

Influenza vaccination coverage for staff of acute care facilities British Columbia, 2015/16

Background

Immunization coverage assessment is an important part of a quality immunization program and serves three main functions:

- i) Identifying populations with low levels of immunization coverage
- ii) Evaluating the delivery of immunization programs
- iii) Informing program planning

Targets for coverage in this population have been identified at the provincial and national levels at 60% and 80% respectively.^{1,2}

The BC Influenza Prevention Policy requires healthcare workers in all health authorities to be vaccinated against influenza or to wear a surgical mask while in patient care areas during the influenza season. The policy covers all health authority staff who work in patient care areas: unionized and excluded staff, volunteers, paramedics, students, contractors, and physicians. The policy was widely communicated; it received extensive provincial and national media attention and its implementation was accompanied by strategies such as the use of peer immunizers. Staff reporting of their influenza immunization was enabled through an online immunization self-reporting website. Disciplinary measures for staff who do not comply with the Policy include loss of privileges and termination of employment. These measures were put in abeyance for the 2012/13 season but were enacted for the 2013/14 season and onward.

From the 2005/06 to 2011/12 influenza seasons, annual influenza vaccination coverage for staff of acute care facilities in BC ranged from 35% to 46%. Coverage increased following implementation of the new BC Influenza Prevention Policy, ranging from 74-76% for seasons 2012/13 through 2014/15.

Objective

To quantify the percentage of staff in acute care facilities in British Columbia who were vaccinated against influenza during the 2015/16 influenza season.

Methods

Influenza immunization coverage for healthcare workers in acute care facilities was calculated at the facility level, health service delivery area level, health authority level, and for BC. There are five regional health authorities, which are comprised of 16 health service delivery areas, and a Provincial Health Services Authority (PHSA) which is responsible for selected province-wide healthcare programs and services.

Acute care facilities were defined as non-profit institutions that are designated as a hospital by the Minister and are operated primarily for the reception and treatment of persons:

- suffering from the acute phase of illness or disability;
- convalescing from or being rehabilitated after acute illness or injury; or
- requiring extended care at a higher level than that generally provided in a private hospital.

An administrative dataset of occupational health records, the Workplace Health Indicator Tracking and Evaluation (WHITE) database, was used to calculate vaccination coverage results. The WHITE data were an anonymized individual healthcare worker level dataset which included influenza vaccination status. One acute care facility in BC did not have data for its employees in WHITE and aggregate facility level immunization coverage data were reported from this facility.

This was the fourth season of influenza coverage reporting using WHITE data. Staff whose records were included in the analysis must have been employed by a health authority and have worked for a minimum of 8 hours during the influenza season, defined as the period from December 1, 2015 to April 15, 2016. Staff who were not on a health authority's payroll (contracted staff, trainees, etc.) were not included in the WHITE database. Physicians and medical residents were not included in the WHITE database for most facilities.

Staff were defined as all persons who work or train on a full time, part time or casual basis in a facility or hospital who have direct or indirect contact with patients or residents, regardless of whether they are health care providers. This includes administrative and non-patient care staff (e.g., medical records, housekeeping and dietary) and excludes volunteers. This definition of staff is unchanged since the 2013/14 season and is based on the Ministry's Performance Agreements.

Some healthcare workers worked at multiple facilities during the influenza season. For **coverage statistics at the provincial, health authority or health service delivery area level**, each healthcare worker was included only in the facility where they worked the most hours. **For facility level coverage statistics**, healthcare workers were included in each facility where they worked for at least 8 hours during the influenza season. This is the same method that was used for the previous (2014/15) season's reporting.

Changes in coverage rates over time should be interpreted with caution as the data collection methods have changed from aggregate facility level reporting of immunization coverage as of February 28th each year prior to the 2012/13 season to individual healthcare worker level reporting using WHITE data, and there have been incremental methodological changes in use of WHITE data.

