms) only worse. This is also true (to a lesser degree) in Newfoundland. Residents of Nova Scotia are the most apt to consider it to include fever and chills (54 per cent), as is also the case in Prince Edward Island (48 per cent). Canadians more often confuse the flu with nausea and gastrointestinal symptoms in Manitoba, Saskatchewan and Alberta than elsewhere in the country.

Also related to an overall understanding of what the flu is, respondents in the survey were asked about the most common method of catching the flu. Results show that Canadians have a good understanding of transmission methods. Although the largest proportion (38 per cent) were not very specific; describing the flu as most commonly transmitted by being around someone else who is already ill with the flu, this still reflects a fairly solid appreciation of how it is transmitted. Most other respondents were even more specific in their response. This included descriptions of touching contaminated surfaces (18 per cent); breathing in droplets from someone ill with the flu (16 per cent); or shaking hands with someone contagious (12 per cent). Only small numbers identify other sources of transmission that are not correct; including poor hygiene (four per cent); and getting too cold or wet (four per cent) and another four per cent are uncertain or unable to identify how the flu is transmitted.

Knowledge of Transmission

“Based on what you know, what is the most common method of catching the flu?”



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n=2521

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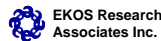
- Those with university education and parents of children under the age of two are more apt to correctly identify airborne transmission (breathing in droplets) as the most common source of infection. Those with high school education and low income parents are less apt to identify this as a transmission source and more apt to erroneously suggest that it is a result of getting too cold or wet, or to be uncertain of the cause.
- There are few noteworthy differences between provinces and territories. There is a striking difference in responses from Quebec, however, regarding handshake versus general proximity to someone with the flu (with Quebecers more apt to cite a handshake as a common method of transmission).

2.2 EFFECTIVENESS OF CLEANING PRODUCTS

With regard to specific belief about the effectiveness of different methods, the largest share of the general public (41 per cent) do not believe that there is a difference in the effectiveness of different hand cleaning products. Another three in ten believe that antibacterial soap is the better cleaner. In fact, only 15 per cent of Canadians understand that regular soap is the best method of cleaning hands. The fewest place hand sanitizer in the top position in terms of effectiveness.

Best Method for Cleaning Hands

“As far as you know, which one of the following is better for cleaning your hands. Would it be...?”



n=2521

PHAC Personal Infection Prevention, 2009

- Awareness that regular soap is the best method is strongly correlated with higher knowledge.
- Women and senior citizens are more apt to realize that regular soap is the best approach to hand cleansing.
- Parents are no more or less likely to understand that regular soap is best, however, parents with the oldest children (six to eleven) are more knowledgeable than other parents in this area, as are parents with more children in the home. This is also more widely understood among Aboriginal people. That said, parents with more children, particularly younger children, are more apt to believe that antibacterial soap is the right product to select.

- Regionally, regular soap is more often selected as the best method in British Columbia (24 per cent), Saskatchewan (23 per cent) and Nova Scotia (22 per cent). Antibacterial soap is considerably more popular choice in New Brunswick (42 per cent) and in Quebec (35 per cent) than it is elsewhere.

2.3 COMBINED KNOWLEDGE (INDEX)

For the purposes of efficiency in the analysis, several survey items were combined to create a more parsimonious and stronger measure of respondent knowledge of seasonal flu or influenza. Respondents were given a point for each of the answers outlined in the table below, and then categorized according to their low, medium or high knowledge in the area. Using this index, 43 per cent of survey respondents were classified with low knowledge of the flu, 37 per cent were collapsed into a “moderate knowledge” category, and six per cent were categorized with a high level of knowledge (answering all three questions correctly).

Table 2.1: Knowledge Index

Variable	Question	Correct Answer
Q1	I'd like to start by asking you if you are familiar with what the flu is. Sometimes it is called seasonal flu or influenza. Can you tell me what this is?	Virus
		Fever, chills, sweating and body aches/pains
		Headache
		Cough
		Fatigue/tiredness/no energy/malaise
Q7	Based on what you know, what is the most common method of catching the flu?	From touching surfaces that others with the flu have touched
		From breathing in droplets from someone with the flu
		From shaking hands with someone with the flu
Q11	As far as you know, which one of the following is better for cleaning your hands: regular soap, antibacterial soap, hand sanitizer, or each are equally effective	Regular soap

- Women exhibit somewhat higher knowledge of the flu than men. Knowledge also increases with education, and among Canadian-born respondents, as well as those with a vulnerable member in their household are more knowledgeable than others.
- Visible minorities and Aboriginal Canadians exhibit considerably less knowledge than other Canadians.
- Residents of British Columbia are more knowledgeable about the flu than others across the country, with Quebec residents following second. At the other end of the spectrum, those in Newfoundland and Yukon scored the least in terms of knowledge regarding the flu.

3. PERCEPTION OF RISK OF CONTRACTING THE FLU

Presumably Canadians who are more concerned about contracting the flu are more motivated to carry out prevention techniques to protect themselves and minimize their risk in this regard. The extent to which Canadians believe that the flu can be prevented and how difficult that is, is also of interest in understanding the extent of prevention behaviour. These and other attitudes and perceptions are explored in this chapter.

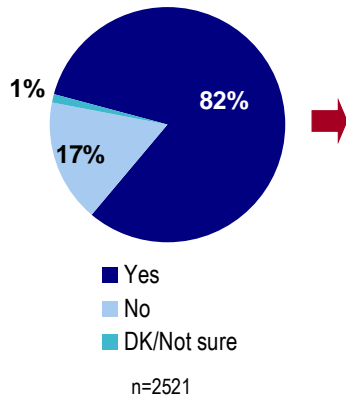
3.1 DIRECT AND INDIRECT PAST EXPERIENCE WITH THE FLU

It is helpful in understanding people's perception of their likelihood of contracting the flu and their perceived investment in prevention behaviour to understand how real the threat is to them. A starting point for this is to measure respondents' direct (and indirect) experience with the flu. Respondents in the survey were asked if they had ever had the flu and if so, how often, in the recent past. It is important to note that after respondents were asked what the flu is, they were read a statement about the actual common symptoms of the flu (see the questionnaire in Appendix A for this description).

Over eight in ten Canadians (82 per cent) reported some occurrence of the flu in their lifetime. That said, over two in ten of those said that they have not had the flu in the past five years. Two in ten have had it once in the past five years. A similar number have had it twice and 31 per cent reported three or more bouts of flu over the last five years. All told, 17 per cent of the sample has no direct experience with the flu (from their own recollection) and 43 per cent have limited recent experience with it (having had it once or less in five years). Another 37 per cent has had it fairly frequently in the recent past (having had it two to three times in the past five years) and the remaining 16 per cent is very prone to the flu, having had it every year in the past five years.

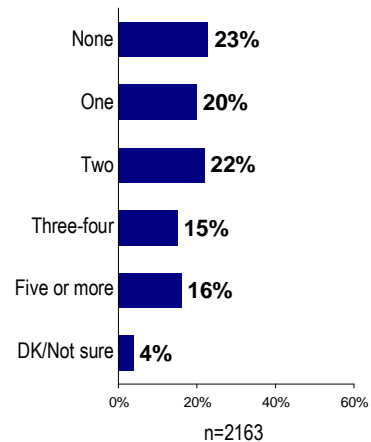
Incidence of the Flu

“Have you ever had the flu at any time, as far as you remember?”



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“How many times in the last five years, for example, have you had the flu, as far as you recall?”



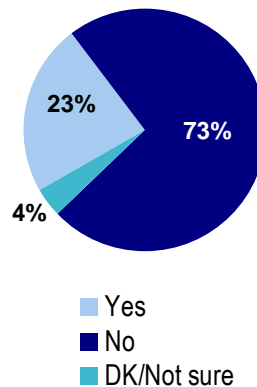
PHAC Personal Infection Prevention, 2009

- Parents are more apt to have contracted the flu, and report greater frequency of the flu (especially men) than others. Among parents, those with infants under two are less likely than parents of older children (of school age) to report having had the flu in the past, while parents of school age children more often reported having the flu five or more times.
- Incidence of having the flu in their lifetime is lower among respondents with high school education and lower incomes (with the exception of parents and Aboriginal parents, in particular, who reported having had the flu five or more times in the past five years), as well as foreign-born Canadians born outside Canada (although they were also less able to describe the flu).
- Youth are less apt to have had the flu in their lifetime than older Canadians. That said, of the youth who have had it, they typically report a greater frequency of recent flu. In fact, of Canadians reporting flu at some point in their lifetime, the incidence of having it in the last five years drops dramatically with age (from 94 per cent of youth to only 55 per cent of seniors).
- Incidence of having had the flu in their lifetime is lowest among those with the least knowledge in this area. On the other hand, of those who have had the flu at some point, those with the lowest knowledge reported the greatest recent frequency of the flu (possibly mistaking it for something else).
- Although generally similar across provinces and territories (82 to 92 per cent), the reported incidence of having had flu is lowest in Quebec (76 per cent) and highest in the NWT (93 per cent).

Again, in an effort to understand respondents' frame of reference, those who had not been ill from seasonal influenza within the past five years were asked about the occurrence of flu among others in their household. Of the one in five that do not believe that they have had it in their lifetime, just under one in four (23 per cent) have experienced it indirectly through another household member. Overall, considering all respondents and both questions, 13 per cent of households seem not to have experienced the flu (at least in the last five years for the other household members). In four per cent of households, the respondent has not had the flu (ever), but someone else in the household has (in the last five years). In 36 per cent of cases, the respondent has experienced the flu once or twice in the past five years and in almost half of the cases (48 per cent of the time) the respondent reported that they have had the flu at least three times in the past five years.

Incidence of Flu – Others in Household

“Has someone else in your household had the flu in the last five years?”



- Respondents more apt to have had someone else in their household contract the flu in the last five years were in the highest income bracket (over \$120,000), and to some extent parents (particularly parents with two children and whose children are school aged (6 to 11)).

3.2 PERCEIVED RISK OF CATCHING THE FLU

In order to fully appreciate the level of prevention that Canadians employ it is useful to first understand how “real” the threat is to them. As a baseline measure, it is interesting to see from the results of the survey that Canadians are relatively unconcerned about the flu.

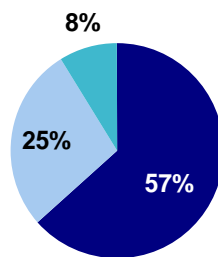
First, ten per cent of survey respondents had already contracted the flu in the current flu season by the time of the survey (collected between mid-January and late February, during the height of flu season). Those most likely to have contracted the flu are seniors (14 per cent). Those least likely to have contracted it are members of visible minorities and foreign-born Canadians.

- The incidence is also lowest among those reporting the highest incomes. This is likely driven at least in part by the inverse relationship between age and income, which begins to come down for most Canadians when they are in their sixties. The same relationship exists with knowledge; those with the greatest knowledge regarding the flu also reported the lowest incidence of flu in that season.
- Although parents are no more likely to report having contracted the flu, parents who say that they have obtained all vaccines (routine, optional and the flu shot) for their children reported the highest incidence of getting the flu (17 per cent), again implying that perceived (or real) likelihood of contracting the illness fuels prevention behaviours.
- Quebec residents collectively reported nearly double the incidence of flu (19 per cent) compared with other provinces and territories. The lowest rates were reported in Alberta and Yukon (five per cent in each).

Over and above the ten per cent who had already contracted the flu by the time of the survey, it is surprising to see that only eight per cent of Canadians surveyed said that they believe it to be likely that they will get the flu in the current winter (giving it a 6 or 7 on the 7 point scale). Another one in four thinks that it is possible, but not very likely. This is in spite of the fact that the survey was collected during flu season, in a year when the occurrence of flu was very high, and there was considerable publicity about the flu shot not covering one of the three main strains of flu circulating. In fact, more than half (57 per cent) said that it was unlikely that they get the flu, with 40 per cent rating it a one on the scale.

Expectation and Concern Regarding Flu

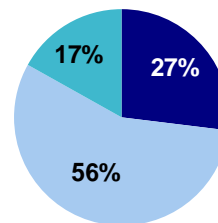
“How likely do you think it is that you will get the flu this winter?”



■ Not likely (1-2)
 ■ Somewhat (3-5)
 ■ Very likely (6-7)

n=2521

“How concerned are you about getting sick with the flu?”



■ Not concerned (1-2)
 ■ Moderately (3-5)
 ■ Very concerned (6-7)

n=304



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- Those least likely to think that they would contract the flu are men and individuals with no children in the home (where 60 per cent or more think that it is unlikely).
- Among parents, both men and women rate themselves equally likely to contract the flu (with slightly over half viewing this as unlikely) although men are less often concerned by this. Those parents who have a vulnerable individual in their home are more concerned about getting the flu.
- Canadians between the ages of 25 and 34, Aboriginal people and those who are a visible minority are more likely than others to think that they would contract the flu.
- Older Canadians (over 65 years of age) are often split at one end of the spectrum or the other. A higher than average number perceive themselves to be very likely (or have already caught) the flu. At the same time, a higher than average number of seniors think themselves very unlikely to catch it (with very few in the middle).

- Regionally, perceived likelihood is lowest and highest in Quebec (where 65 per cent think it unlikely and 19 per cent think it likely). Other regions where perceived likelihood is higher than average are in the Northwest Territories, and Nunavut, followed by Newfoundland.
- Naturally, the expectation increases with the frequency of past experience with the flu. Those who have had the flu and those who have had it more frequently are considerably more apt to say that they are likely to get it again.

3.3 CONCERN ABOUT CONTRACTING THE FLU

Among those who think it likely that they will contract the flu, just over one in four are not very concerned by this prospect (27 per cent). Just over half (56 per cent) are moderately concerned and only 17 per cent are very concerned.

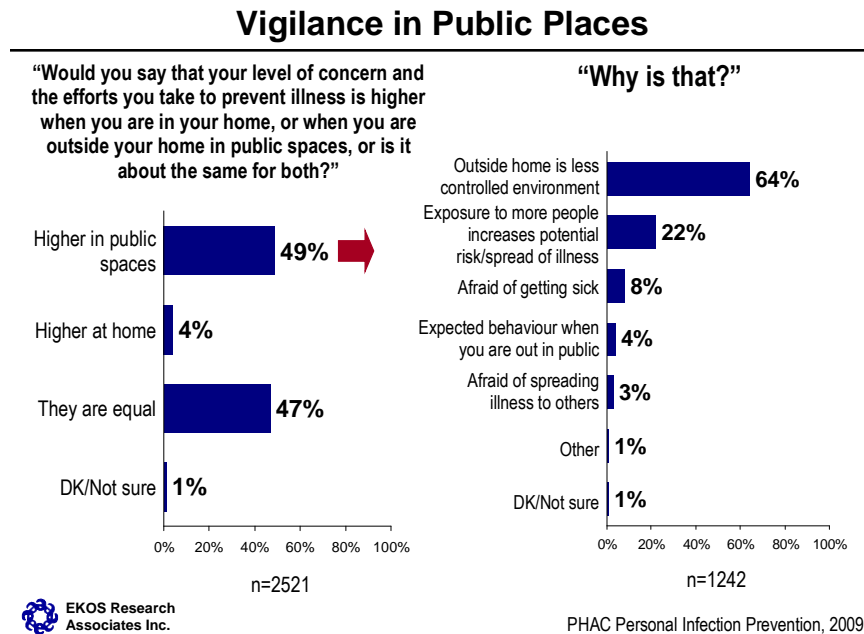
- Levels of concern peak among women and 45 to 54 year old Canadians, as well as among those with the least education and household income.
- The concern is also greater among caregivers, as well as among parents who have not obtained optional shots for their children (although the sample is relatively small at 52 cases).
- Although residents of Quebec are less apt to think they will contract the flu, among those who think it likely, the concern in Quebec is more prevalent than elsewhere across the country.

4. ATTITUDES REGARDING PREVENTION

Along with perceived risk (and concern), the extent to which Canadians see prevention techniques as effective and their motives for following prevention methods, as well as their barriers to doing so, will also form key drivers of prevention behaviour. The current chapter explores these elements among Canadians.

4.1 MOTIVES FOR PREVENTION

Canadians were asked in the survey if their concern and level of effort to prevent the flu is greater at home or in public places. Very few are more concerned at home. Half said that they are more concerned in public places and almost half said that the concern is equal in all circumstances.



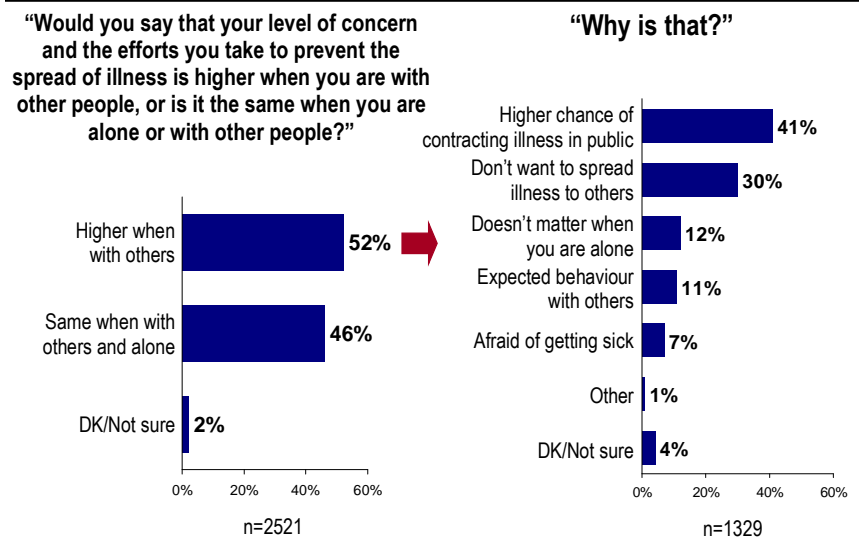
- Elevated concern in public places is more concentrated among those with the highest education and income, as well as among those with children in grade school (ages six to eleven).

- Health care workers are also more often concerned in public places as are those who live with someone who is vulnerable to illnesses.
- Parents who live with someone who is vulnerable to illnesses are more likely to say their level of concern is equal at home and in public spaces.
- Reasons provided by Aboriginal and low income parents (more than others) as for their level of concern being higher in public spaces is their fear of getting sick and fear of spreading illness to others. Parents born abroad are more often concerned with the less controlled environment outside their home.
- Only residents of Prince Edward Island are marginally more likely to say that they are equal (59 per cent), otherwise, there are no substantive differences across the country. In Saskatchewan residents are more likely than others across the country to say that exposure to others increases the risk of getting the flu (35 per cent).

Among those more concerned and vigilant in public places, the lion's share reported that this is because public places are a less controlled environment, where one is unsure of the levels of prevention practiced. Very few said that they themselves are concerned about spreading illness or because they feel that peer pressure is exerted to perform a certain level of prevention in public.

When asked about whether their level of concern and efforts at prevention vary when they are alone versus in the presence of others, just over half (52 per cent) said that they are more vigilant when others are present.

Vigilance in the Absence of Others



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- Higher vigilance in the presence of others is more prevalent among the most educated, as well as among parents with higher incomes. It is also the case (but only marginally more) among those with no children in the home, and people working as caregivers. It is also true of Aboriginal respondents and visible minorities.
- This is also the case among those with the highest knowledge levels regarding the flu and how it is transmitted.

Among those who are more vigilant in the presence of others, four in ten said that this is because they believe there is a higher chance of contracting an illness in public. A similar number (42 per cent when two categories are combined) said that they are concerned about spreading illness to others. One in ten (11 per cent) said that it is because it is expected behaviour when in the presence of others. Those who are more concerned about contracting illnesses from others are considerably more likely to practice prevention techniques.

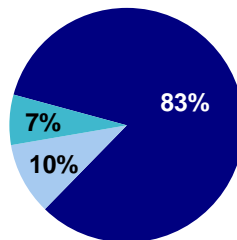
- Fear of contracting the flu from others is more often reported in Alberta, Saskatchewan, Manitoba and Ontario, than it is elsewhere in Canada.
- Visible minorities are more conscious of spreading illnesses to others than most other Canadians (and among parents, it is those who are visible minorities, in particular, who are more apt to believe the chances of contracting the flu are greater in public). This belief is also more prevalent among residents of Quebec and the NWT than it is elsewhere in Canada.
- The fact that it is expected behaviour is more often the case in British Columbia and Newfoundland than it is in the rest of Canada.

4.2 PERCEIVED ORIENTATION REGARDING PREVENTION

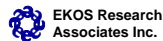
When asked to self-assess their own prevention orientation, most Canadians (83 per cent) think of themselves as a person who takes prevention precautions. Although there is a correlation between this assessment and the behaviours that respondents have described (even though based on self report), there is still a very large proportion of Canadians would describe themselves as people who take precautions, even though their self-reported behaviour belies their assessment. In fact, 63 per cent of those who scored very low on actual prevention behaviour nonetheless describe themselves as people who take precautions.

Personal Perception Regarding Vigilance

“Given everything that you have described here, would you generally consider yourself to be a person who takes prevention precautions on a regular basis?”



- Yes
- No - Does not take prevention precautions
- Somewhat (not volunteered)



n=2521

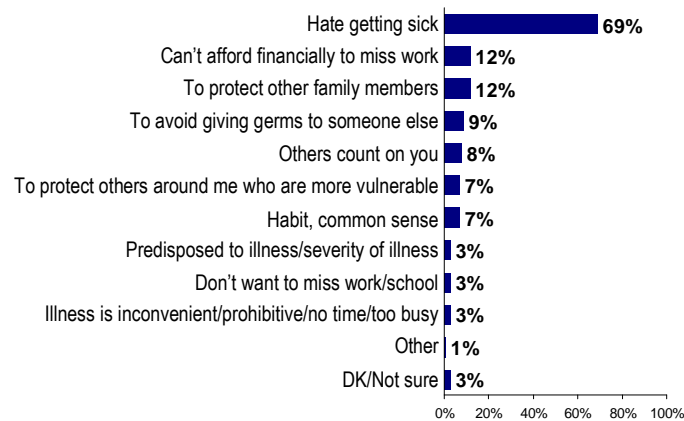
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- Women and visible minorities are more apt than other Canadians to say that they take prevention precautions, as do parents who are university-educated. This tendency also increases with age in the fifties. It is also true of those who feel the need to protect others (health care workers, caregivers and those with vulnerable residence in the home).
- Self-professed prevention increases with knowledge about the flu.
- As already described, those who describe themselves in this way are more apt to report prevention behaviours for themselves (e.g., washing hands frequently and getting the flu shot regularly), and also for their children (getting all available vaccines). This is likely fuelled by their increased perception of the likelihood that they will contract the flu and their concern in this area.
- Residents of New Brunswick register the highest concentration of prevention behaviour, with 90 per cent saying that they would describe themselves as someone who takes precautions regularly. Residents of British Columbia are the least likely to say that they take regular precautions.

