

Flu Immunization – Location/Reasons

Introduction

Background

Influenza (the flu) is a serious illness. It is caused by influenza A and B viruses and occurs in Canada every year. Influenza causes fever, cough, headache, muscle soreness, sore throat and stuffy nose and can lead to pneumonia¹. The flu can also make other illnesses worse, especially chronic illness. The flu spreads very easily from an infected person to others through coughing and sneezing. It is also spread by direct contact with contaminated surfaces or objects such as unwashed hands, clothes, toys, eating utensils, etc.².

Getting an influenza vaccination (or flu shot) every year can help prevent the infection or reduce the severity of the illness. Flu vaccines have been in use since the 1940s. The flu viruses are capable of changing from year to year, so the composition of the vaccine has to be updated annually. This is why it is necessary to be immunized each fall³.

Prior to the 1999/2000 influenza season, the vaccine was only available free of charge to high-risk populations. Since then the flu program has expanded to include all Ontarians. The Leeds, Grenville & Lanark District Health Unit conducts approximately 20 community flu clinics across the Tri-County area each year. Public Health Nurses, Registered Nurses, Registered Practical Nurses, and Administrative Clerks implement these clinics. In 2007, Public Health Inspectors and other Health Unit employees will take active roles within each of the clinics in preparation for any future pandemic that may require additional support from these individuals.

Each year approximately 60,000 individuals received the flu shot in Leeds, Grenville & Lanark and nearly 12,000 of them received their vaccine from one of the 20 community clinics implemented by the Leeds, Grenville & Lanark District Health Unit.

Rapid Risk Factor Surveillance System

The data presented in this report was obtained and analyzed from the Rapid Risk Factor Surveillance System (RRFSS). RRFSS is an on-going cross-sectional telephone survey occurring in various public health units across Ontario that provides timely and relevant local health unit data. A random sample of adults (aged 18+) in Leeds, Grenville and Lanark counties is interviewed monthly regarding risk behaviours, knowledge, attitudes and awareness about topics important to public health. The RRFSS survey is conducted by the Institute for Social Research (ISR) at York University, on behalf of the Leeds, Grenville & Lanark District Health Unit. Data collected in the RRFSS survey is used to support community awareness programmes, health unit programme planning and evaluation, media campaigns, public policy development and evidence-based research as mandated by the Mandatory Health Programs and Services Guidelines

Objectives and Methodology

1. To determine where residents of Leeds, Grenville and Lanark aged 18 and older go to get a flu immunization and to document the reasons they give for getting the shot.
2. To inform the health unit in focussing its resources towards ensuring that the most residents in Leeds, Grenville and Lanark as possible have access to flu immunization.

This module was enlisted into the RRFSS questionnaire module inventory in February 2001.

Data from RRFSS were analyzed using standard data analysis protocols. All analysis was produced using SPSS v.15.0 software (Chicago, IL) and MS Excel software (Redmond, WA). Results are weighted to adjust for household size and the unequal probabilities involved in being selected for the survey. Estimates are presented with 95% Confidence Intervals (C.I.) which indicate that there is a 95% probability that the true value of the variable measure (proportion) is contained within the interval. When the data is presented in a chart or table, an “E” indicates that the estimate may be released, but has a high coefficient of variation (C.V.) and must, therefore, be interpreted with caution due to a high sampling variability (C.V between 16.6 and 33.3). A

“-“ indicates the estimate is suppressed due to small cell size/high sampling variability (C.V greater than 33.3).

Questions pertaining to *Flu Immunization – Location/Reasons* were collected from January 2007 to April 2007. There were a total of 322 weighted respondents. However, the number of respondents varied between questions in the module.

Results

The mean age of respondents to this module was 49.2 years (S.D. = 16.3), with a range of 77.8 years (min = 18.4, max = 96.2). In terms of gender, a similar number of respondents were male (52.2% (95% C.I.: 44.6, 59.8)) and female (47.8% (95% C.I.: 39.9, 55.7)).

Table 1: Since September 2006 have you had a flu shot?

	Frequency (n=319)	Percent	95% C.I.
Yes	147	45.8	37.7, 53.9
No	172	53.2	45.7, 60.7