Results

Reporting of facilities (table 1)

- All 91 acute care facilities in BC are included in this report
- For 90/91 (99%) facilities, data from the WHITE database were used
- For 1/91 (1%) facility, aggregate facility level data were used because WHITE data were not available

2015/16 influenza vaccination coverage (tables 2 and 3; figures 1 to 5)

- 74% (51,888/69,962) of staff in acute care facilities in BC were vaccinated against influenza, a slight decrease from 76% (51,580/67,580) coverage in 2014/15 and 75% (50,878/67,459) coverage in 2013/14
- 66% to 79% coverage was the range across the six health authorities
- 61% to 83% coverage was the range across the sixteen health service delivery areas and PHSA
- 39% to 90% coverage was the range across all acute care facilities in BC
- 61% to 87% coverage was the range across the 33 facilities with 500 or more staff
- 80/91 (86%) facilities met the Immunize BC coverage target of 60%
- 30/91 (33%) facilities met the National Consensus coverage target of 80%

The total number of healthcare workers included in this acute care facility coverage report has fluctuated over the past several years; this year's total (69,962) is higher than the number included for the previous two seasons: 67,580 in 2014/15 and 67,459 in 2013/14.

Summary

Influenza immunization coverage data were available for all 91 acute care facilities in BC. Influenza vaccination coverage for staff of acute care facilities in BC was 74%, which is below the national target of 80%, but exceeds the Immunize BC target of 60%.

Within most health authorities, there was a wide range of influenza vaccination coverage for acute care facilities. More variation in coverage was observed for smaller facilities (<500 staff). Coverage in large facilities (≥500 staff) ranged from 64 to 85%. The reasons behind the variation in vaccination coverage between facilities were not assessed.

The total number of healthcare workers included in the acute care facility coverage reports varied substantially since 2010/11. The reasons for this variation are unknown. The number of staff included in this year's report is 3.5% higher than the number included last year.

Influenza immunization coverage for acute care healthcare workers in BC has ranged from 74-76% in the four seasons since implementation of the policy. Coverage rates during these seasons were about 35% higher than prior to implementation of the BC Influenza Prevention Policy. While slight increases in coverage were observed in the prior post-policy seasons, the 2015/16 coverage suggests coverage may have reached a plateau; in 4 of 6 health authorities, slight declines were observed.

Tables and Figures

Table 1: Acute care facilities included by health authority, 2015/16

Health authority	Acute care facilities		
	Reported	Total	% reported
Interior	27	27	100
Fraser	13	13	100
Vancouver Coastal	14	14	100
Vancouver Island	13	13	100
Northern	18	18	100
Provincial Health Services	6	6	100
British Columbia	91	91	100

Table 2: Influenza vaccination coverage for staff of acute care facilities by health authority, health service delivery area, 2015/16

Health authority	Acute care facility staff		
	Immunized	Total	%
Interior	7,982	10,989	73
East Kootenay	758	982	77
Kootenay Boundary	891	1,220	73
Okanagan	3,829	5,509	70
Thompson/Cariboo/Shuswap	2,504	3,278	76
Fraser	15,547	19,742	79
Fraser East	2,745	3,655	75
Fraser North	6,007	7,492	80
Fraser South	6,795	8,595	79
Vancouver Coastal	12,702	16,785	76
Richmond	1,119	1,353	83
Vancouver	9,558	12,767	75
N Shore/Coast Garibaldi	2,025	2,665	76
Vancouver Island	7,593	11,592	66
South Vancouver Island	4,312	6,585	65
Central Vancouver Island	1,970	3,231	61
North Vancouver Island	1,311	1,776	74
Northern	2,849	4,232	67
Northwest	736	1,078	68
Northern Interior	1,618	2,387	68
Northeast	495	767	65
PHSA	5,215	6,622	79
BC	51,888	69,962	74

Table 3: Acute care facility staff influenza vaccination coverage by health authority, 2007/08 to 2015/16

