

---

**Ministry of Health and Health Authorities**  
**Influenza Immunization Coverage**  
Notes

***Influenza Immunization for Community-Based Population Aged 65 Years and Older***

**DATA SOURCE**

Public Use Microdata File for the Canadian Community Health Survey, 2003 and 2005

**YEAR**

2003 and 2005

**NOTES**

**1. Survey Methods**

The Canadian Community Health Survey (CCHS) is a cross-sectional survey that collects information related to the health status, health care utilization and health determinants of the Canadian population. The target population is persons aged 12 years or older, living in private dwellings.

The CCHS used three sampling frames to select the sample of households: 48-49% of the sample came from an area frame, 50% came from a list frame of telephone numbers and 1-2% came from a Random Digit Dialing sampling frame. Sample units selected from the telephone list frame were interviewed from centralized call centres. Units selected from the area frame were interviewed by decentralized field interviewers. In some situations, field interviewers completed some interviews or part of an interview by telephone.

**2. Weights**

The CCHS was not a census of all Canadians, rather a probability sample was used to obtain a representative sample of Canadians. Each individual in the probability sample "represents", besides himself or herself, several other persons not in the sample. Each respondent was assigned a sampling weight indicating the number of individuals they represent. For estimates produced from the survey data to be representative of the covered population and not just the sample, estimates using CCHS data are derived by identifying the records of individuals in the sample with the specific characteristic(s) of interest and summing the weights entered in those records.

**3. Numerator**

Respondents of the Canadian Community Health Survey (CCHS) who lived in British Columbia, were age 65 years or older and indicated that they received the flu shot less than 1 year ago.

**4. Denominator**

Respondents of the CCHS who lived in British Columbia, were age 65 years or older and answered the question "Have you ever had a flu shot?"

**5. Calculation of Influenza Immunization Coverage**

Weighted Numerator ÷ Weighted Denominator x 100%

**6. Data Quality**

In 2005, the combined response rate in British Columbia was 77.3% and in the Health Service Delivery Areas ranged from 68.3% to 86.2%. In 2003, the combined response rate in British Columbia was 81.2% and in the Health Service Delivery Areas ranged from 76.5% to 90.2%.

The sampling error of the estimates from the CCHS can be quantified by the coefficient of variation. Approximate coefficients of variation for the influenza vaccine coverage results were calculated using the CCHS Microdata File's Approximate Sampling Variability Tables.

95% Confidence intervals for the immunization coverage estimates were calculated using the coefficients of variation as outlined in the CCHS User Guides for the Public Use Microdata Files.

All coefficients of variation were between 0.0 and 16.5%, indicating that estimates of influenza immunization vaccine coverage at the Health Service Delivery Area, Health Authority and provincial level had acceptable degrees of variability.

---

**Ministry of Health and Health Authorities**  
**Influenza Immunization Coverage**  
Notes

***Influenza Immunization for Community-Based Population Aged 65 Years and Older***

**7. Exclusions from the Sampling Frame**

Individuals living on Indian Reserves and on Crown Lands, institutional residents, full-time members of the Canadian Armed Forces and residents of certain remote regions were excluded from the CCHS sampling frame. The CCHS covers approximately 98% of the Canadian population aged 12 years and over.

Due to the exclusion of individuals living on Reserves and residents in certain remote regions, estimates for the Northern Health Authority may not be as representative of the Health Authority's population as estimates for other Health Authorities.

**8. For Further Information about the CCHS**

For further information about the CCHS methods or limitations, please see the Canadian Community Health Survey 2003/2005 User Guide for the Public Use Microdata File.

**9. Abbreviations**

Health Authorities:

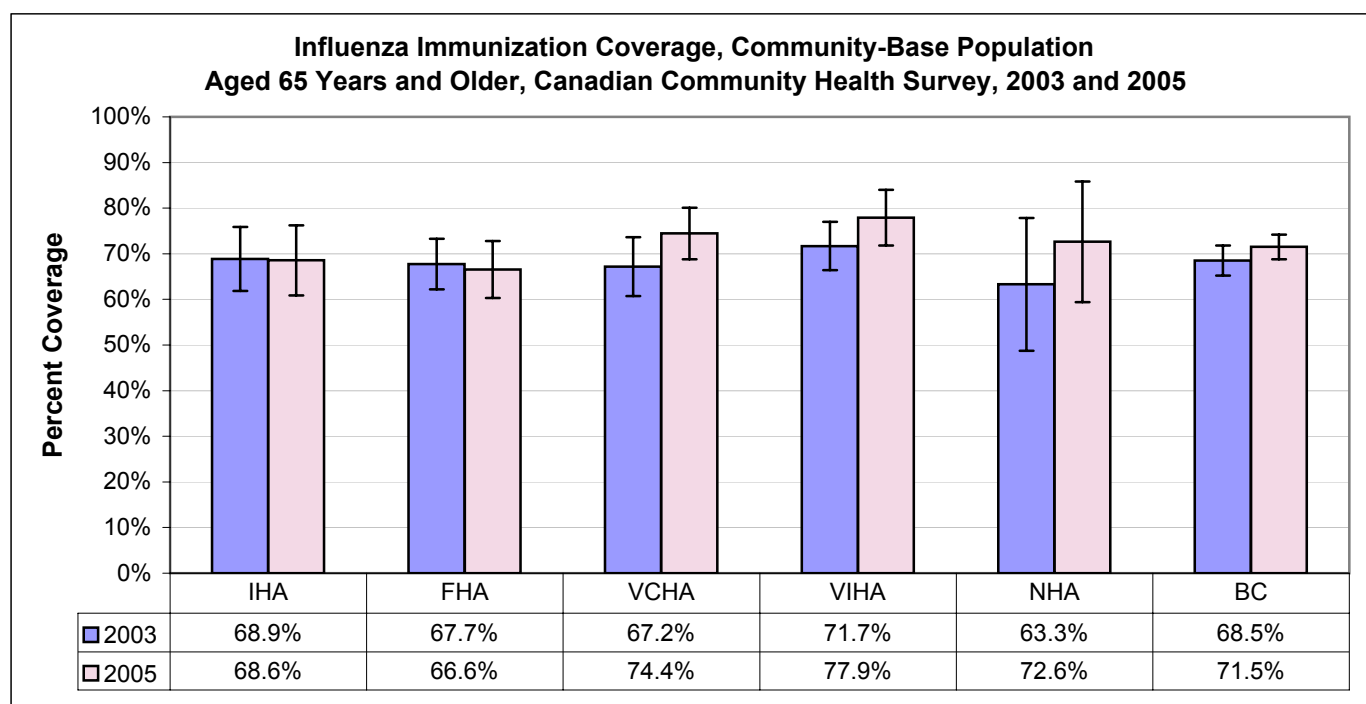
FHA	Fraser Health Authority	VCHA	Vancouver Coastal Health Authority
IHA	Interior Health Authority	VIHA	Vancouver Island Health Authority
NHA	Northern Health Authority		

Health Service Delivery Areas:

EK	East Kootenay	VAN	Vancouver
KB	Kootenay Boundary	NSCG	North Shore / Coast Garibaldi
OK	Okanagan	SVI	South Vancouver Island
TCS	Thompson Cariboo Shuswap	CVI	Central Vancouver Island
FE	Fraser East	NVI	North Vancouver Island
FN	Fraser North	NW	Northwest
FS	Fraser South	NI	Northern Interior
RICH	Richmond	NE	Northeast