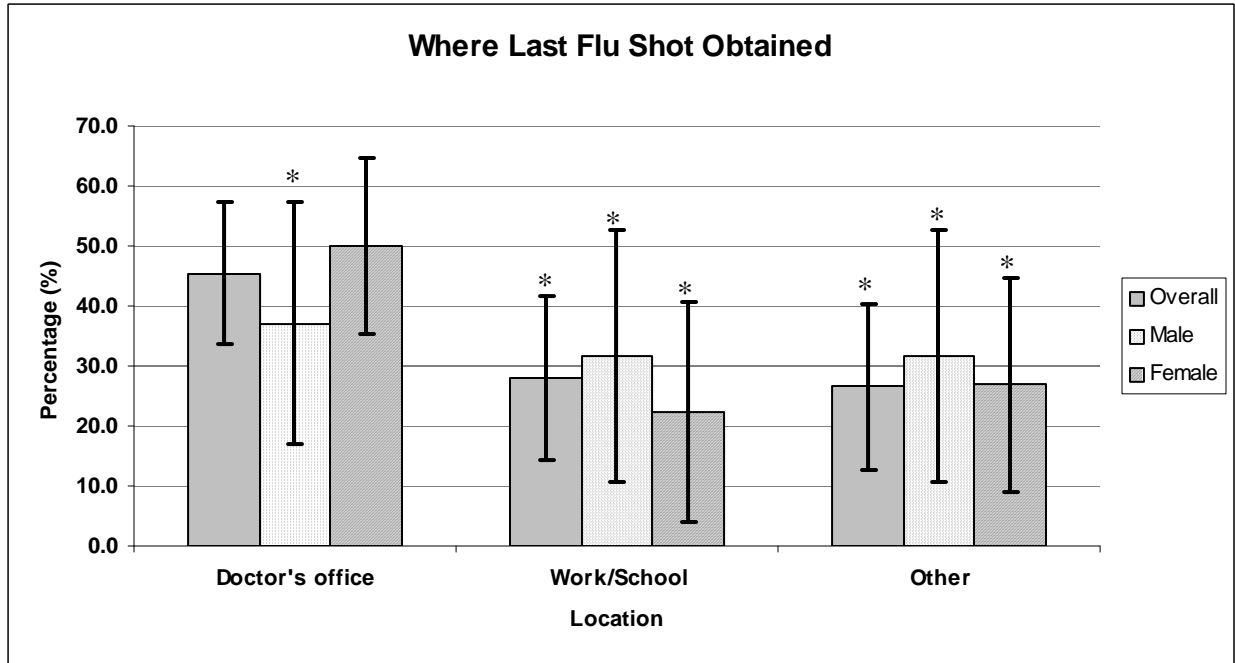
Table 1: 45.8% of respondents (n = 147) in Leeds, Grenville and Lanark stated that they received a flu shot between September 2006 and the time of their survey interview (January – April 2007). 39.0% (95% C.I.: 26.6, 59.4) of male respondents and 52.7% (95% C.I.: 42.3, 63.1) of female respondents reported receiving a flu shot during this time period.

When asked “*What are the main reasons you had your last flu shot?*” 48.7% (95% C.I.: 37.2, 60.2) of respondents stated that they got the flu shot as a “*preventative measure*”. When stratified by sex 48.6% (95% C.I.: 30.4, 66.8) of males and 49.1% (95% C.I.: 30.4, 66.8) of females reported this reason as well. However, overall over half of respondents to this question stated that there were “*other*” reasons for getting a flu shot. Some of these in order of frequency of reporting include:

- Always get one each year
- Has a chronic condition
- Mandatory at workplace
- Recommendation of doctor/health professional



- Age
- Family/peer pressure
- Free/no cost
- Advertising/public information



Notes: Respondents who answered “don’t know” or refused to respond were analyzed using RRFSS guidelines.
 * Interpret with caution, high variability (C.V. 16.6 to 33.3).

Figure 1: Of those who indicated that they had received a flu shot since September 2006, 45.5% (95% C.I.: 33.6, 57.4) had received their shot at a doctor’s office/medical clinic/walk-in clinic. Similar numbers of males and females reported this location as where they obtained their flu shot. Due to low frequencies of response the remaining response categories were collapsed into “other”. Almost equal numbers of respondents stated that they had received their flu shot at work or school or at an “other” location. The top response categories included in “other” were:

- Clinic sponsored by health unit
- Public health unit
- Community health centre
- Pharmacy
- Hospital
- House call by doctor or nurse

11.2% of those who were grouped into the “other” category reported receiving their flu shot at either the health unit or a clinic sponsored by the health unit. However, there is an extreme amount of variability associated with this statistic and therefore this number must not be used in any interpretation.



Table 2: Main reasons did not get a flu shot since September 2006

	Frequency	Percent	95% C.I.
Overall:	(n=171)		
▪ Negative effects/Doesn't work	63	36.6	24.7, 48.5
▪ Do not need it, not get sick, never get flu	43	25.0	12.1, 37.9 ^E
▪ Other	65	38.4	26.7, 50.1
Males:	(n=91)		
▪ Negative effects/Doesn't work	33	35.9	19.5, 52.3 ^E
▪ Do not need it, not get sick, never get flu	31	34.0	17.3, 50.7 ^E
▪ Other	27	29.3	12.1, 46.5 ^E
Females:	(n=80)		
▪ Negative effects/Doesn't work	28	35.0	17.3, 52.7 ^E
▪ Do not need it, not get sick, never get flu	--	--	--
▪ Other	40	50.0	34.5, 65.5 ^E

E = Interpret with caution, high variability (C.V. 16.6 to 33.3).