Most people say that they take precautions simply because they hate getting sick (69 per cent). Not being financially able to miss work, along with the concern for other family members are also cited, but much less often (12 per cent in each case). Avoidance of germs and others' reliance on them are also cited, again much less frequently (nine and eight per cent of the time), with other reasons being described even less frequently. All together, a reason that is oriented toward protecting themselves is provided about twice as often as a reason that is oriented toward protecting others.

Motives for Prevention Vigilance

“What are the main reasons you take steps to avoid getting sick during flu season?”



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n=2306

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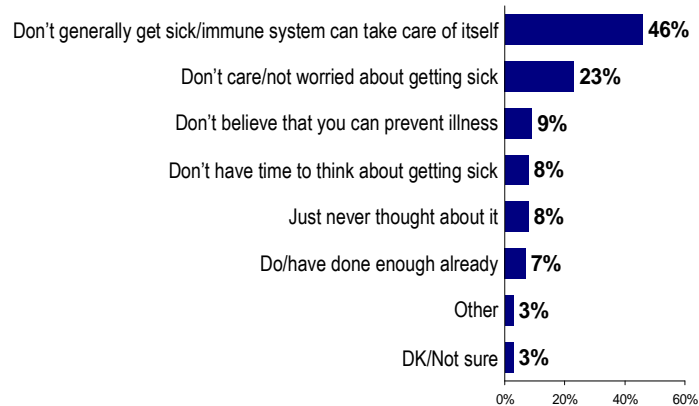
- There are a number of patterns that exist with regard to sub-segments and linkages to attitudes. The overarching theme is that those who are responsible for others (including parents, caregivers, and health care workers) are more apt to be motivated to protect others. Among parents, the younger the child/children the more likely it is that the protection of others is their primary motivation. Women are also more often concerned about the protection of others than men are.
- Aboriginal respondents were far more likely than others to say that taking steps to avoid getting sick is a habit and common sense.

4.3 BARRIERS TO PREVENTION BEHAVIOUR

Among those who do not describe themselves as preventative in their approach, almost half (46 per cent) said that they don't generally get sick and that their immune system will take care of itself (without them taking any additional steps to protect themselves). The second most frequent reason is among the roughly one in four (23 per cent) who are not concerned about getting sick. Fewer than one in ten (nine per cent) say that prevention is not particularly effective. Smaller numbers say that it never occurred to them or simply is not an issue relative to other things.

Barriers to Prevention Vigilance

“What are the main reasons you don't take steps to avoid getting sick during flu season?”



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n=208

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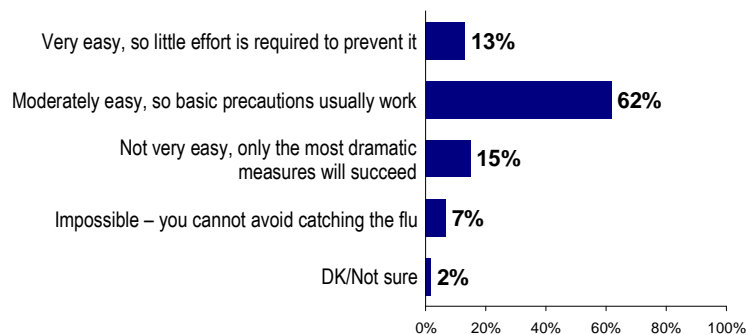
- Those Canadians who are not particularly worried about it or don't have time to think about it more often report lower levels of knowledge about the flu, are less apt to think that they will contract it (or are concerned about contracting the flu) and generally have not had flu shots (validating that they are not particularly prevention oriented). They are also more apt to report lower levels of income.
- Naturally, the rational of not typically getting sick is found more often among those who have not experienced the flu in the past five years.

4.4 PERCEIVED EFFECTIVENESS OF PREVENTION TECHNIQUES

In order to understand whether Canadians are implementing prevention behaviour or not (and why) it is important to understand whether they believe that there is any value in doing so. According to survey results, three in four Canadians believe that it is easy or moderately easy to prevent the flu. There is, however, one in five who believe that it is either very difficult (15 per cent) or impossible (seven per cent) to prevent or avoid the flu. Until this segment believes that there is any point in performing prevention techniques, there will be little incentive for them to do so.

Perceived Effectiveness of Prevention Measures

“As far as you know, how easy is it to prevent yourself from getting or spreading the flu? Would you say it is...?”



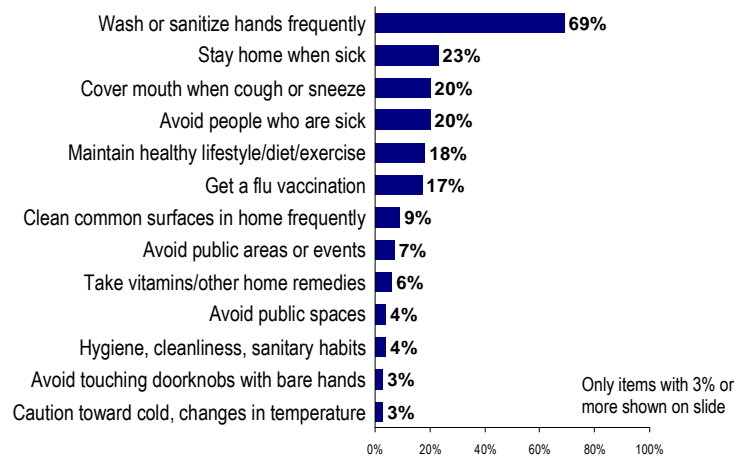
- Women are somewhat more apt to think it is moderately easy to prevent the flu, which is also the more popular response among the university-educated, the most knowledgeable about the flu and health care workers.
- Those who think it more likely that they will contract the flu (and even more so those who are quite worried about this prospect) are somewhat more pessimistic about one's ability to fend off the flu, with higher proportions saying that it is difficult if not impossible to do so. Parents, particularly parents of more children and young or grade school aged children are more apt to say that it is difficult to prevent the flu.
- Larger proportions of Aboriginal respondents and those with a disability believe that it is impossible to stave off the flu (16 and 13 per cent, respectively).

- Residents of British Columbia are the most optimistic about the effort required to reduce or prevent the flu, whereas residents of New Brunswick and Newfoundland are the least optimistic (with 33 and 35 per cent, respectively, believing that it is very difficult, if not impossible, to stave off the flu).

When asked about the best methods to use to reduce or prevent the chance of getting the flu, the most popular method cited is hand-washing (69 per cent). This is followed at a considerable distance by social distancing (i.e., staying home when sick and avoiding people when sick). Cough and sneeze etiquette is also a moderately popular response (20 per cent). Maintaining a healthy lifestyle and flu vaccination were cited 18 and 17 per cent of the time, and cleaning common surfaces was cited by fewer than one in ten (nine per cent).

Effective Methods of Preventing the Spread of Flu

“As far as you know, what can people do to reduce or prevent the chances of getting or spreading the flu?”



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n=2521

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- Women are more apt to identify washing or sanitizing hands frequently as a way people can reduce or prevent the chances of getting or spreading the flu, as are Canadians between 25 and 44 years of age, the college and/or university-educated, and those with higher incomes. The same is true of those born in Canada, health care workers and caregivers, and parents, particular if they have children under the age of 11.
- Those less likely to believe washing or sanitizing hands frequently is a means of warding of the flu or spreading it are Aboriginal people, those with a disability, foreign-born Canadians and seniors, as well as those with a high school education.

- ▶ Residents of Nunavut are less apt to identify washing or sanitizing hands frequently as a means to stave off the flu compared with other Canadians.

4.5 PERCEIVED EFFECTIVENESS OF SPECIFIC TECHNIQUES

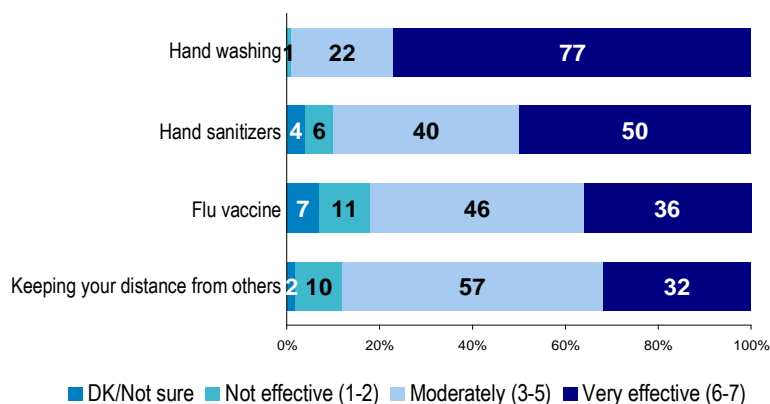
Regarding measures to reduce one's chances of catching the flu, Canadians were asked to rate the perceived effectiveness of certain products or behaviours. At the top of the list, hand-washing was rated by three-quarters (77 per cent) as very effective (reflecting the previous results). Another one in five (22 per cent) rated it as moderately effective. Half of respondents (50 per cent) rated hand sanitizers as very effective, with four in ten (40 per cent) considering this as moderately effective. This is followed by the flu vaccine, which is rated by one-third of Canadians as very effective (and surprisingly high given the previous results). Nearly half (46 per cent) rate it as moderate, and one in ten (11 per cent) believe it has no effect. Social distancing is seen as the least effective method when asked to rate the question individually, even though moderately high proportions said that avoiding others and staying home when you are sick are good methods of prevention in previous results. Less than one-third (32 per cent) feel this to be very effective in reducing ones chances of catching the flu. Nearly six in ten (57 per cent) rate it as moderately effective, and one in ten believe it to be completely ineffective.

The 2007 Environics survey examined effectiveness of several measures in which 95 per cent of Canadians considered hand washing to be effective in protecting oneself from the flu, while 66 per cent considered the annual flu vaccine to be effective.⁹ In the current results, using the same method of collating scale points, 89 per cent of Canadians find hand washing effective and 54 per cent find flu vaccines effective, indicating a similar level of perceived effectiveness regarding hand washing but lower faith in vaccines over time.

⁹ National Follow-Up Survey of Pandemic Influenza Attitudes and Awareness among Canadians. Environics, 2008.

Effectiveness of Measures to Reduce Catching the Flu

“How effective are the following measures in reducing your chances of catching the flu...?”



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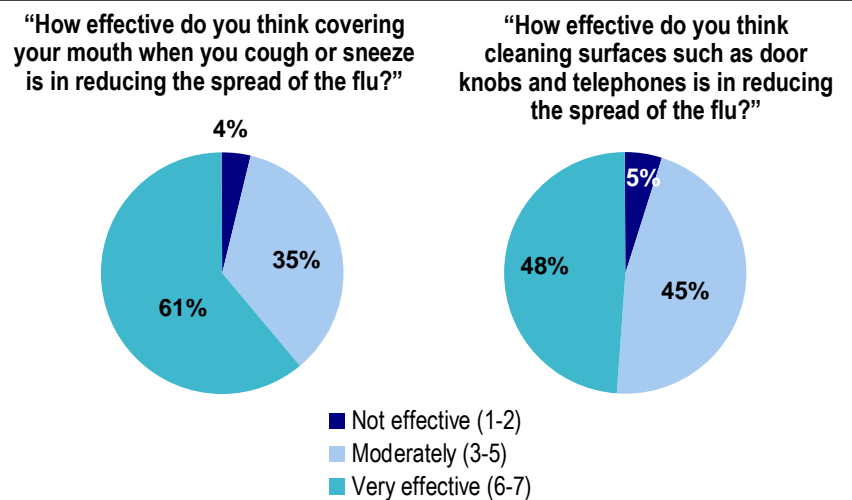
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- *Hand-washing.* Respondents typically placing more faith (than others) in hand-washing are women, individuals born in Canada, individuals who generally report strong prevention behaviour, as well as parents of grade school aged children (who also report strong vaccine prevention for the children). Results are the most positive in Quebec and lowest in Nunavut in terms of perceived effectiveness.
- *Hand sanitizers.* Those with the greatest faith in hand sanitizers report the lowest levels of education and income, although they also report strong prevention behaviour, particularly parents who have ensured maximum vaccination protection for their children. This faith in the effectiveness of hand sanitizers comes down with increasing education and income.
- *Flu vaccine.* The strongest faith in vaccines is reported by seniors and (consequently) those with the least education and income. Naturally, they also report the most frequent vaccination records in the past five years (for them or their children, if they are parents). They are least apt to have children living in the home and a higher than average incidence of disability. Faith in vaccines is less among 35 to 54 year old Canadians and comes down with household income. It is also linked to perceived likelihood of contracting the flu. Those who believe it only somewhat or not very likely they will contract flu have less faith in vaccines. Vaccines are rated more favourably in Nova Scotia than elsewhere across the country (with 44 per cent saying they are very effective) and least favourably in the NWT (25 per cent saying the same) in terms of effectiveness.
- *Social distancing.* Respondents likely to perceive social distancing as an effective prevention technique are more often seniors and also more often report the lowest education and income.

There is a higher than average incidence of foreign-born Canadians (and members of a visible minority), Aboriginal people, and people with a disability. They also report stronger than average prevention behaviour. It is also linked with perceived likelihood of contracting the flu. Some parents, including those with two children, and those reporting no vaccination records for their children reported the least faith in social distancing. Social distancing is given more credence in Nova Scotia than elsewhere and the least in Saskatchewan.

Canadians were also asked to speculate on the effectiveness of covering one's mouth when coughing or sneezing, as well as cleaning surfaces (e.g., door knobs and telephones) in reducing the spread of the flu. Six in ten Canadians (61 per cent) feel that covering ones mouth is very effective. That said, one-third (35 per cent) feel this is only moderately effective in reducing the spread of the flu. Cleaning common surfaces is not believed to be as effective a prevention technique. Fewer than half (48 per cent) described this as very effective and a similar proportion (45 per cent) feeling this to be moderately effective.

Perceived Effectiveness of Actions to Reduce the Spread of Flu



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n=2521

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- *Covering mouth when cough or sneeze.* Individuals with the strongest faith in the effectiveness of covering one's mouth tend to be seniors, consequently influencing a range of other characteristics. As such, women, and those with the least education, and income are all more apt to view this as very effective. Men, the university-educated, those with higher incomes, as well as parents (especially those with two children) are all more apt to feel covering ones mouth (when they cough or sneeze) will be moderately effective in reducing the spread of the flu. Perceived effectiveness is also linked to perceived likelihood of getting the flu. Consequently, those who believe that they are somewhat likely to get the flu this winter more

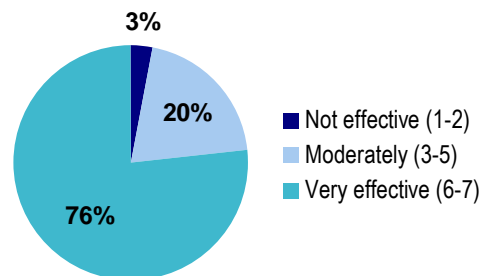
often rate covering one's mouth as moderately effective. Provincially, residents of Quebec and Newfoundland place the greatest faith in cough etiquette. This faith is lowest in Alberta.

- *Cleaning common surface areas.* Canadians with the greatest faith in the effectiveness of cleaning are women, the college-educated, parents (especially those with two children and whose children have had all three vaccines, although this decreases with level of education). Also, linked to perceived likelihood of contracting the flu, those who feel it is likely they will get the flu this winter and report the greatest concern place the most faith in cleaning as a prevention technique. By comparison, men and the university-educated more often feel that cleaning is only moderately effective in reducing the spread of flu.

Canadians were also asked about the effectiveness of not sharing personal items (e.g. utensils and drinking glasses) in reducing their chances of catching the flu. While three-quarters (76 per cent) perceive not sharing personal items to be very effective, two in ten (20 per cent) feel this is only moderately effective. Almost no one considers it ineffective.

Perceived Effectiveness of Not Sharing Personal Items

“How effective is the following measure in reducing your chances of catching the flu: Not sharing personal items like drinking glasses or eating utensils?”



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n=2521

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- Women, those between the ages of 45 and 54 years, and parents (especially those with children over six years of age) more often report greater faith in the effectiveness of not sharing personal items. Youth more often than others rate this as only moderately effective. It is noteworthy that Aboriginal respondents and those with a disability reported the least faith in this element of prevention.
- Provincially, residents of New Brunswick are more often sold on this method of prevention (83 per cent saying it is very effective). The least faith is placed on not sharing items in

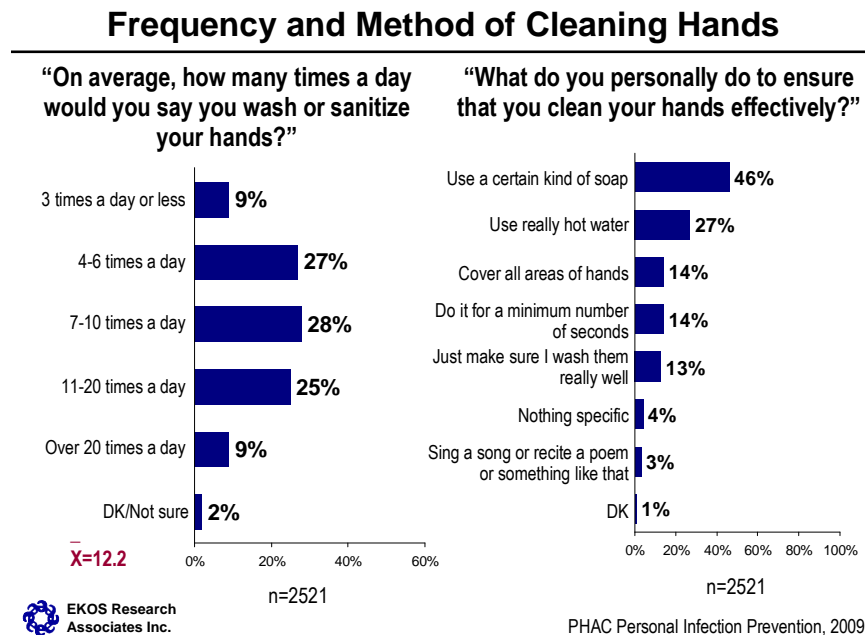
Nunavut (where only 49 per cent believe it to be very effective) and in Quebec (where 67 per cent said that it is highly effective).

5. PREVENTION BEHAVIOUR

5.1 HAND WASHING

The frequency with which Canadians wash their hands each day varies significantly. Overall, on average, survey respondents reported washing their hands 12.2 times daily. Most Canadians reported washing their hands four or more times a day: with 27 per cent washing their hands four to six times daily; 28 per cent seven to ten times daily; and 25 per cent 11 to 20 times daily. On either side of the spectrum, close to one in ten (nine per cent) wash their hands three times or less each day, and the same proportion wash their hands more than 20 times a day.

Respondents were asked to identify the method they use to ensure that they clean their hands effectively. Nearly half (46 per cent) reported using a specific type of soap, and 27 per cent reported that they use really hot water. Less frequent responses include covering all areas of hands with soap (14 per cent), washing hands for a minimum length of time (14 per cent), and simply ensuring that they wash their hands thoroughly (13 per cent).



- Women report washing their hands much more frequently than men. (On average, women report washing their hands 14.8 times daily and men 9.5 times). Women are also more likely than men to state that they cover all areas of their hands, including fingers and finger tips, with soap to ensure that they clean their hands effectively.
- Those with vulnerable individuals within their household reported more frequent hand-washing than those without an at-risk household member. Furthermore, they are somewhat more apt to report washing their hands for a minimum length of time and using really hot water.
- Parents wash their hands with a slightly greater frequency than non-parents. Furthermore, parents of children aged five and younger reported washing their hands more frequently than parents of older children, as do parents with more than one child. Also, parents who have someone more vulnerable living with them more often rely on using really hot water (as do parents born in Canada and parents with more than one child, or older children, relative to other parents) and cover all areas of hands with soap compared to those without a vulnerable person living in their home. This is also true of parents with more than one child. Hand sanitizer seems to be more popular among those parents reporting less income. Among male parents use of a certain kind of soap is a more common response than among female parents.
- The reported daily incidence of hand-washing is lowest in Nunavut, followed by Quebec and highest in Nova Scotia (see table of provincial/territorial differences below).
- The proportion of respondents who reported washing their hands for a minimum length of time, or ensure that they wash them really well increases with knowledge index scores.
- Despite higher than average knowledge about the flu and its transmission, those with university education and higher incomes wash their hands somewhat less frequently than those with high school education and lower incomes (e.g., the average number of times respondents wash their hands each day declines from 12.6 times for those with household incomes below \$30,000 to 10.8 times for those with household incomes of \$120,000 or more). That said, the university-educated are more apt to impose a minimum length of time on themselves for hand-washing.
- Youth (under 25) report less frequent hand-washing than older Canadians (41 per cent wash their hands 4 to 6 times daily). That said, they are also more apt than average to wash their hands for a minimum amount of time to ensure that they are clean (25 per cent).
- Hand-washing is linked to perceived risk of catching the flu. Those who consider it likely that they will catch the flu this winter and who are concerned by this prospect reported washing their hands more frequently than those who feel they are unlikely to catch the flu.
- It is interesting to note that there is little difference in frequency of hand washing based on perceived effectiveness of prevention techniques in general. The average frequency of hand washing is very similar between groups of respondents who said that it is very easy to prevent the flu and those who said that it is very difficult to prevent it.

- There is also a strong link between hand-washing and other prevention behaviours. For example, Canadians who have obtained the flu vaccine three to five times within the past five years reported more frequent hand-washing than those who had not obtained the flu vaccine in the last five years.

On average, how many times a day would you say you wash or sanitize your hands?