Health authority	Influenza immunization coverage (%) for staff of acute care facilities by influenza season									
	2007/08	2008/09	2009/10	2009/10 H1N1	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Interior	53	51	45	52	44	44	76	69	77	73
Fraser	40	33	16	46	30	34	74	80	80	79
Vancouver Coastal	39	45	47	53	46	43	71	75	75	76
Vancouver Island	42	41	37	42	39	42	74	73	70	66
Northern	45	43	37	41	42	37	76	73	75	67
PHSA	44	40	32	36	46	43	71	78	79	79
British Columbia	43	42	35	46	40	40	74	75	76	74

Figure 1: Influenza immunization coverage for staff of acute care facilities, 2006/07 to 2015/16

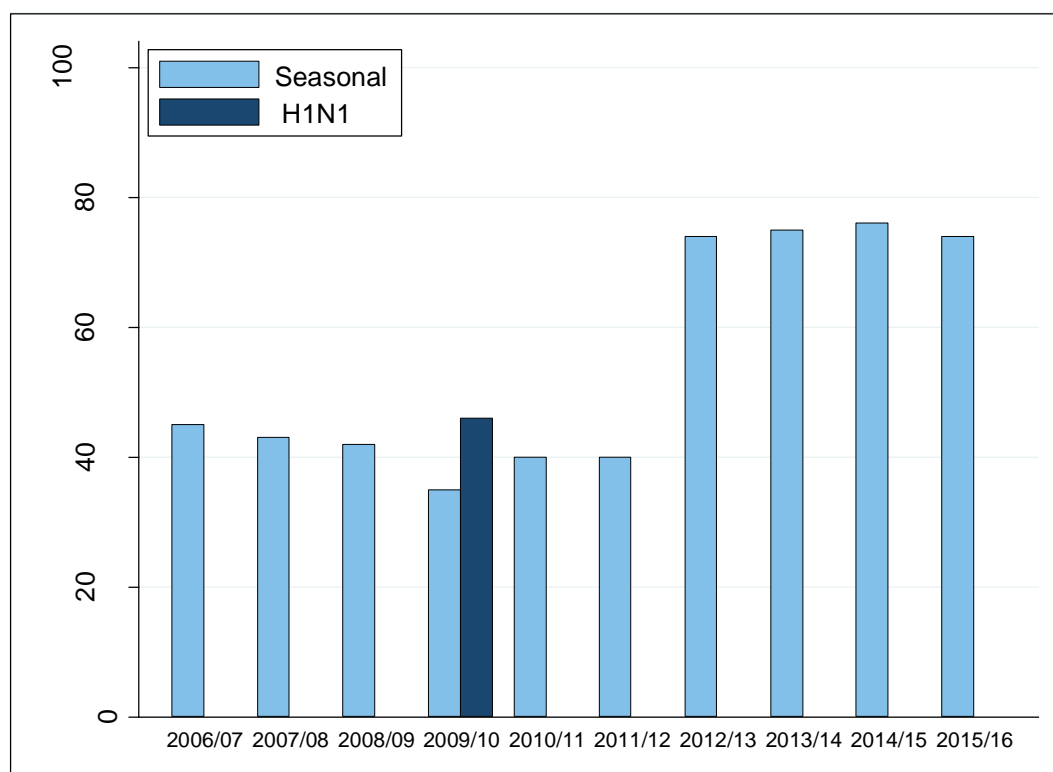


Figure 2: Influenza immunization coverage for staff of acute care facilities by health authority, 2015/16