-- = Data not released due to small sample or extremely high variability (C.V. > 33.3).

Table 2: For the 172 survey respondents who did not get a flu shot since September 2006 over a third cited concerns about “*Negative side effects*”, “*Concern about bioterrorism/vaccine quality*” or “*Don’t believe in it/doesn’t work*” as their main reason for not getting the flu shot. Similar patterns were observed overall and for males and females.

Overall a quarter of respondents stated that they “Do not need it/don’t get sick/never get the flu”. The remainder of response categories were collapsed into an “Other” category due to the low number of respondents. Some of these response categories in order of frequency of reporting include:

- No time, too busy, laziness, not easy to get to doctor or clinic
- Never had one in past
- Too sick to get one at time
- Fear of needles
- Didn’t know about free shots



Table 3: Have you ever had a flu shot (if not had a flu shot since September 2006)?

	Frequency	Percent	95% C.I.
Overall:	(n=163)		
▪ Yes	81	49.5	38.6, 60.4
▪ No	82	50.1	39.3, 60.9
Males:	(n=90)		
▪ Yes	43	48.3	33.4, 63.2
▪ No	46	51.3	36.9, 55.7
Females:	(n=73)		
▪ Yes	37	51.1	35.0, 67.2
▪ No	36	48.9	32.6, 65.2 ^E

E = Interpret with caution, high variability (C.V. 16.6 to 33.3).

Table 3: For those respondents who did not indicate as having a flu shot since September 2006, almost half stated that they had been inoculated for the flu in the past. Similar trends were observed for both males and females.

Those who answered “Yes” in table 3 ($n = 81$) were asked the following question; “*In what month or year did you get your last flu shot? Was it between September 2005 and April 2006, or prior to September 2005?*”. 39.9% (95% C.I.: 22.9, 56.9)^E of respondents stated that they had received their last flu shot between September 2005 and April 2006. A further 53.7% (95% C.I.: 38.8, 68.6) of respondents stated that they had received their flu shot prior to September 2005. This data was not stratified by sex due to insufficient sample sizes leading to high levels of data variability.

Summary of Key Findings

Some key findings in the study were:

1. 45.8% (95% C.I.: 37.7, 53.9) of respondents ($n = 147$) in Leeds, Grenville and Lanark stated that they received a flu shot between September 2006 and the time of their survey interview (January – April 2007).
2. 48.7% (95% C.I.: 37.2, 60.2) of respondents stated that they got the flu shot as a “preventative measure”. Similar results were observed for both males and females.
3. 45.5% (95% C.I.: 33.6, 57.4) had received their shot at a doctor’s office/medical clinic/walk-in clinic. Similar results were observed for both males and females.
4. 36.6% (95% C.I.: 24.7, 48.5) of those who did not get the flu shot cited concerns about negative side effects, vaccine quality and fear of lowering their immune systems as reasons for not getting the flu shot. A further 25.0% (95% C.I.: 12.1, 37.9)^E cited that they don’t need the shot or never get the flu as another set of reasons for not receiving a flu shot since September 2006.



Strengths & Weaknesses: _____

The data provided in this analysis demonstrates a timely and local perspective of the percentage of adults (aged 18+) who have had a flu shot since September 2006. The data also indicate the geographic location where the respondent received their flu shot and main reason for getting the shot for residents of Leeds, Grenville and Lanark counties.

Although the sample size ($n = 319$) was sufficient for overall descriptive analysis, it was not large enough to allow for analysis of all questions when stratification was done by sex. Longer periods of data collection are required to enable full data stratification by sex.

References: _____

1. Ontario Ministry of Health and Long-Term Care. Immunization: Influenza Vaccine. [Online]. 2004 [cited 2007 Aug 3]; Available from: URL: http://www.health.gov.on.ca/english/public/program/pubhealth/flu/flu_04/factsheets/flu_vaccine.html.
2. Ontario Ministry of Health and Long-Term Care. Immunization: Influenza Vaccine. [Online]. 2004 [cited 2007 Aug 3]; Available from: URL: http://www.health.gov.on.ca/english/public/program/pubhealth/flu/flu_04/factsheets/flu_vaccine.html.
3. Health Canada. Influenza (the "flu"). [Online]. 2005 [cited 2007 Aug 3]; Available from: URL: http://www.hc-sc.gc.ca/jyh-vsv/diseases-maladies/flu-grippe_e.html.

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