Province	Mean
BC	12.2
AB	12.0
SK	13.2
MB	12.8
ON	12.5
QC	11.9
NB	12.5
NS	15.2
PEI	9.5
NFL	12.6
YU	11.0
NWT	10.5
NU	9.0

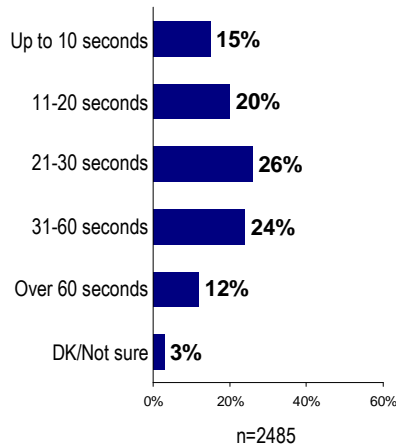
Of those Canadians who reported washing their hands for a minimum length of time, that amount of time varies significantly. Two in ten spend 11 to 20 seconds washing their hands, and 15 per cent spend less than ten seconds. One-quarter reported that they spend 21-30 seconds washing their hands (26 per cent). Another quarter (24 per cent) spend 31-60 seconds washing their hands. Finally 12 per cent spend more than one minute (60 seconds) washing their hands. The average number of seconds reported to be spent (by only those who rely on minimum time as their method of ensuring effectiveness) is 48.2.

Respondents most often reported using regular soap to clean their hands (55 per cent), while close to one-third (32 per cent) use antibacterial soaps. A small minority (six per cent) use hand sanitizers most often to clean their hands, and a similar number (5 per cent), report using all of these products (soap, antibacterial soap and hand sanitizer) equally.

It is interesting to see that virtually all of those who believe regular soap to be the most effective use regular soap (88 per cent). About half of those who believe antibacterial soap to be best use it, although 38 per cent still use regular. Of those who believe hand sanitizer to be the most effective, 14 per cent use it most frequently, but the lion's share are split equally in their use of regular versus antibacterial soap. Of those who believe that all are equally effective methods, 59 per cent use regular soap and 28 per cent use antibacterial soap.

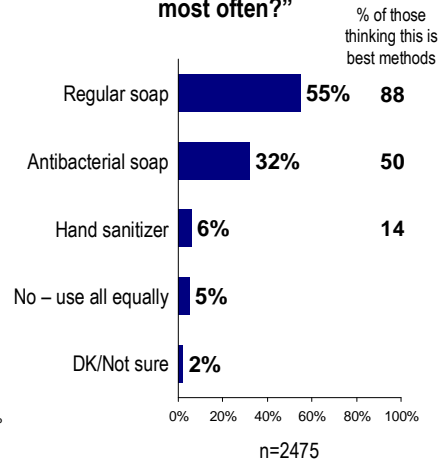
Duration and Products to Clean Hands

“How long do you typically wash your hands for?”



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“Do you tend to use regular soap, antibacterial soap or hand sanitizer most often?”



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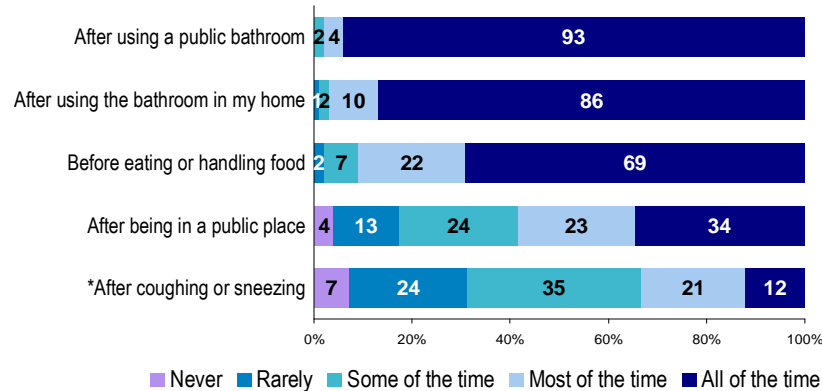
- As with the frequency of hand-washing, the duration of hand-washing tends to decline with increasing education and income (e.g., those with the lowest incomes reported spending an average of 62.9 seconds on average washing their hands, while those with the highest household incomes reported spending 38.8 seconds washing their hands on average).
- Residents of Quebec reported washing their hands for a longer period than do other Canadians (averaging a full 54 seconds). The average is generally between 40 and 50 seconds, with Manitoba reporting the lowest).
- Those who consider it likely that they will catch the flu this winter tend to spend more time washing their hands than those who consider it not or somewhat likely that they will fall ill with the flu.
- The proportion who report using regular soaps to wash their hands increases with age (from 39 per cent of those under 25 to 67 per cent of those 65 or older), while use of antibacterial soaps declines with age.
- Parents, and those with a vulnerable household member are more apt to report using antibacterial soaps, and less likely to use regular soap. Furthermore, parents who procure all vaccines available for their children (including the flu vaccine), are more apt to report using antibacterial soaps than other parents. Lower income and high school educated parents reported a longer average length of time to clean their hands than other parents.

- Use of regular soaps is more prevalent among those with high knowledge index scores than those with less knowledge, and the reverse is true of antibacterial soaps (which are less often used by those with high knowledge levels).
- Those who consider it likely that they fall ill from the flu this winter and are concerned by this possibility are somewhat more apt to report using hand sanitizers (12 per cent do) compared to others. That said, 51 per cent of those reporting the greatest likelihood and concern regarding getting the flu still reported regular soap as their main product for cleaning their hands.
- While regular soap is the main product for all Canadians, there is a greater pull towards antibacterial soap with increasing reports of other prevention behaviours. That is, 24 per cent of those who reported lower frequencies of prevention behaviours said they use antibacterial soap (with 64 per cent using regular soap). Among those who reported high frequencies of prevention behaviour 40 per cent use antibacterial soap (and only 47 per cent use regular soap). So, increasing prevention behaviour is associated with greater use of antibacterial soap (even though regular soap is still the main product used).

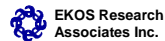
Survey respondents were then asked to indicate how often they wash their hands each day in specific situations. The vast majority of Canadians reported that they always wash their hands after using a public washroom (93 per cent); and always wash their hands after using the washroom in their home (86 per cent). Just over two-thirds said that they always wash their hands before eating or handling food (69 per cent). Only 34 per cent, however, said that they always wash their hands after being in a public place; and 16 per cent always wash their hands after coughing or sneezing. The latter number is deceiving, however, since many Canadians also reported that they do not cover their mouth with their hand after they cough or sneeze, but rather with a sleeve/arm or handkerchief. Considering only those Canadians who typically use their hand to cover their mouth when they cough, only 12 per cent said that they always wash their hands after a cough or sneeze. Another 21 per cent reported doing this most of the time. The results are similar for those who cover their mouth with a hand during a sneeze. In fact, it is those who use a handkerchief during a cough or sneeze who are the most apt to wash their hands afterward (with 52 per cent saying most of the time or all of time).

Frequency of Cleaning Hands – Different Conditions

“How often do you wash or sanitize your hands each day...?”



*Based on the 1,136 respondents who reported typically covering their mouth with their hand when they cough



n=2521

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- Women are more likely than men to report washing their hands in each of these situations (consistent with earlier findings of women washing their hands more frequently than men).
- Youth (under 25) are less apt to always wash their hands before eating or handling food (although this is not the case among parents in this age range). Seniors more often reported washing their hands after using the bathroom in their home than other age groups. Furthermore, the proportion who wash their hands after being in a public place increases with age (from 18 per cent of those under 25 to 45 per cent of those 65 and older).
- Those with high school education are more apt to always wash their hands before eating or handling food, after being in a public place, and after coughing and sneezing compared to those with more education. The proportion who reported always washing their hands after being in a public place or after coughing and sneezing also declines with household income.
- As noted previously, various prevention behaviours and perceived risk are linked. Those who have had the flu vaccine three to five times in the past five years are more apt to report always washing their hands in most of these situations compared to others (who have not had the flu vaccine or received it less frequently). Furthermore, those who consider it likely that they will catch the flu this winter and who are concerned by this more often reported always washing their hands after being in a public place (with the exception of parents who reported doing so some of the time), and after coughing or sneezing in comparison to others.
- Those born outside Canada and visible minorities more often reported always washing their hands after being in a public place than do other Canadians.

- Those with vulnerable family members are more apt to report always washing their hands after being in a public place and after coughing or sneezing than those without household members who are at risk.
- Residents of Quebec reported always washing their hands before eating or handling food and after being in a public place more often than other Canadians, with the exception of Newfoundland residents who also reported doing so after being in a public space. Alberta residents and those from PEI reported the least likelihood of washing their hands before eating. Those residing in New Brunswick and Newfoundland, however, are more apt to wash their hands after using the washroom in their home. In Nunavut, on the other hand, whether using the washroom in their home or a public restroom, this incidence is lowest. Residents of British Columbia and PEI reported lower frequencies of washing their hands after being in a public place than other Canadians. Also, after coughing or sneezing, Nova Scotia residents are the most apt to report washing their hands, whereas this frequency is lowest in British Columbia.

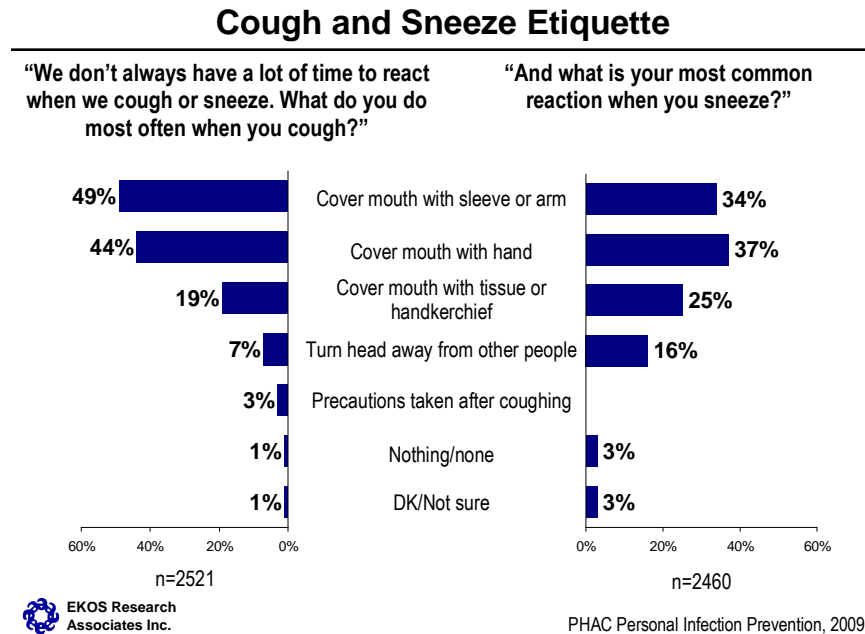
How often do you wash or sanitize your hands each day...?

Province	Those saying "All of the time"				
	After using a public bathroom	After using the bathroom in your home	Before eating or handling food	After being in a public place	After coughing or sneezing
BC	95%	83%	68%	24%	12%
AB	89%	87%	60%	31%	14%
SK	92%	85%	72%	36%	15%
MB	93%	87%	64%	28%	14%
ON	94%	88%	69%	37%	16%
QC	90%	83%	74%	40%	18%
NB	93%	91%	69%	38%	23%
NS	93%	88%	72%	33%	28%
PEI	97%	93%	57%	20%	13%
NFL	96%	95%	71%	42%	31%
YU	92%	83%	62%	27%	15%
NWT	90%	88%	66%	30%	19%
NU	82%	72%	64%	36%	22%

Acknowledging that there is not always a great deal of time to react to a cough or sneeze, survey respondents were asked to indicate what they do most often when they cough or sneeze. Covering their mouth with their sleeve or arm when they cough is the most frequent response to a cough or sneeze (according to 49 per cent), followed by covering a mouth with a hand (44 per cent). Two in ten cover their mouth with a tissue or handkerchief. Less than one in ten (seven per cent) turn their head away from other people when they cough.

5.2 OTHER PREVENTION TECHNIQUES USED

The reported reaction to a sneeze is somewhat different or more varied than it is for coughing. Again, most reported that they cover their mouth with their hand (37 per cent) or with their sleeve or arm (34 per cent). One-quarter said they use a tissue or handkerchief (25 per cent), and 16 per cent turn their head away.



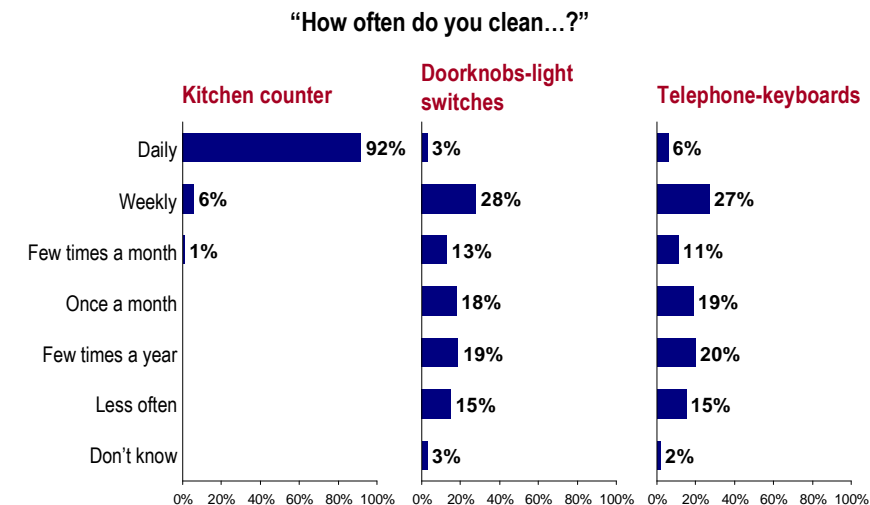
- Women more often reported covering their mouth with their sleeve, arm, a tissue or handkerchief when they cough or sneeze, while men are more apt to cover their mouth with their hand.
- As a newer method of containing germs, it is not surprising to see that the proportion of respondents who cover their mouth with their sleeve or arm when they cough decreases dramatically with age (from 71 per cent of youth who do this to only 25 per cent of seniors). Use of a handkerchief is a more dated method of prevention, which is reflected in the usage findings; only nine per cent of youth use one compared with 43 per cent of seniors).
- Those born in Canada are more apt to report covering their mouth with their sleeve or arm when they cough or sneeze, while those born outside Canada are more apt to use a tissue or handkerchief.
- Parents, particularly those with children under 12, those who have a vulnerable person living in their home, and those who tend to obtain for their children all routine and non-routine

vaccinations, as well as the flu shot, are more apt than others to report that they cover their mouth with their sleeve or arm when they cough or sneeze.

- Generally residents of Saskatchewan and Newfoundland are more likely than others to cite the use of a tissue to cover one's mouth. Those in Alberta and Manitoba are more apt than others to use their arm and residents of Prince Edward Island and Nunavut are the most likely across the country to use their hand.

Survey respondents were also asked to indicate how often they clean a number of surfaces common to homes and offices, which are known to be areas where germs tend to collect. Most respondents reported that they clean their kitchen counters daily (92 per cent), but clean doorknobs, light switches, telephones and keyboards on a less frequent basis. Three in ten clean doorknobs or light switches daily or weekly (31 per cent), and others clean these on a less frequent basis (13 per cent a few times a month, 18 per cent once a month, and 34 per cent less frequently than once a month). The same is true for telephones and keyboards, which 33 per cent clean daily or weekly and the rest clean less frequently.

Cleaning Common Surfaces



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n=2521

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- Women are more apt to report a higher frequency of cleaning than men. For example, 34 per cent of women reported that doorknobs and light switches are cleaned daily compared to 23 per cent of men who said the same.
- Younger respondents (under the age of 35) are less likely than older respondents to say they clean kitchen counters daily, and are more apt to clean this surface weekly. Similarly, the proportion of respondents who clean telephones and keyboards weekly increases with age (with younger respondents cleaning this surface less frequently). Conversely, the youngest

respondents (under 25) clean doorknobs and light switches more frequently than do older respondents (39 per cent clean this surface weekly, while older age groups are more apt to clean this surface on a less frequent basis).

- Parents are more apt than others to clean kitchen counters daily, but tend to clean telephones and keyboards on a less frequent basis than non-parents.
- Visible minorities, those born outside Canada, Aboriginal Canadians and those with a disability are much less likely to clean kitchen counters daily than are other Canadians (with the exception of Aboriginal parents and parents with a disability). Canadians with a disability are more apt than others to clean keyboards and telephones daily (although the proportion is still relatively small at 15 per cent).
- The proportion that cleans doorknobs and light switches weekly declines with education (from 35 per cent of those with high school education to 22 per cent of those with university education). The same pattern is true for cleaning telephones and keyboards. In both instances, respondents with university education (and greater income) are more apt than those with less education to report that they clean these surfaces a few times a year.
- Residents of Nunavut are slightly more likely to wash keyboards and telephones frequently but least likely to wash counters, door knobs and light switches compared with other Canadians.
- Those who believe they are likely to catch the flu this winter and are concerned by this are more apt than others to report higher frequency of cleaning doorknobs, light switches, telephones and keyboards (daily or weekly).
- Those with vulnerable family members also tend to clean doorknobs and light switches more frequently (daily or weekly) than those without a household member at risk.

5.3 COMBINED PREVENTION BEHAVIOUR (INDEX)

As with knowledge, a number of survey variables were taken together to create an index of prevention behaviours. In creating this index, respondents were given a point for each appropriate prevention behaviour. With some variables, the number of points increased with the frequency of the behaviour (e.g., number of times they wash hands daily, number of annual vaccines). Table 5.1 identifies the variables and responses utilized to create this index. These include the number of times the respondent washes or sanitizes their hands each day; approach taken to clean hands effectively; length of time typically spent washing hands; frequency of hand-washing in specific situations; reaction or behaviour when one coughs or sneezes; the frequency with which the respondent cleans common surfaces (e.g., kitchen counters, door knobs, telephones); and flu vaccine behaviour. Respondents were then assigned a behaviour “score” based on this index, and respondents with low scores, medium and high behaviour scores were grouped and used as a variable for analysis.

Table 5.1: Behaviour Index

Variable	Question	Correct responses/Responses receiving points	Points	
Q8	On average, how many times a day would you say you wash or sanitize your hands	5 – 7 times a day	1	
		8 – 10 times	2	
		11-19 times	3	
		20-50 times ¹⁰	4	
Q12	What do you personally do to ensure that you clean your hands effectively?	Nothing specific	0	
		Wash for a minimum number of seconds	1	
		Sing song/recite poem	1	
		Cover all areas of hands, including fingers and finger tips	1	
Q13	How long do you typically wash your hands for?	15 seconds or more	1	
Q16	How often do you wash or sanitize your hands each day:			
	Before eating or handling food			
	After using the bathroom in your home			
	After using a public bathroom			
	After being in a public place	Most of the time	0.5	
Q17	What do you do most often when you cough?	After coughing or sneezing	All of the time	1
		Cover your mouth with your hand		0.5
		Cover your mouth with your sleeve or arm		2
		Cover your mouth with a tissue or handkerchief		0.5
		Precautions taken after coughing (e.g., wash hands)		1
Q19	What is your most common reaction when you sneeze?	Cover mouth with clothing		1
		Cover your mouth with your hand		0.5
		Cover your mouth with your sleeve or arm		2
		Cover your mouth with a tissue or handkerchief		0.5
		Wash hands immediately after		1
Q20	How often do you clean?	Turn head away from all objects, surfaces, people		1
		a) Kitchen counter	Daily	1
		b) Doorknobs, light switches	Daily	1
		c) Telephones, Keyboards	Weekly	1
			Few times a month	0.5
		Once a month	0.5	

¹⁰ Note that those who responded with a number higher than 50 were excluded as outliers

Variable	Question	Correct responses/Responses receiving points	Points
Q25	Have you had a vaccine for flu or influenza in the past five years?	More than once in the past five years	1 plus .5 for every year of vaccination
Q26	How many times in the last five years have you had an annual flu vaccine?		

Based on this index, 22 per cent of respondents receive low behaviour index scores (or a low level of effective or appropriate prevention behaviours); 53 per cent have moderate or medium behaviour scores; and 26 per cent obtain high behaviour scores.

A regression model was built to explore the value of key variables in predicting strong prevention behaviour (as measured by a high score on this index). Knowledge, risk perception, including recent experience of the flu, vulnerability of the household, and perceived likelihood of contracting the flu, as well as perceived effectiveness of different measures were each entered into the model. Perceived effectiveness was returned as the best predictor of strong prevention behaviour. In fact, perceived effectiveness of cleaning common surfaces such as doorknobs and telephones was the single best predictor of strong prevention behaviour. Perceived effectiveness of hand washing followed as the next best predictor of strong prevention behaviour, then followed by effectiveness of the flu vaccine. The extent of vulnerability of the household (including having a vulnerable household member, having a senior or young child in the home or working as a caregiver or health care worker - being responsible for others) followed these perceptions of effectiveness. This was followed by the perceived effectiveness of cough etiquette (which is a good predictor, but not one as strong as perceived effectiveness of cleaning and hand washing). Age was the next best predictor, with prevention behaviour increasing with age. The individual's knowledge of the flu is another reasonably good predictor, however, it is not nearly as strong as the top effectiveness measures or vulnerability of the household. Last in the model was perceived likelihood of contracting the flu. So, perceived effectiveness of the preventative measures being taken, and the desire to protect others are the two key drivers of prevention behaviour, according to survey results.

- As with the knowledge index, there is some link between knowledge and behaviour, although it is not as strong as we might expect. There is only a limited correlation between knowledge and behaviour found in the survey results. Those with a high knowledge index are more likely to also hold a high behaviour index score (30 per cent do); but there is no strong link between low or moderate knowledge levels and low or moderate behaviour scores. Those with low knowledge scores are only moderately more likely to score low on the behaviour index (46 per cent with low behaviour scores have low knowledge scores, compared to 44 and 39 per cent of those with medium and high behaviour index scores, respectively).
- As noted above, prevention behaviours are strongly linked to perceived risk. Respondents who consider it likely that they will catch the flu and are concerned by that fact are more apt to have high behaviour index scores (38 per cent do, compared to 23 per cent of those who believe it unlikely that they will catch the flu). Similarly, those with a vulnerable household member are

more apt than others to demonstrate a higher level of prevention behaviours (37 per cent have high behaviour scores, compared to 22 per cent of those without a family member at risk).