**Ministry of Health and Health Authorities  
Influenza Immunization Coverage**

<b>Influenza Immunization for Community-Based Population Aged 65 Years and Older</b>				
<b>PROVINCE / HEALTH AUTHORITY / HEALTH SERVICE DELIVERY AREA</b>	<b>2003</b>		<b>2005</b>	
	<b>% Coverage</b>	<b>95% CI</b>	<b>% Coverage</b>	<b>95% CI</b>
<b>1 INTERIOR</b>	<b>68.9%</b>	<b>61.8% - 75.9%</b>	<b>68.6%</b>	<b>60.9% - 76.2%</b>
East Kootenay	74.5%	59.7% - 89.2%	67.4%	50.1% - 84.6%
Kootenay Boundary	63.7%	47.2% - 80.3%	58.7%	43.3% - 74.1%
Okanagan	66.3%	56.5% - 76.2%	71.6%	62.7% - 80.4%
Thompson Cariboo Shuswap	74.1%	63.7% - 84.5%	67.4%	53.6% - 81.1%
<b>2 FRASER</b>	<b>67.7%</b>	<b>62.2% - 73.3%</b>	<b>66.6%</b>	<b>60.3% - 72.8%</b>
Fraser East	62.4%	49.8% - 75.0%	66.7%	53.9% - 79.5%
Fraser North	70.1%	60.5% - 79.6%	66.4%	54.7% - 78.0%
Fraser South	68.4%	56.2% - 80.6%	66.6%	55.0% - 78.2%
<b>3 VANCOUVER COASTAL</b>	<b>67.2%</b>	<b>60.8% - 73.7%</b>	<b>74.4%</b>	<b>68.8% - 80.1%</b>
Richmond	63.6%	48.2% - 79.0%	76.0%	63.3% - 88.6%
Vancouver	72.1%	63.0% - 81.2%	73.2%	64.5% - 82.0%
North Shore / Coast Garibaldi	60.0%	48.0% - 72.0%	75.9%	65.3% - 86.6%
<b>4 VANCOUVER ISLAND</b>	<b>71.7%</b>	<b>66.4% - 77.0%</b>	<b>77.9%</b>	<b>71.8% - 84.0%</b>
South Vancouver Island	70.9%	62.5% - 79.3%	78.6%	70.4% - 86.8%
Central Vancouver Island	72.0%	60.5% - 83.6%	77.4%	67.9% - 86.8%
North Vancouver Island	73.7%	59.6% - 87.9%	77.0%	60.8% - 93.2%
<b>5 NORTHERN</b>	<b>63.3%</b>	<b>48.7% - 77.9%</b>	<b>72.6%</b>	<b>59.4% - 85.8%</b>
Northwest & Northeast	54.2%	38.3% - 70.2%	72.9%	59.2% - 86.6%
Northern Interior	70.5%	54.4% - 86.5%	72.4%	57.0% - 87.7%
<b>BRITISH COLUMBIA</b>	<b>68.5%</b>	<b>65.2% - 71.8%</b>	<b>71.5%</b>	<b>68.8% - 74.2%</b>

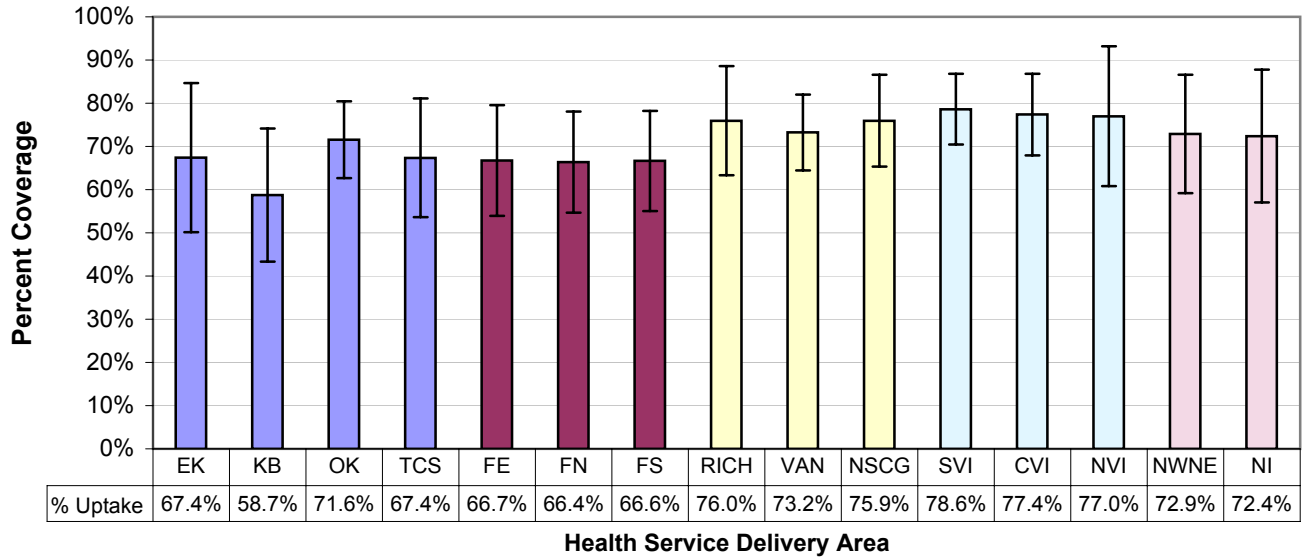


See data sources and notes on accompanying cover pages.

**Ministry of Health and Health Authorities  
Influenza Immunization Coverage**

**Influenza Immunization for Community-Based Population Aged 65 Years and Older**

**Influenza Immunization Coverage, Community-Based Population  
Aged 65 Years and Older, Canadian Community Health Survey, 2005**



See data sources and notes on accompanying cover pages.