- Naturally, there is a strong correlation between behaviour index scores and the individual variables contained within the index (e.g., length of hand-washing, frequency of hand-washing, cleaning common surfaces, obtaining the flu vaccine regularly), demonstrating that there is a link between different prevention behaviours (those who engage in one prevention behaviour such as frequent hand-washing also engage in other prevention behaviours).
- Consistent with other findings presented, women have a higher behaviour index score than men (36 per cent have high behaviour scores, compared to 15 per cent of men). Women engage in more prevention behaviours more frequently than men.
- Youth more often score medium or moderate behaviour scores compared to older respondents, and are less likely to have high scores.
- Despite the fact that they had been more knowledgeable regarding the flu, respondents with university education are less likely to demonstrate high levels of prevention behaviour (23 per cent have high scores, compared to 25 per cent of those with high school and 31 per cent of those with college education). Similarly, those with the lowest household incomes are somewhat more apt than others to hold high scores (27 per cent do), while those with the highest household incomes are least likely to have high behaviour index scores (23 per cent do).

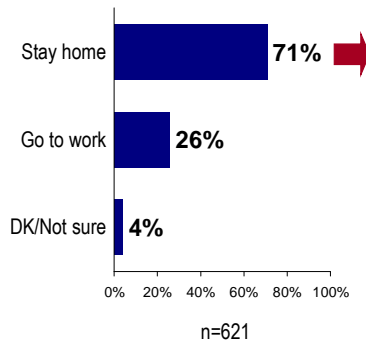
5.4 OTHER STRATEGIES TO PREVENT SPREAD OF FLU

Seven in ten Canadians (71 per cent) opt to stay home from work when they are sick with something more serious than a cold (such as a fever or upset stomach), although just over one-quarter go to work regardless (26 per cent).

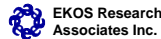
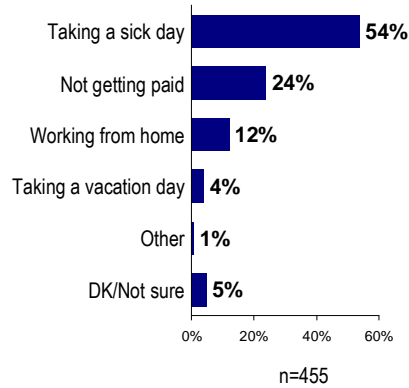
Of those who choose to stay home when they are ill, only just over half would be covered, with sick leave at their place of employment. So, assuming they don't get sick more often than they are covered for in sick leave, they sacrifice relatively little by staying home. Almost one-quarter do not get paid when they stay home from work, and therefore have to take a day without pay (24 per cent). A further four per cent must take a vacation day. Another one in ten are able to distance themselves from those at work but still work, by working from home if they are ill (12 per cent). So, all told, two in three of those who stay home do so with little sacrifice, however, the other one in three stay home even though it costs them in some way.

Distancing and Personal Cost When Sick

“What do you do when you are sick with something more serious than a cold, such as a fever or upset stomach, on a work day?”



“If you stay home, does this involve...?”



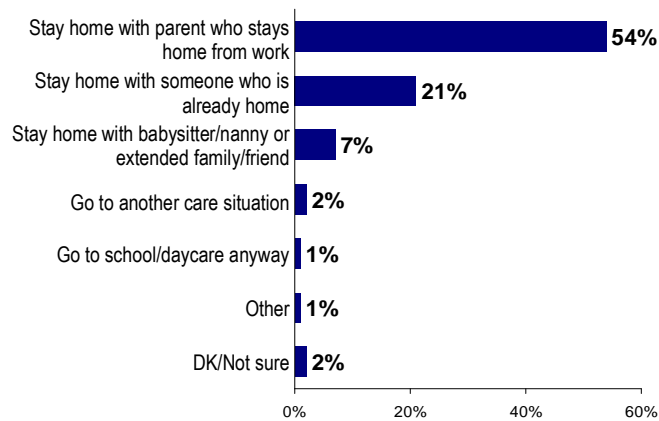
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- As with other infection prevention measures, women are more apt to stay home when they are sick than men (77 per cent, compared to 63 per cent of men). Women, on the other hand are also more apt to be covered for the time they stay home, with proportionately more reporting sick leave. Men rely more often than women on the strategy of working from home or having to take a vacation day.
- Residents with a vulnerable individual in their household are also more apt to stay home when sick (83 per cent, compared to 67 per cent of those not living with a vulnerable person).
- Those with higher knowledge levels are more apt to stay home when they are sick (92 per cent do), compared to those with lower knowledge levels.
- According to survey results, residents of Quebec are more apt than other Canadians to go to work when they are sick (43 per cent).

When a child in the household is ill with something more serious than a cold, most parents opt to stay home from work to care for the child (54 per cent). Two in ten indicated that someone is already home (e.g., stay-at-home parent or grandparent) to care for the child, and a further seven per cent stay home with a babysitter, nanny or extended family member. So, according to survey results, virtually all children are kept home from school when they are sick. That said, in three per cent of situations children are sent out even though they are ill (presumably because there is no alternative care possible in these situations).

Distancing When Child is Sick

“What happens when a child in your home is sick, with something more serious than a cold, such as, for example a fever, or upset stomach?”



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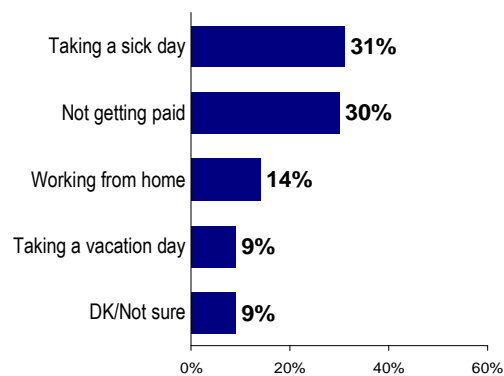
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PHAC Personal Infection Prevention, 2009

Three in ten parents reported that they are able to take sick leave when they stay at home from work to care for a sick child (31 per cent), and another nine per cent must take a vacation day. Just over one in ten (14 per cent) are able to work from home. Three in ten, however, said that they do not get paid in this situation (30 per cent).

Parental Cost of Distancing Among Sick Children

“When a parent is staying home from work, would this involve...?”



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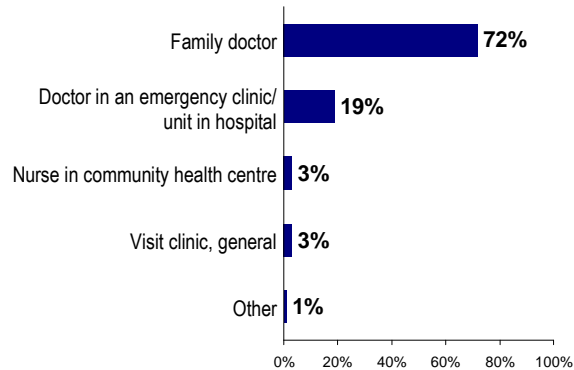
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Canadians turn most often to a family doctor when a household member is sick with something they believe requires intervention by a medical professional (72 per cent). That said, close to two in ten need to visit the emergency department of a hospital or a walk-in clinic (19 per cent), and three per cent turn to a nurse in a community health centre.

Reliance on/Access to Family Physician

“Who do you usually see when someone in your household is sick with something that you believe should be seen by a medical professional?”



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n=744

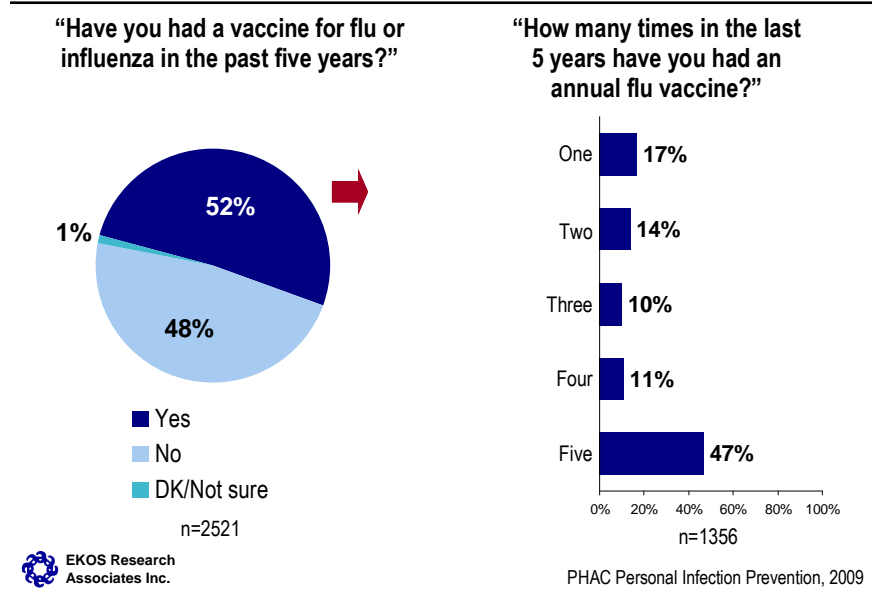
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5.5 VACCINES AS PREVENTION BEHAVIOUR

Only just over half the Canadians responding to the survey have obtained the vaccine for flu or influenza within the last five years (52 per cent), while a similar proportion (48 per cent) have not. Furthermore, of those who have obtained the flu vaccine in the past five years, almost half (47 per cent) have obtained the vaccine each year (five times) in the past five years. One in ten have obtained the vaccine four years out of five (11 per cent), and the same proportion have been vaccinated three years out of five (10 per cent). A third have obtained the vaccine only once or twice during that time.

The 2004 baseline survey and 2007 follow-up survey also examined the incidence of receiving the flu vaccine. The incidence of obtaining the flu vaccine increased from 2004 to 2007. In 2004, 48 per cent of Canadians had never obtained the flu vaccine, while in 2007 41 per cent had not. In 2004, 28 per cent received the flu shot annually, and in 2007 33 per cent of Canadians reported obtaining the vaccine annually.¹¹ Current results for 2009 show a marked increase in obtaining the flu shot.

Incidence of Flu Vaccine – Past Five Years



- The incidence of flu vaccines is lowest in Quebec (41 per cent), and highest in Nova Scotia (61 per cent).
- The proportion of Canadians that have obtained the flu vaccine increases dramatically with age (although the reverse is true among parents, who are found in a narrow age range). One-third of those under 25 have obtained the flu vaccine within the last five years; between 43 to 47 per cent of those 25 to 54; 61 per cent of those aged 55-64, and 74 per cent of those 65 have done so. Furthermore, the proportion of Canadians who have obtained the vaccine annually (five times in five years) increases with age (from 13 per cent of those under 25 to 79 per cent of those 65 and older). This, however, is true of parents (starting with parents who are 25).

¹¹ National Follow-Up Survey of Pandemic Influenza Attitudes and Awareness among Canadians. Environics, prepared for the PHAC, January 2008.

Pandemic Influenza: National Baseline Survey of Pandemic Influenza Attitudes and Awareness amongst Canadians, August 2004.

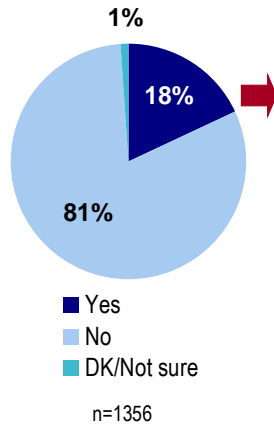
- The proportion of Canadians who have obtained the vaccine annually decreases with education and income (which also largely corresponds to age).
- Not surprisingly, those concerned by the risk of getting the flu are more apt to obtain the flu vaccine. Those who consider it likely that they will catch the flu this winter and are concerned by this are much more likely to have obtained the vaccine to protect themselves (73 per cent have), as are those with a vulnerable household member (67 per cent). Respondents with a disability are also much more likely than others to have obtained the flu vaccine (72 per cent), and to have done so on an annual basis (70 per cent).
- Parents are less likely than others to have obtained the flu vaccine within the past five years (which is not surprising as it is generally older Canadians who are the most likely to have sought protection), and less likely to have obtained it annually. Among parents, women are more likely than men to have obtained the flu vaccine, along with those who live with a vulnerable individual. When parents are vaccine conscious they generally tend to follow all vaccine regimens. Those who reported giving their children routine and optional vaccines also provide flu vaccines and do so more often on a regular basis.
- Respondents scoring higher on the knowledge index are more apt to have obtained the flu vaccine annually (62 per cent have) compared with those scoring lower than average.

A fairly substantial segment of Canadians who have received vaccines claim to have had negative health reactions as a result. Just under two in ten (18 per cent) of those who have received the flu vaccine believe that they had some sort of negative reaction.

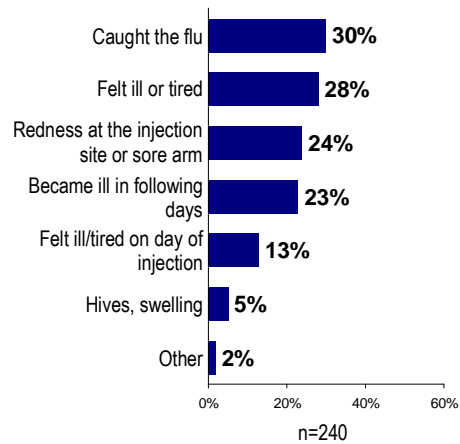
Of these, 24 per cent experienced a sore arm or redness at the site of the injection, which is a likely side effect. That said, three in ten (30 per cent) mistakenly believe that they caught the flu from the vaccine. Almost half said that they felt ill or tired following the vaccine or became ill in the following days (23 per cent). Just over one in ten felt ill or tired on the day they received the injection (13 per cent), and five per cent experienced hives or swelling.

Perceived Negative Reactions

“Did you have any negative health reactions or side-effects to it?”



“What negative reaction did you have?”



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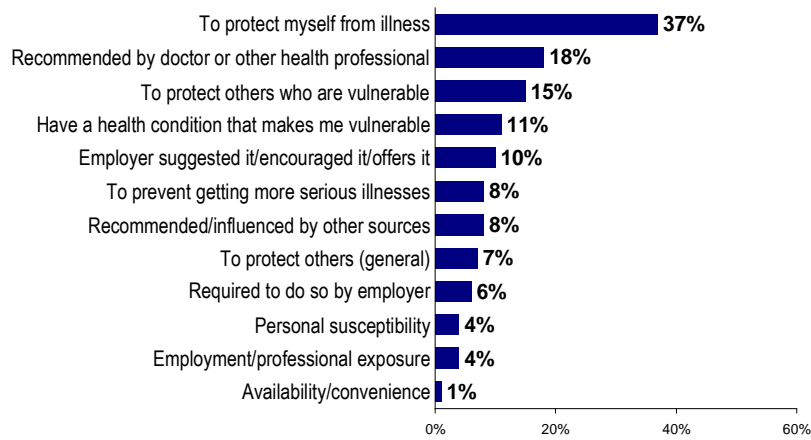
- The proportion of respondents who claim to have experienced negative side-effects from the vaccine tends to decline with age (from 31 per cent of those under 25 to 11 and 12 per cent of those 55-64 and 65 or older, respectively).
- Those born outside Canada are more apt to have experienced negative reactions to the vaccine than those born in Canada (although there is no difference among parents born in or outside of Canada).
- Interestingly, children of parents who experienced no negative health reaction to the flu vaccine were less apt to have obtained the optional flu vaccine for their children.
- Those who have obtained the flu vaccine only once or twice in the past five years are more apt to have experienced negative side effects than those who have obtained the vaccine annually (23 per cent, compared to 16 per cent). This suggests that negative reactions may prevent some individuals from obtaining the vaccine regularly (or that some of the people who have not obtained vaccinations regularly use negative side effects as their own rationale for not doing so – whichever way the relationship tends to work).

Respondents to the survey who indicated that they have received the flu vaccine at some point within the past five years were asked to identify the main reason they chose to obtain the vaccine. The lion's share of people are doing so to protect themselves, or in some cases because it was suggested that they do so (also to protect themselves). In about one in five cases the concern is for the protection of others. Specifically, protecting oneself from illness is the most often listed reason (according to 37 per cent). The recommendation of a doctor or health professional follows as a distant second (for 18 per cent), along with

protecting others who are vulnerable (15 per cent). One in ten reported that they have a health condition which makes them vulnerable. One in ten said that their employer encourages them to obtain the vaccine, and a further six per cent were required to obtain the vaccine by their employer. Other reasons mentioned less often include the prevention of a more serious illness (eight per cent), to protect others in general (seven per cent), and recommended or influenced by another source (eight per cent).

Motives for Obtaining Flu Vaccine

“What are the main reasons you have chosen to get the flu vaccine in the past five years?”



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n=1356

PHAC Personal Infection Prevention, 2009

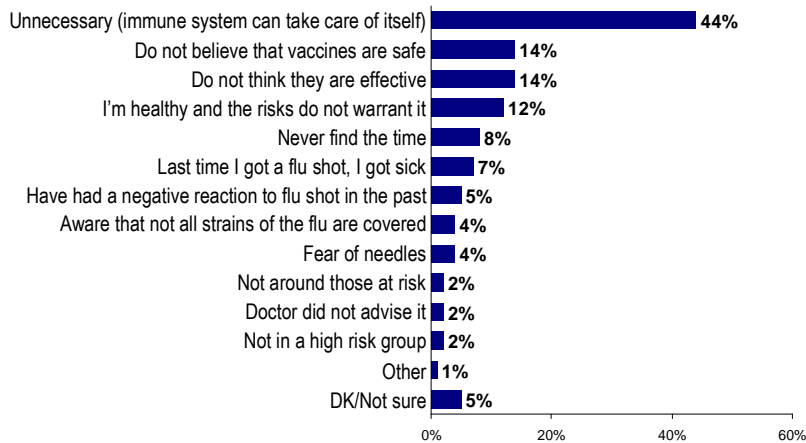
- Women are more apt than men to be motivated by the protection of others.
- Parents of children between two and eleven years of age, however, more often cite protecting others who are vulnerable as a reason for their having gotten a flu vaccine.
- Seniors are more likely than others to obtain the vaccine based on the recommendation of a health professional, because they are vulnerable based on a medical condition, to protect themselves from illness, or due to a personal susceptibility. Youth who have obtained the vaccine are also much more likely to indicate that they did so based on the recommendation of a doctor or health professional. Respondents aged 25 to 44 are more apt to seek to protect others, including those who are vulnerable.
- Respondents born outside Canada are more apt than those born in Canada to obtain the vaccine in order to protect themselves from illness. Parents, however, born outside of Canada more often obtained the vaccine after a recommendation by a doctor.

- Those who have obtained the vaccine three to five times in the past five years were more often motivated by personal protection and in some cases a health condition which renders them vulnerable.
- Those who generally seem to practice more prevention behaviour are more apt than others to be motivated by a health condition, to protect others, or because they are required to do so by their employer.

In terms of reasons not to obtain the flu vaccine the most commonly cited reason is that it is considered unnecessary in that their immune system can take care of itself (identified by 44 per cent of those who have not had the vaccine). Other reasons mentioned by more than one in ten respondents are that they do not believe the flu vaccine is safe (14 per cent); that they do not believe the vaccine is effective (14 per cent); or that they are healthy and do not believe that the risks presented to them by the flu warrant the vaccine (12 per cent). Some identify previous side-effects or reactions as a barrier: 12 per cent believe that they became ill the last time or had some other negative reaction.

Barriers to Obtaining Flu Vaccine

“What are the main reasons you have chosen NOT to get the flu vaccine in the past five years?”



EKOS Research Associates Inc.

n=1151

PHAC Personal Infection Prevention, 2009

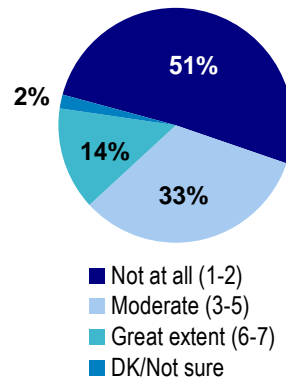
- Those who said that they don't care about getting sick typically report lower income levels than average. This respondent group also reports fewer prevention measures and limited history of flu vaccines.
- Those who said that their immune system can take care of itself more often scored in the mid ranges of prevention behaviour (based on scores on the behaviour index).

- Those who said that they don't have time to get sick are more apt to report getting three to five shots in the past five years, indicating that they do in fact take frequent precautions. Similarly those who said that they already do take precautions are also more apt than others to report frequent flu vaccinations.

Half the Canadians surveyed express no concerns with side-effects of flu vaccines (51 per cent). That said, one-third expressed moderate concerns and 14 per cent significant or high concerns with potential side-effects of the influenza vaccines.

Concerns About Side-Effects of Flu Vaccine

“To what extent do you have concerns about side-effects with the flu vaccines?”



EKOS Research Associates Inc.

n=2521

PHAC Personal Infection Prevention, 2009

- It is not surprising to note that groups more apt to obtain the vaccine regularly are less likely to express any concerns. For example, the proportion who expressed no concern whatsoever with the side-effects of the flu vaccine increases with age (from 39 per cent of those under 25 to 63 per cent of those 65 and older). Similarly, those with a vulnerable or at-risk household member, and individuals with a disability are less apt to have concerns regarding the vaccine compared to others.
- Conversely, those who have not obtained the flu vaccine at all in the past five years are far more likely to express strong (23 per cent) or moderate (40 per cent) concerns with side-effects compared to those who have obtained the vaccine once or more.
- Parents are somewhat more likely to express moderate concerns with the side-effects. Among parents, men are less apt to have concerns than women. Parents who have given their

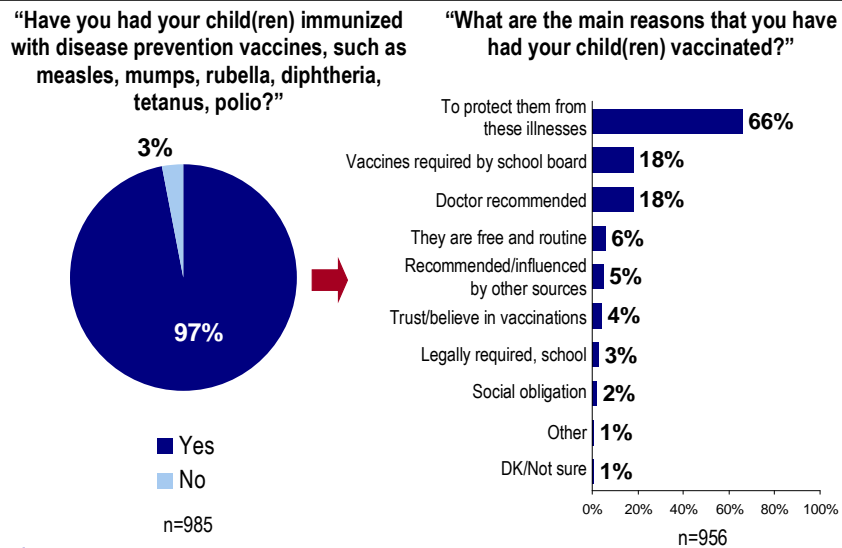
children all of the available vaccines were less likely to express concern regarding side-effects, than those whose children have had no flu shots.

- University-educated individuals and those born in Canada are also more likely to have no concerns at all regarding side-effects.
- Aboriginal Canadians more often expressed strong concerns with side-effects (34 per cent) compared with other Canadians. This contrast between Aboriginal and non-Aboriginal responses is not as strong when comparing the responses of parents specifically.

The vast majority of Canadian parents responding to the survey have immunized their children against such illnesses as measles, mumps, rubella, diphtheria, tetanus and polio with disease prevention vaccines covered under provincial health plans. Only three per cent have not done so.

Parents most frequently cite a desire to protect their children from illness as the main reason they have obtained immunization for their children (66 per cent). Several also identify the fact that these vaccines are required by school boards (18 per cent), or a doctor’s recommendation as the main reason or motivation for immunization (18 per cent). A minority obtain these vaccines primarily because they are free and routine (six per cent), or cite other reasons.

Incidence and Motives for Childhood Immunization



EKOS Research Associates Inc.

PHAC Personal Infection Prevention, 2009

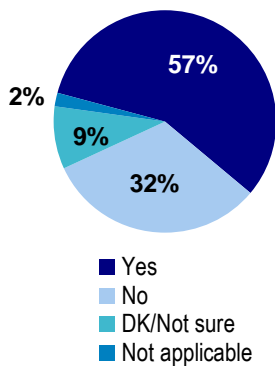
- It is interesting to note that parents who have not obtained the flu vaccine in the past five years are more apt to have their children vaccinated because it is required by the school board or on a doctor's recommendation; while those who obtain the flu vaccine regularly, as well as parents who are university-educated, are more apt to cite protecting their children from illness as the main reason.
- Parents with a vulnerable household member are also more likely to identify protecting their children from illness as the main reason for immunization.

Just over half the parents surveyed (57 per cent) have also obtained optional vaccines, not necessarily covered by provincial health plans, such as for chicken pox or HPV for their children. Close to one-third (32 per cent) have chosen not to obtain optional vaccines, and nine per cent do not know or do not recall if they have done so.

Parents who have chosen not to procure optional vaccinations for their children were asked to identify the main reason behind this decision. Two in ten indicated that their child is still too young to obtain these vaccines and another 15 per cent said that their child has already had the chicken pox. That said, over one in ten feel that these vaccines are unnecessary (and believe in letting their immune system take care of itself) (18 per cent) and another one in ten do not believe in these vaccines or their effectiveness. One in six (16 per cent) expressed concerns over side-effects with optional vaccines. A similar proportion have not thought of it in the absence of any recommendation (15 per cent).

Incidence of Additional Vaccines for Children

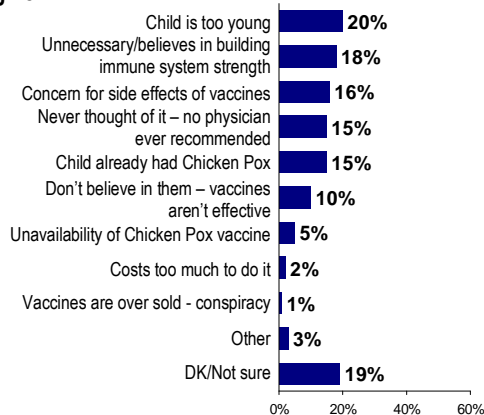
“What about optional vaccines, like Chicken Pox or HPV? Have you had any of these types of vaccines given to your children?”



n=985



“What are your reasons for this?”



n=319

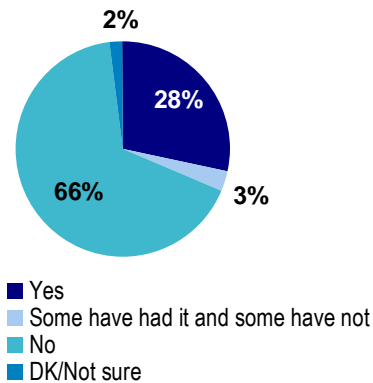
PHAC Personal Infection Prevention, 2009

- Parents with high knowledge scores are less apt to have obtained optional vaccines for their children (42 per cent have), most often reasoning that it is unnecessary and believe more in building immune system strength.
- Not surprisingly, parents who have obtained the flu vaccine regularly are more apt to have obtained optional vaccines for their children (69 per cent have).
- Parents of children 12 or older are less likely to have obtained optional vaccines for their children (possibly because these vaccines were not available when their children were young and obtain routine vaccinations).

Only 28 per cent of parents surveyed indicate that their children have received an annual flu vaccine.

Incidence of Annual Flu Vaccine in Children

“Have your children had an annual flu vaccine?”



- Interestingly, parents with the lowest and highest household incomes are more apt than others to have obtained annual flu vaccines for their children (39 and 35 per cent, respectively).
- Parents born outside Canada are much more likely to have obtained the flu vaccine for their children (42 per cent, compared to 26 per cent of Canadian-born parents).
- Parents who think it less likely that they will catch the flu this winter are less apt to have worried about annual flu vaccine for their children. Conversely, parents with a vulnerable member in their household are more apt to have obtained the annual vaccine for their children.

- Not surprisingly, the proportion of parents who have obtained the vaccine for their children increases with the frequency with which the parents themselves are vaccinated (from 10 per cent of parents who have not obtained the flu vaccine in the past five years, to 58 per cent of those who have obtained it three to five times in this period). Similarly, parents who generally reported stronger prevention behaviour are more apt to also have obtained the annual flu vaccine for their children.

6. PANDEMIC FLU

In order to explore public perception of the effectiveness of a number of prevention techniques in fighting pandemic flu (particularly in relation to how people view these techniques in prevention of seasonal flu) one must first understand what people think is meant by pandemic flu. A fair number of respondents in the survey (40 per cent) were unsure about the main differences between seasonal and pandemic flu. Of the 60 per cent that did respond, one-quarter described pandemic flu as affecting more people (27 per cent) and a similar proportion reported it as being more severe than seasonal flu (24 per cent). Fewer than one in ten consider the difference to be either the global occurrence; the time or regularity of the occurrence or the ease with which it spreads. Fewer than one in twenty replied that a pandemic involves more than one country; seasonal flu has a vaccine while pandemic flu does not; pandemic is a new flu strain; or people in many countries die from a pandemic.

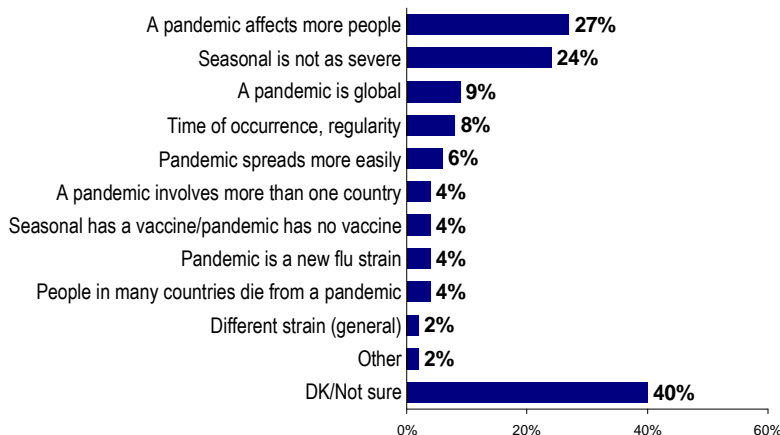
In the 2004 baseline survey, 52 per cent of Canadians were able to identify at least one difference between seasonal flu and pandemic flu, while in the 2008 follow-up, 56 per cent could, evidence from ongoing monitoring indicates that the general understanding of pandemic is increasing somewhat over time. The most common distinctions between the two cited by respondents to the 2007 survey include that a pandemic affects more people (20 per cent), that seasonal flu is less severe (19 per cent), that a pandemic is more widespread (18 per cent), or that a pandemic is global (12 per cent).¹²

¹² National Follow-Up Survey of Pandemic Influenza Attitudes and Awareness among Canadians. Environics, prepared for the PHAC, January 2008.

Pandemic Influenza: National Baseline Survey of Pandemic Influenza Attitudes and Awareness amongst Canadians, August 2004.

Knowledge of Definition of Pandemic Flu

“Based on what you know, what would you say are the main differences between seasonal flu, and pandemic flu?”



EKOS Research
Associates Inc.

n=932

PHAC Personal Infection Prevention, 2009

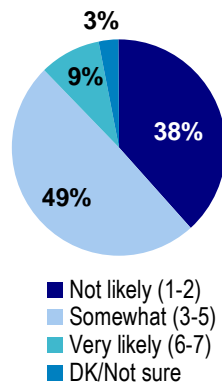
- Those with the highest education and incomes more often said that a pandemic affects more people. Not surprisingly, individuals who work in a health setting also provided more accurate responses, as did those working as caregivers.
- In terms of regional differences, respondents in Saskatchewan more often (than others) provided accurate responses (e.g., the global nature of a pandemic).

Survey respondents were also asked about their perceived likelihood to be affected by a flu pandemic in their community in the next five years, as well as (for those who felt it likely), how concerned they would be about catching pandemic flu in the event of an outbreak in their community. Not quite one in ten (nine per cent) think it is very likely while half (49 per cent) think it somewhat likely that a flu pandemic will affect their community in the next five years. Four in ten (38 per cent) think that it is quite unlikely. Of those who felt the likelihood to be moderate or higher, about half expressed a great deal of concern (51 per cent), and similar numbers were moderately concerned (46 per cent).

The 2004 baseline survey and 2007 follow-up survey measured the perceived likelihood of a pandemic occurring within Canada in the next five years. Using the same method of collapsing points on the scale it was found in the 2007 survey that 30 per cent considered it unlikely that a pandemic would occur (virtually the same as the 2004 result of 29 per cent) whereas the current results indicate the 56 per cent think it unlikely (in their own community, selecting 1 to 3 on the scale). Another 42 per cent considered it likely that a pandemic would occur (compared to 45 per cent in 2004), whereas only 18 per of current survey respondents think it likely in their own community (giving it a 5-7 on the scale).¹³

Perceived Likelihood of Pandemic in Community

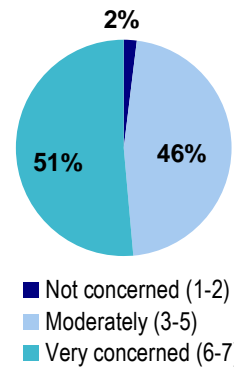
“How likely do you think it is that a flu pandemic will affect your community in the next five years?”



n=930

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Associates Inc.

“How concerned would you be about catching pandemic flu if there were an outbreak in your community?”



n=389

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- Perceived likelihood of a pandemic increases with general knowledge regarding seasonal flu.
- It is also higher among those who are more apt to believe they could contract seasonal flu and to be concerned about contracting seasonal flu.
- Perceived likelihood of a pandemic striking their community is also higher among those who report prevention behaviours, including hand washing, and other general daily preventions, as well as vaccination behaviour.
- It also tends to be individuals who rate high on the knowledge index, those who feel they are somewhat likely to catch the flu this winter, as well as those who have had between three and

¹³ National Follow-Up Survey of Pandemic Influenza Attitudes and Awareness among Canadians. Environics, prepared for the PHAC, January 2008.

Pandemic Influenza: National Baseline Survey of Pandemic Influenza Attitudes and Awareness amongst Canadians, August 2004.

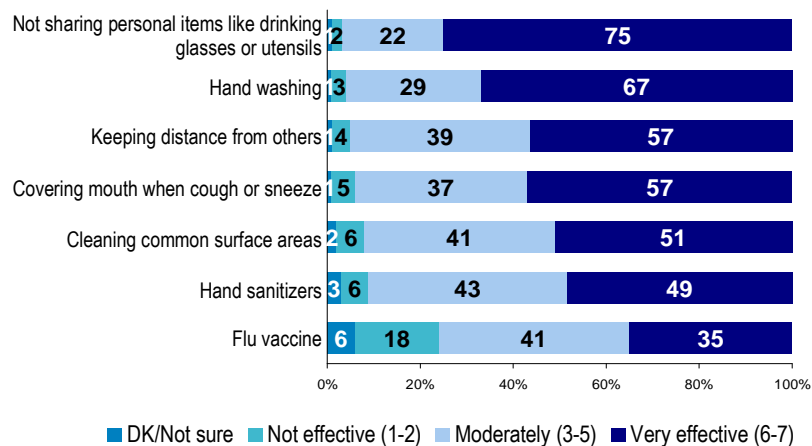
five flu vaccines in the past 5 years who are more likely to feel it is somewhat likely a flu pandemic will affect their community in the next five years.

- Concern is greatest among those between 25 and 34 years of age, health care workers, and those with a vulnerable person living in their home. It also co-exists with greater concern for catching seasonal flu.
- Perceived likelihood of a pandemic hitting their community is lowest in British Columbia. Residents of Quebec, although no less apt to think a pandemic may strike their community, are proportionately less concerned by the prospect.

Perceived effectiveness of prevention behaviours were also explored in the context of pandemic flu (as they were for preventing seasonal flu earlier in the report). The most effective, perceived by three-quarters as very effective and two in ten as somewhat effective is not sharing personal items like drinking glasses and utensils. Second most effective is hand-washing, noted by two-thirds as very effective and three in ten as somewhat effective. Nearly six in ten rated keeping distance from others and covering ones mouth when coughing or sneezing. Half of respondents felt that cleaning common surface areas is very effective. A similar number (as cleaning common surfaces) feel that hand sanitizers would be effective in the event of a flu pandemic. As with prevention for seasonal flu, the flu vaccine was considered the least likely to be effective. Results are quite similar to those provided in the context of seasonal flu. The two key differences are hand washing and social distancing. Fewer Canadians expect hand washing to be highly effective in a pandemic situation. Social distancing, on the other hand, is seen as an effective prevention strategy by more people when applying it to a pandemic.

Effectiveness of Methods to Reduce Spread – Pandemic

“In the event of a flu pandemic, how effective is the following in reducing the spread of the flu...?”



EKOS Research Associates Inc.

n=929

PHAC Personal Infection Prevention, 2009

As with the perceived effectiveness of these methods in preventing or reducing seasonal flu, women and seniors also place stronger faith in the effectiveness of these methods in the context of a pandemic. Also, as with seasonal flu, there is a strong link to prevention behaviours. That is, those who perceive these methods to be effective are the ones who typically report that they perform prevention behaviours. This suggests that increasing the perception of the effectiveness of these different methods in general and specifically during a pandemic will likely translate into increased prevention behaviour. Some additional specifics for each prevention technique are:

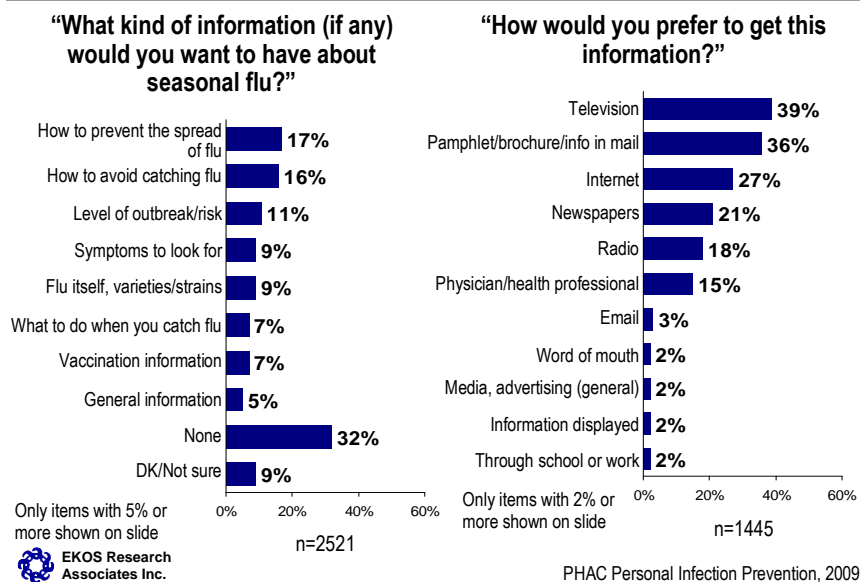
- **Not sharing personal items.** Residents born outside of Canada, individuals who feel it is likely they will get the flu this winter (and are concerned) have stronger faith in this method in reducing the spread of a pandemic. It is interesting that individuals with no recent past history of flu vaccination are also among those most likely to place a high degree of faith in the power of not sharing personal items. Men, youth, Canadian born individuals and those who do not currently follow prevention technique expressed the least faith.
- **Hand-washing.** As with seasonal flu, perceived effectiveness of hand washing to reduce the likelihood of being infected during a pandemic is higher among caregivers and foreign-born Canadians. It comes down with higher education and is weaker among men. This faith is also lowest in Alberta compared with the rest of the country.
- **Keeping distance from others.** As with this application to seasonal flu, foreign-born Canadians place the greatest faith in social distancing to prevent a pandemic. Youth and those reporting middle income ranges have the least faith in social distancing during a pandemic.
- **Covering mouth when cough or sneeze.** Canadians with less education, foreign-born Canadians, and visible minorities each place more faith than others in cough and sneeze etiquette in preventing the spread of a pandemic. Health care workers also place a higher than average faith in its effectiveness, along with those with a vulnerable household member. Youth are among the least likely to believe in the effectiveness of cough and sneeze etiquette in a pandemic as are residents of Alberta.
- **Cleaning common surface areas.** Faith in the effectiveness of cleaning is highest among the least educated and foreign-born Canadians. It is also higher among those who typically believe that they are likely to contract the seasonal flu and have higher levels of concern in this regard. It is lowest among the most affluent.
- **Hand sanitizers.** As with seasonal flu, the strongest faith in hand sanitizers occurs among the least educated and affluent, and decreases with education and income.
- **Seasonal flu vaccine.** Perceived effectiveness is also linked to education (as it is for other measures and for preventing seasonal flu). It is similarly linked to stronger vaccine behaviour (i.e., highest among those with a strong history of flu vaccines in the past five years) and is higher among those with a vulnerable household member.

7. COMMUNICATION PREFERENCES

The survey explored the information needs of Canadians with regard to seasonal flu, first asking about what they would want to know and then how they would like to receive this information. By far the most popular, according to one in three respondents, would be to find out about how to prevent the spread (17 per cent) or avoid catching the flu (16 per cent). This is likely in part, because these information questions were placed at the end of the questionnaire and respondents had been focused on prevention throughout most of the interview. Information related to the level of outbreak and/or risk is of interest to one in ten (11 per cent). Slightly fewer would like to have information related to the symptoms to look for; the flu itself, its varieties and strains; what to do when one catches flu; and vaccination information (seven to nine per cent cited each). A full one in three was not interested in any information regarding seasonal flu.

In terms of preferred method of receiving such information, three preferences top the list. The top preference, reported by nearly four in ten respondents was through television (39 per cent). One-third listed a pamphlet, brochure or information in the mail (36 per cent) and one in four (27 per cent) cited the Internet. Newspapers (21 per cent) and radio (18 per cent) followed for about one in five. Hearing about it through a physician or health professional is a preferred source for about one in six (15 per cent), although quite far down on the list of sources generally.

Preferred Type of Information and Format



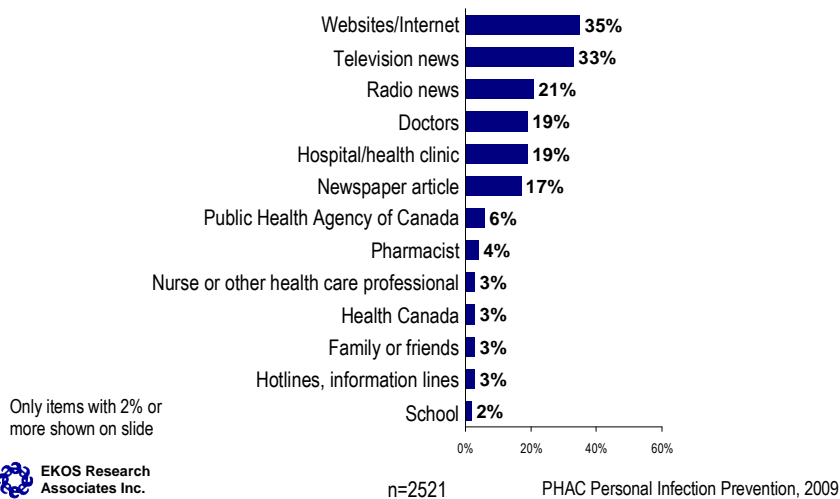
- The most concerned individuals (regarding contracting the flu) are the most apt to want information about how to prevent the spread and avoid catching it, as well as what symptoms to look for. Those who think it likely that they catch the flu, but are not concerned expressed a greater than average demand for information about the flu itself (e.g., strains).
- Younger respondents are more interested in information pertaining to how to prevent the spread of the flu and what to do if they were to catch the flu. They are less likely to prefer this type of information through television and more often than others note word of mouth and to a greater extent said a pamphlet, brochure, or information via mail are a preferred source. On the other hand, older respondents are less interested in information related to preventing the spread of flu and would prefer to know the level of outbreak or risk. Television as a source of such information was rated highest among those over the age of 65; radio and newspapers were also noted as a preference by those over 45 and above. Those over 65 are also more likely than others to consult with a physician or health professional and are less apt than other age groups to consult or read a pamphlet, brochure or information via mail or by the internet.
- High school educated individuals and those with lower incomes (under 30k) are less apt to prefer obtaining information via the Internet and are more likely to consult a physician/health professional. Those with a college education (and women) prefer information in the mail, while the university-educated cited television and the Internet as prime sources of this type of information. Households earning over \$80,000 are more apt to cite the Internet as their preferred source, whereas those earning over \$120,000 more often cite newspapers as a preference compared with those reporting less income. Parents whose household income is over \$120,000 also prefer information via television.
- Parents placed a greater emphasis on information about how to prevent the spread of the flu. They were also more apt to suggest the Internet as a source for the information. Individuals who do not have children are more likely to prefer information via television, radio or newspapers. Also, parents of children under the age of five are more apt to consult a pamphlet, brochure or information in the mail. Parents of older children are typically less apt to want any information (compared with parents of younger children).
- Aboriginal respondents and those with a disability are more likely than others to prefer information from a physician or health professional. It is interesting however, that individuals with a disability are less apt to want information regarding flu compared with the level of demand among others. Visible minority parents cited either television or a pamphlet in the mail as their preferred source of this information more often than other parents.
- There are no regional differences in the type of information pertaining to seasonal flu respondents would want to obtain, and while television is the number one preference across the board (with the exception of Quebec respondents) Albertans and Manitobans are more apt than others to also cite a preference to get such information via radio, while those in Quebec are least likely to report this preference. Respondents in British Columbia were less inclined to

prefer a pamphlet, brochure, or information in the mail, while those in Quebec preferred this avenue vs. all others.

In the event of an outbreak of some illness in or near their community, survey results suggest that Canadians would turn primarily to websites on the Internet (35 per cent) or television news (33 per cent) to get the latest news and information. Roughly two in ten would rely on the radio (21 per cent) or a newspaper article (17 per cent). Doctors and/or a hospital or health clinic were cited by just as many (19 per cent each). Other sources were not considered with any real frequency (e.g., pharmacist, nurse, Health Canada, etc.).

Preferred Method of Getting Information in Outbreak

“Where would you turn to get news and information in the event of an outbreak of some illness in or near your community?”



- Those most apt to turn to websites or the Internet in the event of an outbreak are under 44 years of age, have post-secondary education, as well as mid to upper income levels (between \$50,000 and \$120,000). Also included among those more likely to seek information via the Internet are parents (especially those with one child and range between 2 and 5 years of age).
- Those born in Canada are more likely than those born abroad to turn to the Internet for such information. Foreign-born Canadians and visible minorities are more apt to turn to television news.
- Those between 45 and 64 years of age will either turn to television or radio news most often, as is the case with seniors, who place an even greater emphasis on radio news. Respondents over 55 years are least likely to turn to the Internet for news or information.

- Parents are less apt to view television news in the event of an outbreak compared to those without children.
- Doctors are seen as a preferred source more often among seniors and those with a disability, as well as individuals who generally think it more likely that they will catch the flu. The most concerned about catching the flu expressed a greater demand for the hospital as a source of information than those who do not think it is likely that they contract the flu or not as concerned about it.
- Health care workers have a greater preference in seeing this information come from the Public Health Agency of Canada relative to the average (13 per cent).
- Were an outbreak of some illness to occur in or near their community, residents of British Columbia, Alberta, Ontario, and (to a lesser extent) those in Manitoba would most often turn to television news to get news and information. Residents of Quebec, the Yukon, NWT and Nunavut are least likely to do so.
- Residents of Saskatchewan would most often turn to doctors, and Quebec residents are more inclined than average to seek information from the Internet, as well as through a hospital or health clinic, compared to other regions. Those in Nova Scotia are more inclined than others to turn to radio news for such information.
- Those living in the Yukon, NWT and Nunavut would also most often turn to a hospital or health clinic to get news and information if an outbreak were to occur near them or in their community.

Respondents were also asked who they would most trust to give them accurate and complete information about preventing illness and ways to protect themselves, with family doctors coming up as by far the most trusted source for most. Two in three respondents to the survey said a family doctor (62 per cent) would be the most trusted source of information. All other sources were provided by less than two in ten respondents, with a nurse or other health professional/hospital/clinic (18 per cent) cited next most frequently. One in ten listed medical experts (10 per cent), the PHAC (nine per cent), or Health Canada (eight per cent). A variety of other sources were cited, but only by handfuls of respondents.

Trustful Sources of Accurate Information

“Who would you trust most to give you the most accurate and complete information about preventing illness and ways to protect yourself?”



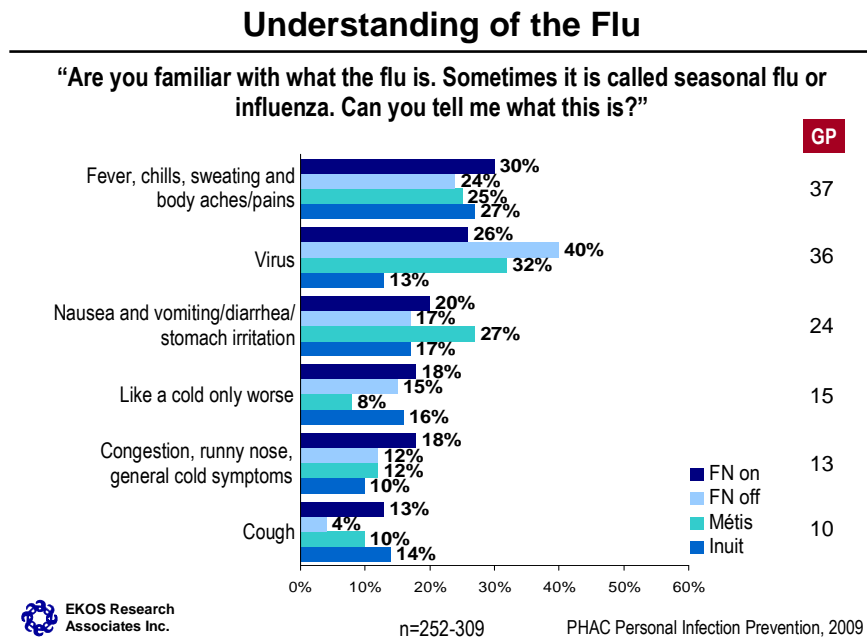
- Those most trusting of family doctors for accurate and complete information are often seniors (over 65 years), and high school educated. Among parents specifically it is those who are college-educated and/or whose household income is less than \$50,000.
- Those with the highest education and incomes are more sceptical and less trusting of family doctors for information about preventing illness and ways they can protect themselves. They do place more trust in nurses or other health professionals, medical experts and to a some extent (more than other income brackets) the Public Health Agency, Health Canada, as well as, news in the media.
- Individuals who think it is likely they will get the flu this winter (but do not express great concern) are more apt to trust their family doctor.
- Health care workers are less trusting than average of family doctors for accurate and complete information and place greater trust in nurses or other health professionals, as well as the Public Health Agency.

- Parents with one child (compared to those with larger families) are less trusting of their family doctor for accurate and complete information and consider nurses and other health professionals, medical experts, and Health Canada among their most trusted sources. Among parents of children under the age of five, as well as lower income families, pharmacists are cited more often as a trusted source of information. Parents with a vulnerable household member more often do trust family doctors than families without a vulnerable household, who more often cited Health Canada as a valuable source.
- Those with a disability are more likely than others to place the greatest confidence and trust in their family doctor for the most accurate and complete information about preventing illness and ways to protect themselves.
- Ontario and Nova Scotia residents are more trusting of family doctors than other residents, particularly residents from the Yukon and Nunavut. Individuals in Quebec, Yukon, NWT and especially those in Nunavut are more likely to cite nurses and other health professionals as their most trusted source of accurate and complete information about preventing illness and ways to protect themselves.

8. RESULTS FOR ABORIGINAL POPULATIONS

8.1 KNOWLEDGE OF THE FLU

Results for the four Aboriginal populations show some differences between the groups and from the general public. Results for the First Nations residents living on-reserve are the most apt to equate the flu with a bad cold, under emphasizing the severity of the symptoms. Members of the Inuit population seem less apt to identify elements of the flu, while the Métis population are more apt to confuse it with stomach flu. It is members of the off-reserve sample, who are older (as was shown in the pattern of knowledge by age with the general public) seem to provide the most accurate responses regarding the nature of the flu.

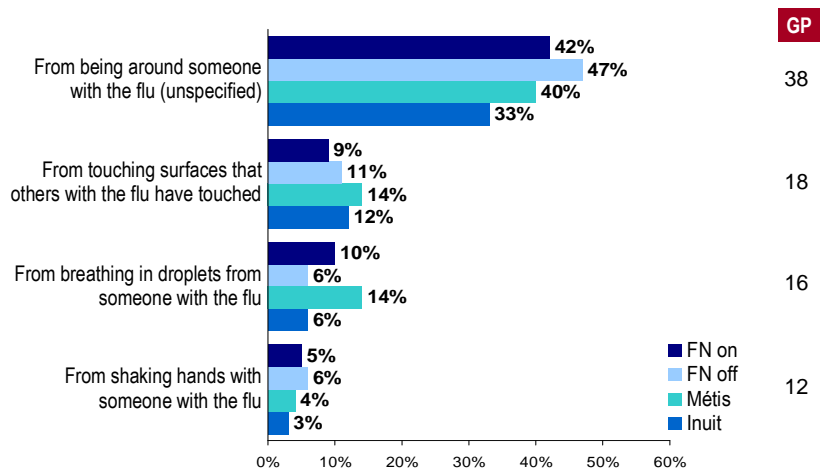


- Results for the Aboriginal sample generally hold the same patterns as found in the general public portion of the sample.

Results among the four Aboriginal groups are generally similar to those found in the broader general public, although responses are more general in nature from the Aboriginal groups. Responses from the Métis are the most apt to be specific to water droplets and touching common surfaces, and most in line with the results for the general public. Inuit respondents are more apt to attribute the flu to cold and wet conditions.

Knowledge of Transmission

“Based on what you know, what is the most common method of catching the flu?”



EKOS Research
Associates Inc.

n=252-309

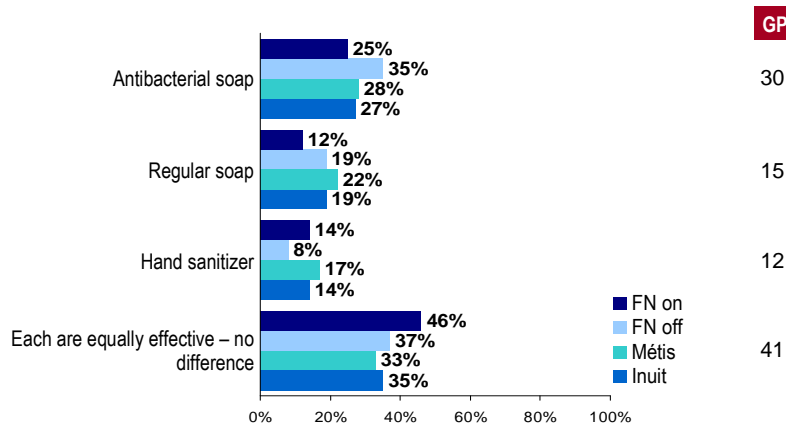
PHAC Personal Infection Prevention, 2009

- Sub-group patterns of results are generally similar to those found in the broader public, although some regional differences do not apply. In particular, Aboriginal residents of British Columbia and Alberta are more apt than others to cite common surfaces as a source of contagion, while Ontarians are most apt across the country to cite poor hygiene. Aboriginal Quebecers are more likely than others across Canada to believe that cold is a key factor.

Results for Aboriginal respondents are very similar to those generated by the broader public. Between the four Aboriginal groups regular soap is seen as a better cleaner more often among Métis respondents, who also put their faith in hand sanitizer more often. Antibacterial soap is favoured more often among First Nations people living off-reserve as an effective method. Residents of reserves are the most apt to believe that all of these are equally effective.

Best Method for Cleaning Hands

“As far as you know, which one of the following is better for cleaning your hands. Would it be...?”



n=252-309

PHAC Personal Infection Prevention, 2009

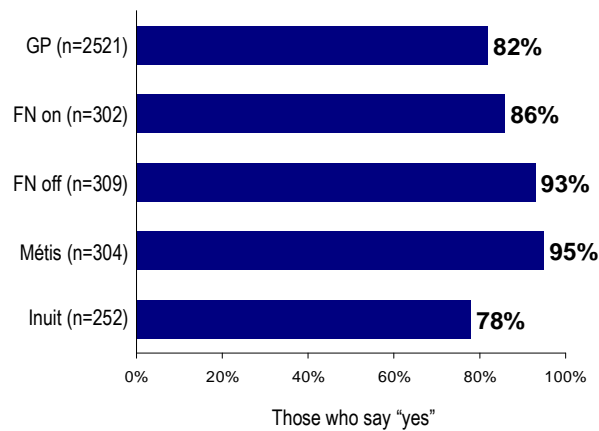
- Sub-group patterns are generally similar to those found in the broader public, although some regional patterns are different, including regular soap being favoured more often by Aboriginal residents in British Columbia and Ontario, while antibacterial soap is more often seen as the best method among those living in Alberta.

8.2 PERCEPTION OF RISK

Given the remoteness of reserves and Inuit communities, it is perhaps not surprising to see that those living in less densely populated areas do not report the flu with as great a frequency, although only the Inuit report a lower incidence of the flu than the general public. Both the Métis and First Nations people who are not living on a reserve report much greater frequency of the flu than reported by members of the broader general public. Of those who have had the flu, on the other hand, it is the Inuit who report the more frequent bouts of the flu, with one in three saying they have had it five times in the last five years. First Nations who are not living on a reserve reported the lowest frequency over that five year period with an average of two to three times.

Incidence of the Flu

“Have you ever had the flu at any time, as far as you remember?”



- Results for the Aboriginal sample generally hold the same patterns as found in the general public portion of the sample.

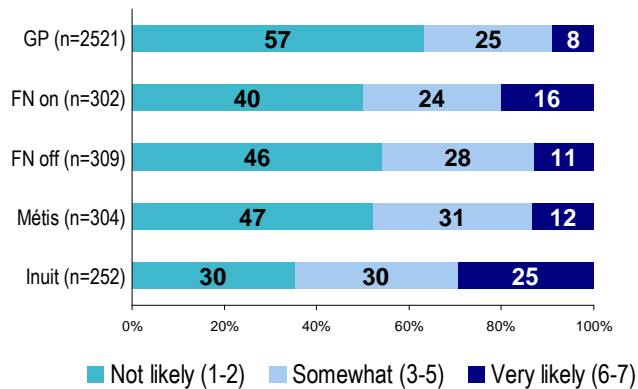
8.3 PERCEIVED LIKELIHOOD OF CONTRACTING THE FLU

Perceived likelihood of contracting the flu is similar, although marginally higher in Aboriginal populations than it is in the broader public. That said, it is reasonably similar among those living closest to the broader public, in populated areas. It is higher, however, among those living in more rural and remote areas of the country. Among First Nations residents living on-reserve 16 per cent think it likely that they will contract the flu and a fully one in four Inuit respondents believe that it is likely that they will catch the flu.

The actual incidence of having caught the flu is actually highest among residents of reserves, with 15 per cent reporting that they had already had the flu in this winter season (as of February). First Nations people living off-reserve also reported a relatively high incidence at 13 per cent. This is followed by 10 per cent of Métis respondents saying the same (which is the same incidence reported in the broader public). The incidence is actually lowest among the Inuit, with only seven per cent reporting the flu as of February.

Expectation and Concern Regarding Flu

“How likely do you think it is that you will get the flu this winter?”



- Results are largely the same in terms of sub-group patterns as those found in the broader public, with some regional differences that are not the same, with the highest likelihood being reported in the NWT and Alberta.

Among Aboriginal respondents it is First Nations people living off-reserve who are the most apt to say that their concern is higher in public places (55 per cent), where as Métis respondents are slightly more likely to lean toward equal concern in public places and in their own home (53 per cent). Aboriginal respondents are also equally likely across the four groups to say that their concern is higher when with others (56 per cent) which is similar to the results for the broader public.

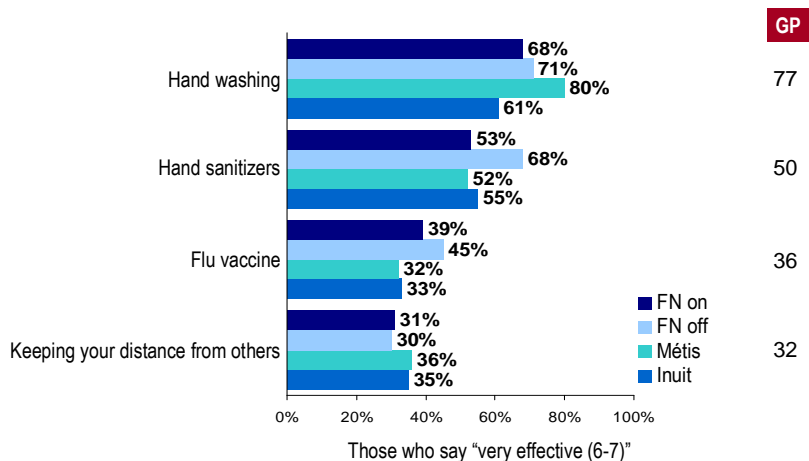
8.4 PERCEIVED EFFECTIVENESS OF VARIOUS PREVENTION METHODS

Perceived effectiveness of most prevention methods are fairly similar between Aboriginal and non-Aboriginal respondents. Hand washing shows a wider range of perceived effectiveness, however, across different groups. Inuit respondents place the least faith in hand washing, followed by First Nations people (both on and off-reserve, with residents of reserves having less faith in hand washing). Métis respondents report the strongest faith in hand washing, which is in line with results from the broader public.

The perceived effectiveness of sanitizers is about the same as it is in the broader public with the exception of the faith placed in them by First Nations people living off-reserve (which is stronger). The flu vaccine is also seen as an effective prevention technique by more First Nations people living off-reserve than found in the other three Aboriginal populations or the broader public. The faith placed in vaccines is weaker among the Métis and Inuit. Social distancing is seen as effective by about a third of Aboriginal and non-Aboriginal respondents across the board.

Effectiveness of Measures to Reduce Catching the Flu

“How effective are the following measures in reducing your chances of catching the flu...?”



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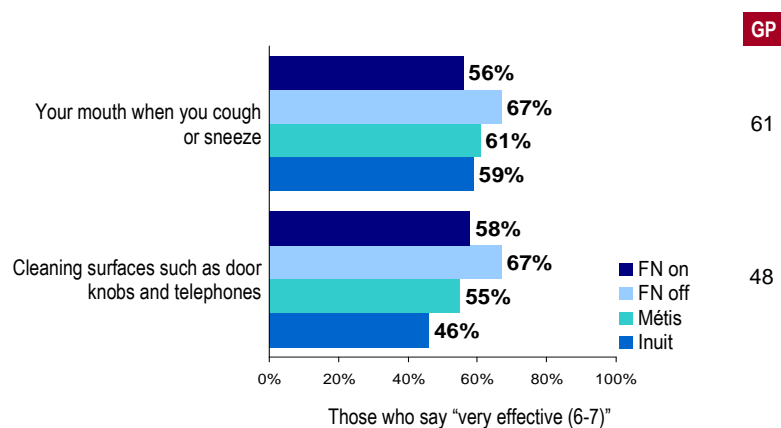
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- Group patterns are similar to those for the broader public, although parents of grade school children do not place more faith in hand washing than other parents (whereas this is the case with the broader public). Also, results are the most positive for Aboriginal residents of Ontario and lowest in Quebec (where it is the highest in the broader public). It is also higher among residents with a vulnerable member in the household.
- Regional variation in the faith placed in flu vaccines is somewhat different across the country than found in the broader public. It is lower among Aboriginal residents of Saskatchewan, Manitoba and Nunavut.
- Social distancing is seen as very effective among parents of many children, particularly parents of young children. Regionally, it is rated least effective in Quebec and most effective in Nunavut. Other sub-group patterns of results are similar to those found in the broader public.

Perceived effectiveness of cough etiquette is about the same as found in the broader public, although slightly lowest among First Nations residents of reserves and higher among First Nations people living off-reserve (compared with the three other Aboriginal groups and the broader public). Cleaning is generally perceived to be more effective across Aboriginal groups than it is in the broader public, with the exception of Inuit respondents, where results are similar to those found in the general public. The greatest faith is placed in cleaning among First Nations people living off-reserve, which is considerably higher than found in the broader public.

Perceived Effectiveness of Actions to Reduce the Spread of Flu

“How effective do you think covering ... is in reducing the spread of the flu?”

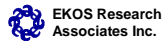
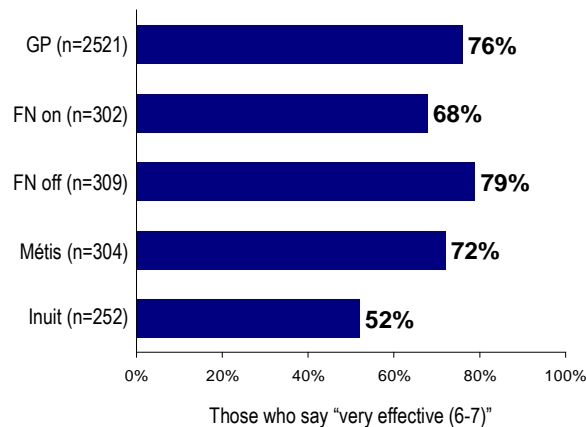


- Results are largely the same as found among different segments of the broader public.

The perceived effectiveness of not sharing personal items is similar between the level found in the broader public and that of First Nations people living off-reserve and among Métis. Faith in cleaning common surfaces is not as high among First Nations people living on-reserve, and it is considerably lower among Inuit respondents. In fact, only half of the Inuit in the sample said that not sharing personal items is very effective as a prevention strategy.

Perceived Effectiveness of Not Sharing Personal Items

“How effective is the following measure in reducing your chances of catching the flu: Not sharing personal items like drinking glasses or eating utensils?”



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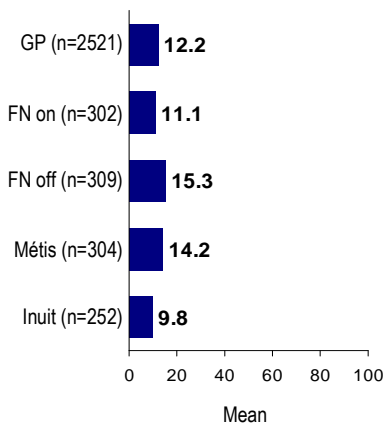
- Parents are no more likely than non-parents in the Aboriginal population to place a high degree of faith in cleaning (whereas this was the case in the broader public). Only moderate faith is placed in the effectiveness of cleaning among men, parents, 35 to 44 year olds and the university-educated.
- Regionally, it is residents of Saskatchewan who place the least faith in cleaning as a prevention strategy.

8.5 HAND WASHING PREVENTION BEHAVIOUR

Frequency of hand washing is reported to be in a similar range as that provided by the broader public, with the lowest reported in the Inuit population and the highest among First Nations people living off-reserve, followed closely by responses for Métis. Both of the latter are higher than reported in the wider public (which is closest to the frequency reported on-reserve).

Frequency of Cleaning Hands

“On average, how many times a day would you say you wash or sanitize your hands?”

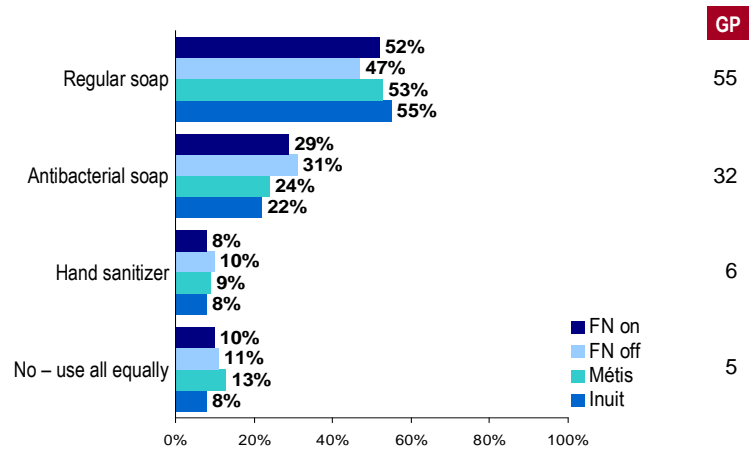


- Results are similar to the patterns described for the broader public, however, parents reported a lower frequency of hand washing than other respondents, whereas the number was higher among parents in the general public.

The type of soap used is fairly similar across the four Aboriginal groups (and similar to the results for the broader public), with twice as many using regular soap as those using antibacterial soaps (51 per cent versus 28 per cent across the four groups, collectively).

Products to Clean Hands

“Do you tend to use regular soap, antibacterial soap or hand sanitizer most often?”



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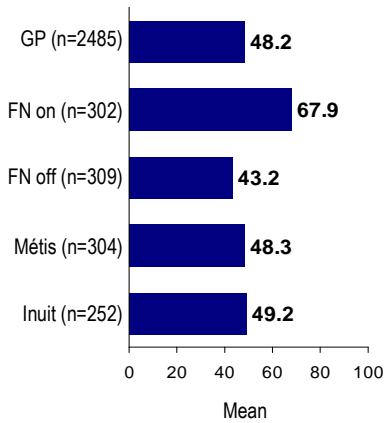
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- Parents are more frequent users of regular soap and hand sanitizer than non-parents.

The length of time hands are washed is somewhat more varied, with the least amount of time reported by First Nations people living off-reserve (43 seconds) and the most reported by residents of reserves (68 seconds). Both Métis and Inuit respondents were in the 48-49 second range, as is also the case with the broader public.

Length of Time Spent on Cleaning Hands

“How long do you typically wash your hands for?”



- Response patterns were generally similar to those found in the broader public.

In terms of a strategy to ensure that hands are cleaned effectively, use of a certain kind of soap is strongest among First Nations people living off-reserve (and much stronger than the responses among the broader public). This is also the case among Inuit respondents who specifically indicated regular soap and water as their strategy (and most in line with responses of the broader public). Métis respondents were least apt to report a specific strategy for hand cleaning, followed by Inuit respondents.

Method of Cleaning Hands

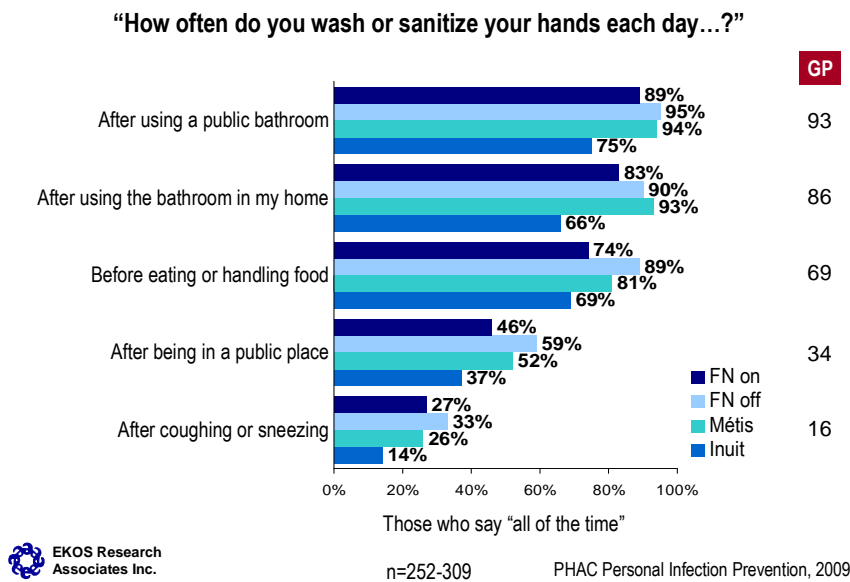
“What do you personally do to ensure that you clean your hands effectively?”

	GP	FN on	FN off	Métis	Inuit
Use a certain kind of soap	46	51	66	45	41
Use really hot water	27	26	24	29	23
Cover all areas of hands	14	5	7	5	4
Just make sure I wash them really well	14	5	6	5	3
Do it for a minimum number of seconds	13	5	6	4	6
Nothing specific	4	9	6	15	11
Sing a song or recite a poem or something like that	3	0	3	5	0

- Response patterns were generally similar to those found in the broader public.

The frequency of hand washing under different conditions is generally similar to the results found in the broader public, although the Aboriginal results are typically somewhat higher, particularly when handling food and after being in a public place. It is difficult to know if this is a real difference or some additional social desirability pressure that is exerted among the Aboriginal populations, that the broader public may not be as sensitive to. In these two later cases, results for the broader public are close to those reported by the Inuit portion of the Aboriginal sample. Generally, across the Aboriginal sample, Inuit respondents report the lowest frequency of hand washing. Results are largely more frequent in the two samples living in more populated areas, and less frequent among those two samples typically living in more rural and remote communities.

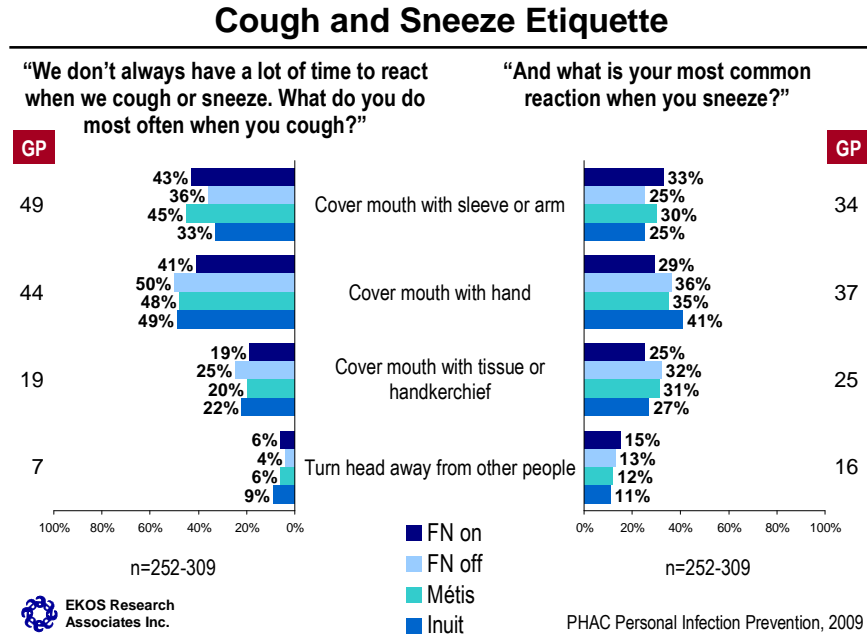
Frequency of Cleaning Hands – Different Conditions



- For the most part sub-group patterns are similar to those found in the broader public, with the exception of some regional differences. Lower frequencies of hand washing related to the handling of food can be found in the west (Saskatchewan, Alberta, and British Columbia). Residents of Saskatchewan, Manitoba and Nunavut are also less apt to wash their hand as frequently as others across the country after being in a public place. The frequency is similarly lower after coughing, and highest in Quebec.

8.6 COUGH AND SNEEZE ETIQUETTE

In terms of cough and sneeze etiquette results in the Aboriginal populations are similar, and similar to the results for the broader public. Aboriginal segments of the sample are marginally more apt to use a hand, rather than a sleeve, arm or tissue than the proportions found in the broader public, making hand washing even more critical.



- Sub-group results are largely similar to those patterns found in the broader public, however, it is parents of children between two and five who are more apt to report covering their mouth with a sleeve or arm (suggesting that these messages are filtering into the classrooms with school age children in Aboriginal communities, but with some delay compared with the broader public, where it is parents of children under 12 who have adopted this technique).
- Regionally, it is residents of British Columbia and Manitoba who are most apt to use a sleeve compared with others across the country. Residents of Quebec and Nunavut are the most likely to use a hand. Note that Quebec also has the highest rate of hand washing after a cough or sneeze (although it is lowest in Nunavut).

Results for frequency of cleaning are also similar across the four Aboriginal groups, and compared with the broader public. Inuit respondents in the sample are marginally less apt to report cleaning of kitchen counters on a daily basis, and report the lowest frequency of cleaning telephones and keyboards, although they may also be less likely to have telephones and keyboards in their home. First Nations residents living off-reserve report the highest frequency of cleaning doorknobs, light switches, telephones and key boards.

Cleaning Common Surfaces

“How often do you clean...?”

	Kitchen counter					Doorknobs-light switches					Telephone-keyboards				
	GP	FN on	FN off	M	I	GP	FN on	FN off	M	I	GP	FN on	FN off	M	I
Daily	92	96	97	95	88	3	13	8	10	7	6	16	11	13	7
Weekly	6	3	3	5	4	28	28	50	29	25	27	29	49	25	27
Few times a month	1	1	0	0	2	13	14	15	10	13	11	12	9	6	14
Once a month	--	0	0	0	0	18	19	12	19	18	19	12	14	22	14
Few times a year	--	0	0	0	4	19	11	5	14	17	20	9	4	20	13
Less often	--	1	0	0	0	15	13	9	14	18	15	17	10	12	24
Don't know	--	0	0	0	0	3	2	0	5	1	2	3	3	2	2

- Sub-group results are largely similar to those patterns found in the broader public, however, residents of Nunavut are less apt to report higher frequencies of cleaning keyboards and telephones.

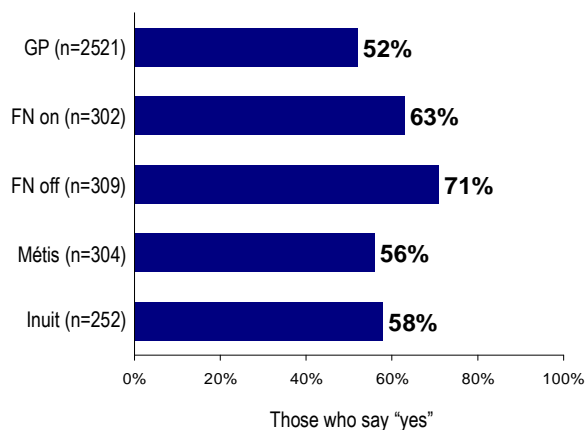
As with the general public, prevention behaviour is most closely associated with perceived effectiveness. Those most apt to see hand washing and cleaning common surfaces as effective (and therefore worthwhile doing) are the most apt to report prevention techniques. Knowledge about the flu and how it is transmitted has a stronger linkage to prevention behaviour in the Aboriginal population than it does in the broader public. Among Aboriginal respondents it is the third strongest predictor of high prevention behaviour, whereas it is much further down the list after age and household vulnerability and perceived effectiveness of cough etiquette (which are not strongly associated with prevention behaviour in the Aboriginal population, but are in the broader public). Finally, the perceived effectiveness of the flu shot is a factor in the Aboriginal population, as it is in the broader public, however, it is not as strongly associated among Aboriginal people as it is in the wider public.

USE OF VACCINE AS A PREVENTION TOOL

Considering that 52 per cent of the broader public reported getting a flu vaccine in the past five years, Aboriginal populations seem to obtain the vaccine at considerably higher rate, particularly First Nations people, and particularly those living off-reserve, with 71 per cent of this portion of the sample saying that they have received a vaccine in the past five years. Métis respondents reported the least incidence of obtaining the vaccine. As with overall prevention behaviour, perceived effectiveness is the best predictor or driver of getting the flu shot in the Aboriginal population, as it is with the broader public. Those who think that it is worthwhile getting a flu shot are more likely to get one (followed by a vulnerability in the household and whether you think it likely that you will contract the flu).

Incidence of Flu Vaccine – Past Five Years

“Have you had a vaccine for flu or influenza in the past five years?”



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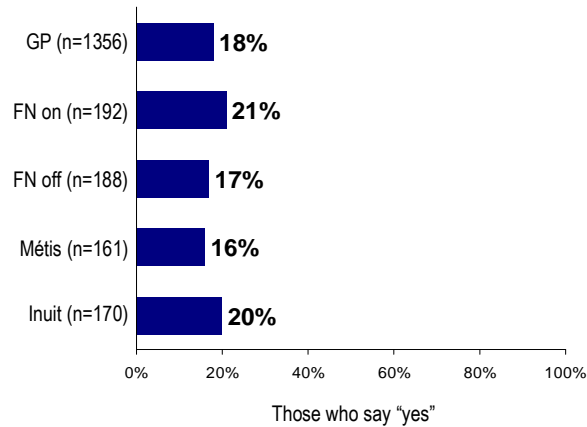
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- The incidence rate is highest in Quebec (unlike it is in the broader public, where it is the lowest). It is lowest in Newfoundland.
- The same age relationship exists in the Aboriginal population, however, it is not as dramatic an increase with age among Aboriginal populations. Nor is the relationship with income as strong as it is in the broader public.

Negative reactions are perceived by about one in six members of the broader public and similar proportions of the Aboriginal populations. There is no one group that is more apt to report or perceive negative reactions to a vaccine that they obtained.

Perceived Negative Reactions

“Did you have any negative health reactions or side-effects to it?”

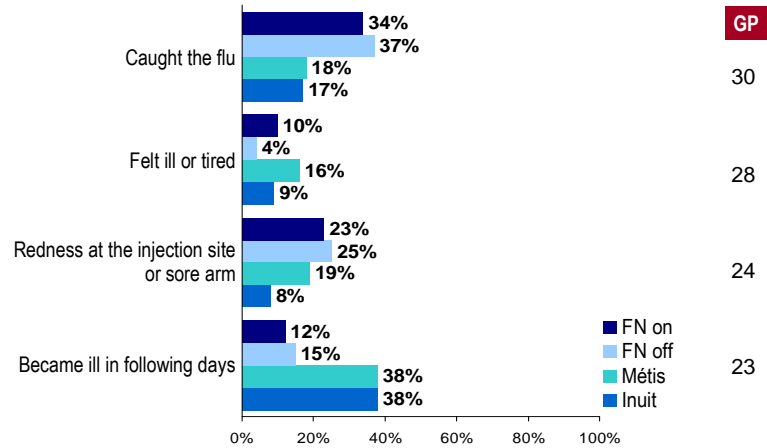


- Generally sub-group results are similar, however, there is an increase in perceived negative reactions with education in the Aboriginal populations.

The type of adverse reactions are somewhat different in different groups. First Nations people (on and off-reserve) are more apt than other groups (or the broader public) to say that they caught the flu after the vaccine. Métis and Inuit respondents were more apt to report that they became ill on the days following the vaccine.

Type of Negative Reactions

“What negative reaction did you have?”



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n=34-44

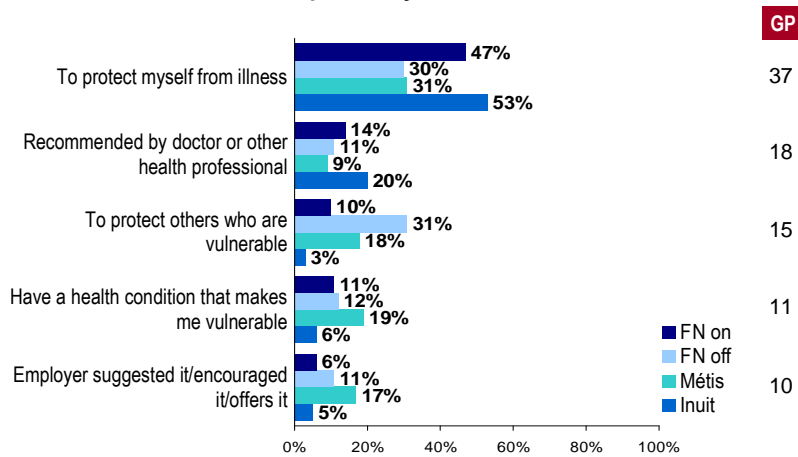
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- Sub-group results seem similar, although numbers of cases in each of the four Aboriginal populations are small for this type of detailed analysis.

In terms of reasons for obtaining the flu vaccine personal protection is at the top of the list, although it is considerably more prevalent among First Nations residents of reserves and the Inuit. It is far less of a consideration among the other two Aboriginal groups, where results are more in line with the broader public. Those two Aboriginal populations that are living in more densely populated areas are more apt to be concerned with protecting others who are more vulnerable, particularly First Nations people living off-reserve. Inuit respondents are also more apt to be motivated by the recommendation of a health professional than others. A health condition is more often an issue among the Métis respondents, as is a suggestion from an employer.

Motives for Obtaining Flu Vaccine

“What are the main reasons you have chosen to get the flu vaccine in the past five years?”



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n=161-192

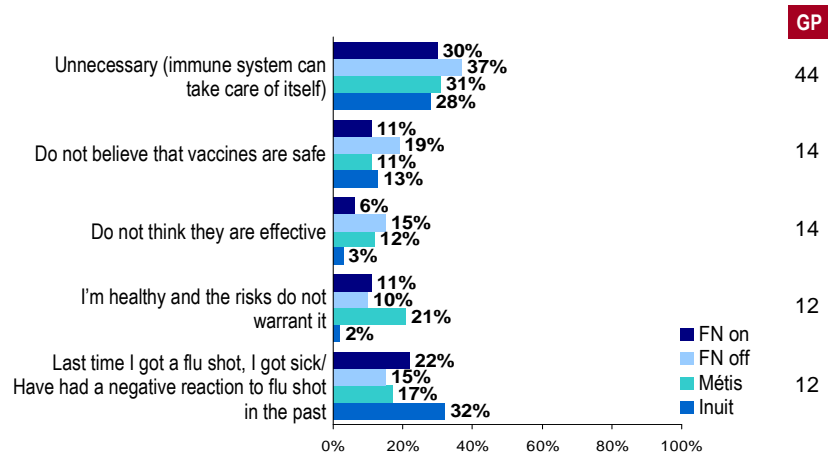
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- The sub-group patterns found in the broader public generally hold among Aboriginal respondents, with the addition of increased desire to protect others, to prevent serious illness and personal susceptibility increasing being higher among low income segments.
- Also, those with higher prevention behaviour reported also were more apt to be motivated to protect others, prevent more serious illness, personal susceptibility and suggestions from an employer.

Barriers to obtaining the flu shot are largely in line with the results from the broader public and consistent across the four groups, with the exception of First Nations people living off-reserving and the Métis not finding vaccines to be effective more often than the other two groups (although these results are largely in line with results from the broader public). Métis respondents are more apt than others to say that they are healthy and do not warrant a vaccine. Inuit respondents were more apt to worry about adverse reactions to the vaccine.

Barriers to Obtaining Flu Vaccine

“What are the main reasons you have chosen NOT to get the flu vaccine in the past five years?”



EKOS Research Associates Inc.

n=80-142

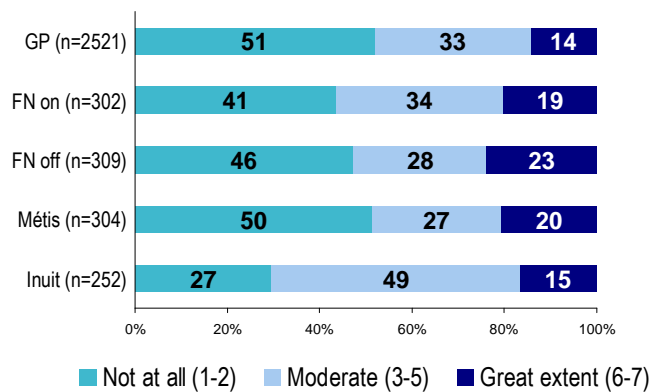
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- Patterns of results by sub-groups are largely reflective of the patterns found in the broader public.

The general level of concern for adverse reactions from the flu vaccine is fairly similar between the different Aboriginal groups and in line with the level of concern in the broader public. In spite of a slightly higher proportion of Métis respondents saying that they are very concerned, the overall rating on the seven point scale is actually lower across the entire group of Métis respondents. The reverse is true for Inuit, where fewer said they are very concerned, but the overall average rating is highest across the four Aboriginal groups.

Concerns About Side-Effects of Flu Vaccine

“To what extent do you have concerns about side-effects with the flu vaccines?”



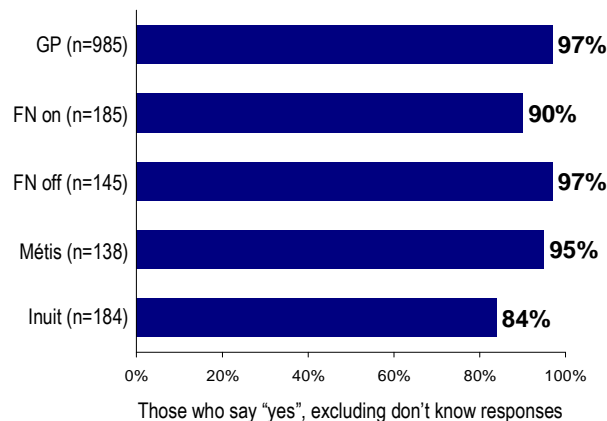
- Patterns of results by sub-groups are largely reflective of the patterns found in the broader public.

According to survey results First Nations parents who are living off reserve as well as Métis parents in the sample report similar inoculation rates as those reported in the broader public. Those Aboriginal groups living in more remote and isolated communities, however, reported lower rates of childhood vaccination. Inuit parents in the sample were considerably less likely to report that they have had their children given the routine vaccinations. It should be noted, however, that there is a percentage of each Aboriginal group that aid that they don't know" whether children in the household have been vaccinated or not. When these numbers are recalibrated to exclude the "don't know" factor, 97 per cent of First Nations parents living off-reserve and 95 per cent of Métis parents said that they provided routine inoculations. Of the other two groups, 90 per cent of First Nations parents living on-reserve said that vaccines were provided and 84 per cent of Inuit parents said the same. So, these latter two groups still see to be reporting a lower rate of routine vaccination than the other two Aboriginal groups and than reported in the broader public, however, the gap is not as large.

As with overall prevention behaviour and flu vaccination for one's self, perceived effectiveness is the best predictor or driver of getting the flu shot for children in the Aboriginal population, as it is with the broader public. Those who think that it is worthwhile giving the flu shot to their children (because it works) are more likely to do this (followed by a vulnerability in the household and the perceived effectiveness of cough etiquette).

Incidence for Childhood Immunization

"Have you had your child(ren) immunized with disease prevention vaccines, such as measles, mumps, rubella, diphtheria, tetanus, polio?"



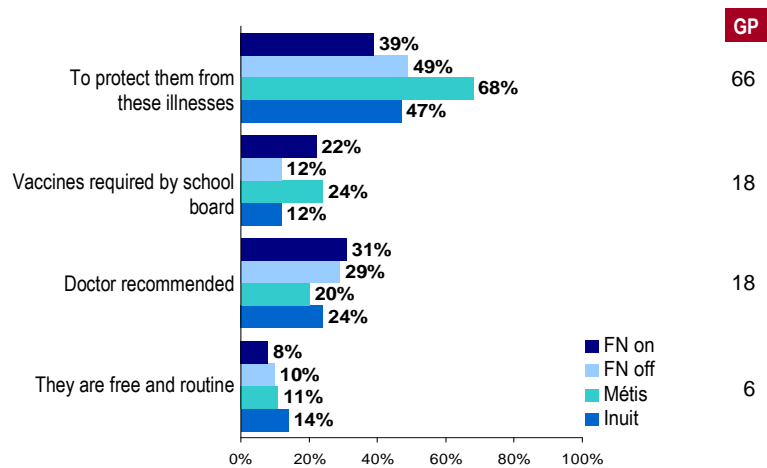
- Patterns of results by sub-groups are largely reflective of the patterns found in the broader public.

Optional vaccines were reported to have been provided in 66 per cent of the time among First Nations people living off-reserve and 64 per cent among Métis parents. Among on-reserve First Nations parents it is 58 per cent of the time and among Inuit parents it is 49 per cent of the time. Considering the proportion of respondents that said “don’t know/not applicable” this is roughly three in four parents in each of the Aboriginal populations except for the Inuit population, where it is 60 per cent. This is actually the closest to the result found for the broader public, which is 64 per cent (excluding don’t know and not applicable).

Among the reasons for providing vaccinations, the recommendations of a doctor (or other health care worker, presumably) is higher among First Nations parents than it is in the other two groups, and considerably higher than found in the broader public. The need for vaccination records for schools is also more pronounced as a reason for First Nations parents living on-reserve and among Métis parents. Perhaps it is because of these higher results among these two categories in some of the Aboriginal groups that the motive of protecting children from illness is lower in some groups.

Motives for Childhood Immunization

“What are the main reasons that you have had your child(ren) vaccinated?”



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n=130-153

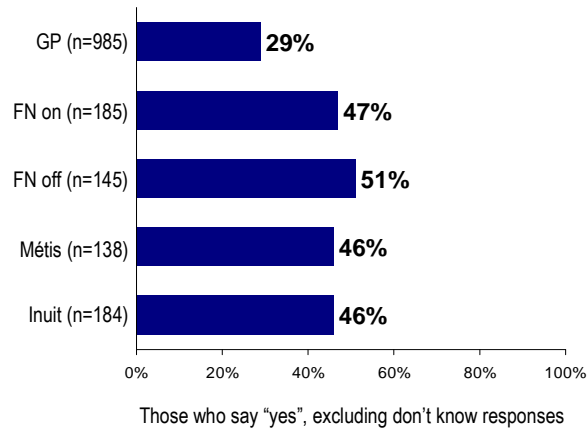
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- Patterns of results by sub-groups are largely reflective of the patterns found in the broader public.

The incidence of providing children with the flu vaccine is considerably higher than it is in the broader public. In fact, it is twice the rate across all of the four Aboriginal groups when compared with the results for the broader public.

Incidence of Annual Flu Vaccine in Children

“Have your children had an annual flu vaccine?”



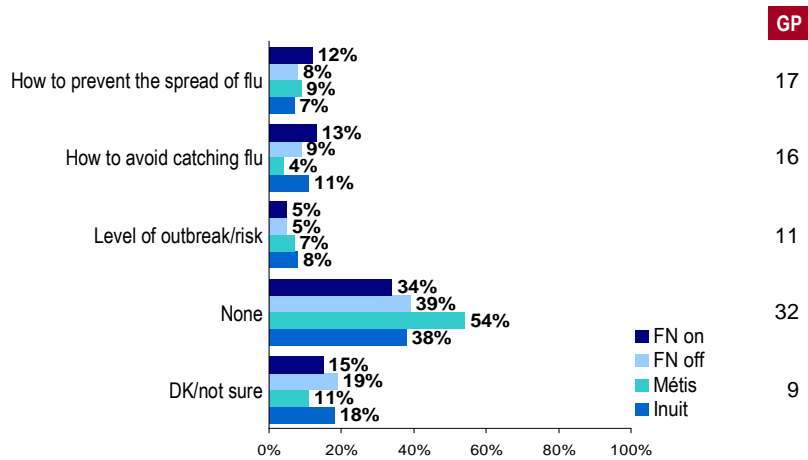
- Patterns of results by sub-groups are largely reflective of the patterns found in the broader public, although there is not as pronounced a relationship with income in the Aboriginal populations.

8.7 INFORMATION PREFERENCES

The only real difference in results among Aboriginal respondents is in the percentage who said that they do not want any information about seasonal flu. This is highest among Métis respondents at 54 per cent.

Preferred Type of Information

“What kind of information (if any) would you want to have about seasonal flu?”



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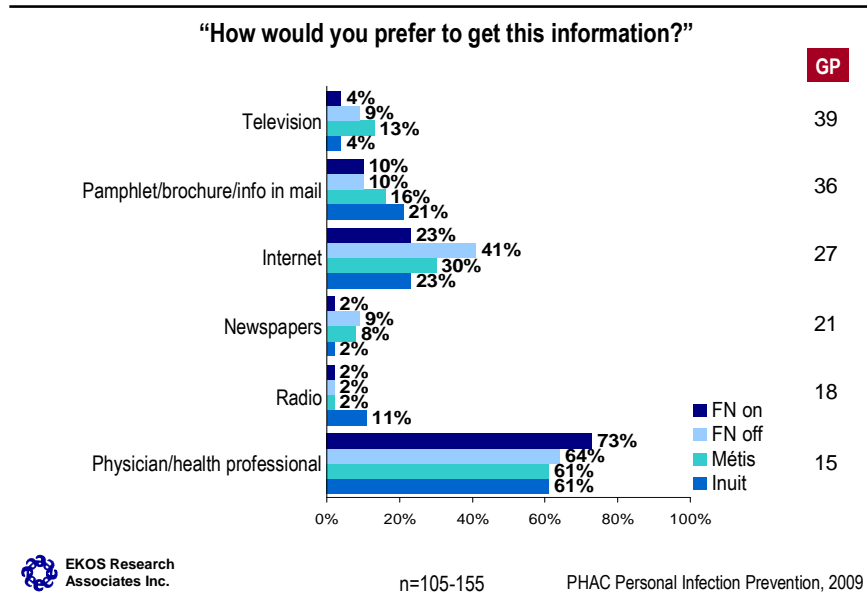
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- Results are similar across sub-groups to the patterns found in the broader public.

Results are dramatically different among Aboriginal results compared with the broader public. The key difference is the frequency with which Aboriginal respondents chose a doctor or other health professional as their preferred source for receiving this type of information. This is a four fold preference compared with the general public. Where there is a preference in the broader public for traditional mass media (television, radio and newspapers, as well as pamphlets) as sources for this type of information, Aboriginal respondents did not select these with any degree of frequency. Only the Internet was selected with some frequency, particularly among Métis respondents, where it is the second highest preferred source and selected considerably more often than found in the broader public).

Preferred Type of Format

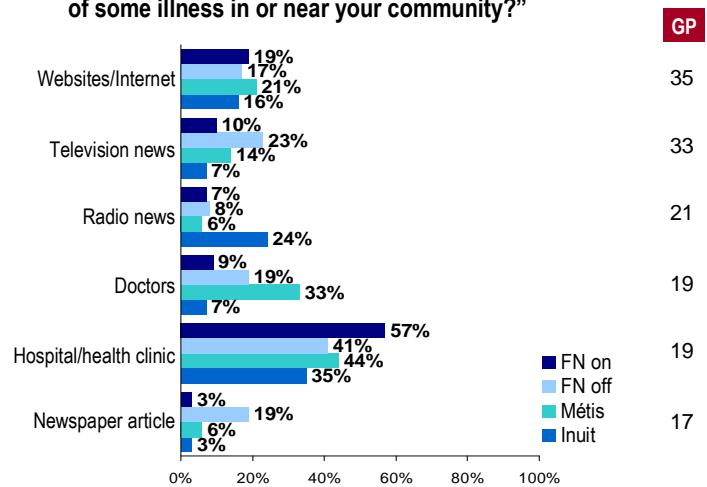


- Physicians or other health professionals were selected even more frequently in Alberta, and least likely in the North, where a pamphlet in the mail is more popular than it is elsewhere in the country. Aboriginal residents of British Columbia are the most likely across the country to prefer the Internet as a source.

Similar leanings toward health care professionals are also found in the question related to information sources about an outbreak. Again, each of the four Aboriginal groups placed a much higher degree of trust or preference in health care workers than found in the broader public, particularly among First Nations residents of reserves. There is a slight preference for television among First Nations people living off-reserve, relative to the other three groups. Inuit respondents stand out in their greater preference for radio news compared with the other three populations. Among Métis there is a relatively greater preference for newspaper articles, compared with the results for the other three groups, which is more in line with the results found in the broader public.

Preferred Method of Getting Information in Outbreak

“Where would you turn to get news and information in the event of an outbreak of some illness in or near your community?”



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n=252-309

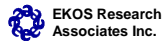
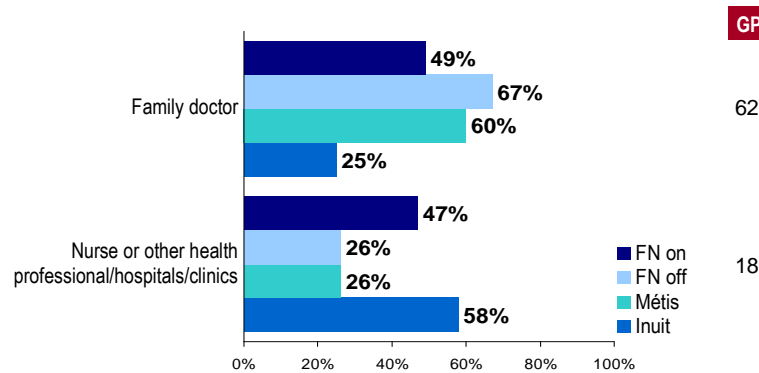
PHAC Personal Infection Prevention, 2009

- Patterns of results are largely similar although the link to perceived likelihood of catching the flu is somewhat different, with those who think they are not likely to get it expressing a greater preference for television and newspapers as good sources for information about an outbreak. Those who think it likely that they will contract the flu are more apt to want to turn to the Internet.
- Regionally, there are also some differences. Residents of British Columbia have a stronger than average preference for doctors and nurses as good sources, which is also the case in Manitoba and Ontario. Hospitals are also more apt to be a preferred source in Ontario and in Newfoundland and the NWT. Radio is a more commonly preferred source in Saskatchewan, the NWT and Nunavut. The Internet is more often preferred in Saskatchewan and the Public Health Agency of Canada is more often cited as a preferred source in Alberta.

As with the previous results all of the Aboriginal respondent groups indicated considerable reliance on nurses and doctors as trusted source of health information. In particular, the two populations living in more remote communities place a much greater trust in nurses and other health professionals than other groups do (and therefore less trust in doctors, since respondents were asked to select one single most trusted source).

Trustful Sources of Accurate Information

“Who would you trust most to give you the most accurate and complete information about preventing illness and ways to protect yourself?”



n=252-309

PHAC Personal Infection Prevention, 2009

- Results by sub-group are largely the same as found in the broader public, although regionally, nurses are more popular in Manitoba, Newfoundland, Alberta, Quebec and Nunavut and the NWT.

9. SUMMARY

- Most Canadians have at least some familiarity with the flu, although about one in four seem to confuse it with a stomach virus, citing nausea, vomiting and gastrointestinal upset as key symptoms of the flu. Results also suggest a general understanding of how the flu is transmitted.
- There is less of an appreciation of which soap is the most effective for cleaning hands, with a fair degree of emphasis being placed on antibacterial soaps. In fact, only one in seven believe regular soap to be the most effective.
- Most Canadians (and Canadian households) have been struck with the flu at some point. In fact, 25 per cent have had it three or more times in the past five years. Only one in eight households have not experienced the flu.
- In spite of reasonably high familiarity and knowledge and considerable direct experience with the flu, the perceived likelihood of contracting the flu seems fairly low. Although ten per cent of the samples respondents indicated that they had already had the flu, only eight per cent said that it is very likely and 25 per cent said that it is somewhat likely that they will contract it in the current winter season. A full 57 per cent said that they believe it unlikely. And, of those who believe that it is a good possibility, only 17 per cent said that they were concerned by this prospect. Given that there is a relationship between perceived risk of contracting the illness and prevention behaviour it will be difficult to motivate Canadians who do not think that they are at risk.
- There is greater concern about contracting or spreading the flu when in public and in the presence of others because of the inability to control the environment. This is interesting given that many respondents reported that they do not wash their own hands in a number of circumstances and do not always take other prevention precautions. This concern for the practices of others (rather than one's own practices) is in line with the overinflated degree of considering oneself to be a person who practices prevention (even though many of these same individuals report lower than average frequencies of prevention behaviour).
- Not liking to be sick is the primary motivator for prevention for most, although the protection of others is also a consideration for one in three. Being too busy or generally not caring enough is also a reason for about one in six.
- Barriers to prevention practices include primarily the perception that one is healthy and prevention is not required (according to half of those that do not consider themselves to be people who practice prevention). Not caring enough to bother is a second fairly strong self-professed reason for inaction. It is interesting to see that only a small proportion of those who don't consider themselves "preventer" say that they don't believe in the effectiveness of prevention strategies, yet modeling of the reported prevention behaviours indicated it to be the strongest driver of taking prevention action.

- Canadians are by and large generally convinced that the flu can be prevented or one's chances of getting it reduced. Although only a small proportion think that this is easy to do, two in three think that it is moderately easy to do with some conscious actions. Only two in ten think that it is very difficult, if not impossible, but this represents a fairly significant segment of the population that is quite fatalistic about getting the flu, which again, makes it very difficult to motivate them toward prevention behaviour.
- Among the specific prevention behaviours tested in terms of preventing or reducing the spread of the flu, hand washing is seen as the most effective by far (i.e., accepted by the largest share of Canadians to be an effective method of addressing the issue) in top of mind recall. This is followed by social distancing and cough etiquette, and then by vaccine (which is only seen as effective by 17 per cent of Canadians). Cleaning common surfaces is the least obvious to most Canadians (again, in top of mind recall of an effective strategy for reducing the spread of flu).
- When specifically prompted for specific behaviours hand washing is still seen as the most effective followed by hand sanitizers, and not sharing personal items. Vaccine and distancing are seen as less, but moderately effective. Surprisingly, cough etiquette is not seen as effective by a large portion of Canadians (although six in ten Canadians do have faith in it), nor is cleaning common surfaces which only four in ten Canadians have faith in.
- In terms of prevention behaviours Canadians report a high frequency of hand washing on a daily basis (12.2 per day), although there is a considerably range, with ten per cent reporting only three or four times a day and ten per cent reporting more than 20 times a day.
- Use of specific soap is most often described as a good strategy for ensuring effective cleaning, however, few reported regular soap as the most effective in results presented earlier. Use of hot water is another method described by many. Relatively few rely on a specific length of time or specific strategy to reach all areas of the hand. That said, of those who rely on length of time to ensure effective cleaning, the average length of time was reported to be 48 seconds, which is obviously overstated for most.
- Antibacterial soap is considered to be the most effective product to use, although considerably more Canadians use regular soap (at a rate of about two to one). In fact, most of those who think regular soap is the way to go, use it, while only about half of those who place their faith in antibacterial soaps actually use it on a regular basis.
- There are some more obvious situations in which virtually all Canadians say that they wash their hands (e.g., in the bathroom). There are some situations, however, that are considerably less obvious, including after a cough or sneeze (even among only those who cover their mouth with their hand) or after being in a public place. In fact, even in relation to the handling of food a fairly large number of respondents did not report regular hand cleaning.
- Cough etiquette is an interesting area because more than one in three still say that they use their hand (instead of a sleeve, arm, clothing or handkerchief) to cover their mouth. That said,

most also reported that they do not always wash their hands following a cough or sneeze, and relatively few place a high degree of faith in covering one's mouth after a cough or sneeze as a very effective method of reducing the spread of flu. This seems to be an area where there is room for improvement (i.e., increasing believe in the value of cough etiquette and need for hand washing if one uses a hand to cover one's mouth).

- Although cleaning of kitchen counters is an obvious method of prevention according to most, relatively few reported frequent cleaning other common surfaces (e.g., telephones, light switches, key boards) (e.g., even monthly, or more often).
- An overall snapshot of behaviour suggests that about one four Canadians do not typically follow prevention strategies (even though many think that they do) and only one in four are very consistent in their practice of prevention behaviours. Regression analysis indicated that perceived effectiveness is the number one driver of prevention behaviour, with a high degree of faith in cleaning common surfaces as the most strongly linked to high prevention behaviour. This is followed by faith in hand washing and then faith in the flu vaccine). The vulnerability of the household or level of responsibility of the respondent to protect others are also key drivers. Those describing a household with vulnerable individuals, seniors, young children in them or indicating themselves to be a health care worker or caregiver are more likely to report strong prevention behaviour patterns. Perceived effectiveness of cough etiquette is also related to prevention behaviours as is age (with older individuals more likely to practice prevention). The likelihood of catching the flu is also a driver.
- Most Canadians say that they practice social distancing even in relation to work (with seven in ten saying that they stay home when they are sick, and even more parents saying that they stay home when a child is sick). This is in spite of the fact that one in three of these are not covered for this time, so they practice distancing even at an economic cost to themselves.
- Vaccines are something that about half of Canadians (52 per cent) believe in and obtain on a fairly regular basis. Even of these, however, only about get the flu vaccine every year. As a barrier to vaccines, about 18 per cent of those who have been vaccinated in the past five years about one in six (18 per cent) said that they had an adverse reaction, with about half of these citing the flu or some illness in the days following the shot.
- Those motivated to obtain flu shots cite personal protection as the main reason, although one in five cite the protection of others as the main reason. Recommendation by a doctor or employer is also a motivator, according to one in four.
- Barriers to getting the flu shot include a perception of healthiness (i.e., a lack of need for the vaccine) and perceived lack of effectiveness of vaccines, as well as concerns about the safety of vaccines. In fact, four in ten of those who do not typically obtain the flu vaccine expressed some concern with the safety of the vaccine and adverse reactions.
- Virtually all parents obtain the routine vaccinations for their children, either to protect them from illness or because the school boards insist on it, or because a doctor recommends it. Just

over half of parents report that they have provided optional vaccines for this like Chicken Pox, and HPV to their children. Most of the parents who do not say that it is unnecessary or that they are worried about side effects.

- Incidence of obtaining the flu shot for children is fairly low at 28 per cent. In fact, it's almost half of what it is for the general public obtaining it for themselves (even among parents specifically).
- About six in ten Canadians have some general understanding of what pandemic flu is and this proportion of the public is increasing steadily each year. The perceived likelihood of a pandemic affecting their own community however is small (and even smaller than it is for regular flu affecting an individual), at nine per cent. That said, the concerns regarding contracting pandemic flu are much higher, with half of those thinking that it is likely to affect their community saying that they are quite concern about this possibility.
- The perceived effectiveness of various behaviours design to reduce or prevent the spread of pandemic flu are similar to those found for seasonal flu. That said, the faith placed in had washing is lower for pandemic flu than it is for seasonal flu and social distancing is seen to be effective by more people in connection with pandemic flu than it is for seasonal flu. This provides an interesting window into reactions and reliance on prevention strategies in a pandemic situation (although until a pandemic strikes close to home it is difficult to anticipate what the real reactions and strategies will be).
- Most Canadians said that they would want to know about how to catch or prevent the flu, what the symptoms of seasonal flu are, what the level of outbreak is (if there were an outbreak) and how to deal with seasonal flu. Information about the flu vaccine was also listed, although by relatively few (seven per cent). Tradition media (i.e., television, radio and newspaper) were cited as popular preferred methods of getting information about the flu. Pamphlets in the mail were cited with a high degree of frequency (by one in three respondents). The popularity of the Internet was surprisingly low for this day and age (with 27 per cent saying that this would be a preferred conduit for receiving generalize information about the flu). Doctors were cited by 15 per cent as the best method of getting information about the flu.
- In an outbreak, the traditional methods lose ground to the Internet, which presumably is see as a quicker and more constant source of up to date information. Doctors, hospitals and other heath care workers were also cited by four in ten. The trust that Canadians place in different sources suggests that family doctors would be the primary vehicle for receiving trusted information, followed by other health care professionals. The government (Health Canada and public Health Agency of Canada) are also seen as trusted sources.

APPENDIX A
SURVEY INSTRUMENT

APPENDIX B
DETAILED RESPONSE RATE