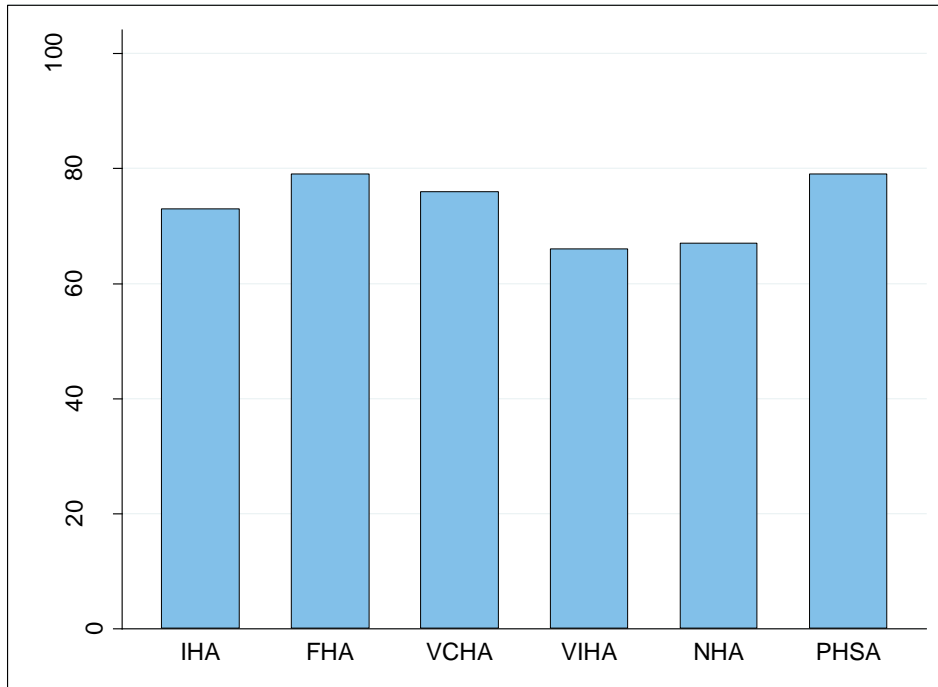


Figure 3: Influenza immunization coverage for staff of acute care facilities by health service delivery area and for PHSA, 2015/16

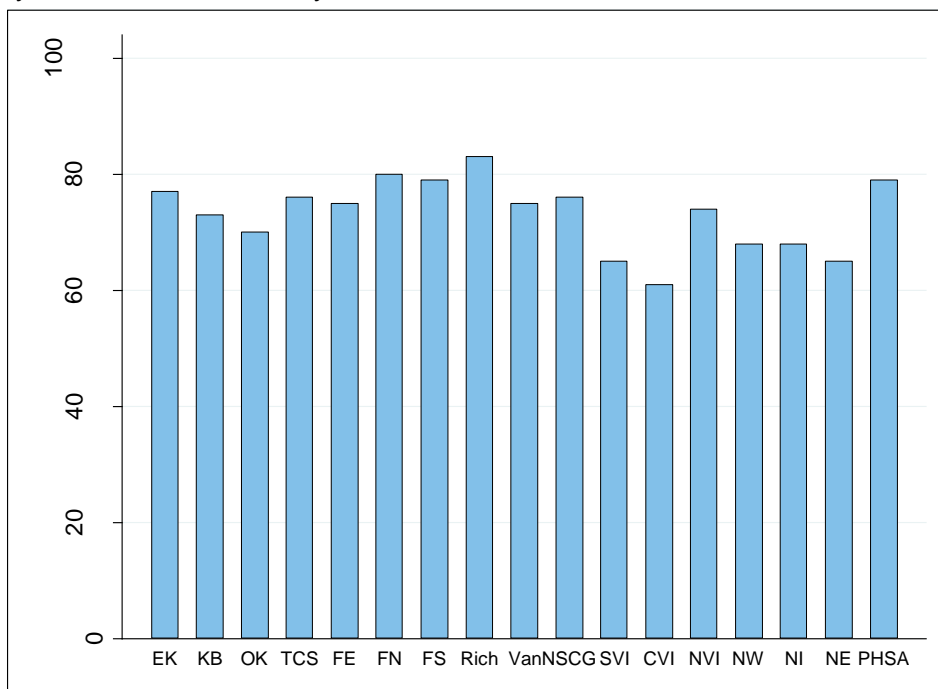


Figure 4: Influenza immunization coverage for staff of acute care facilities by facility size (number of staff), 2015/16

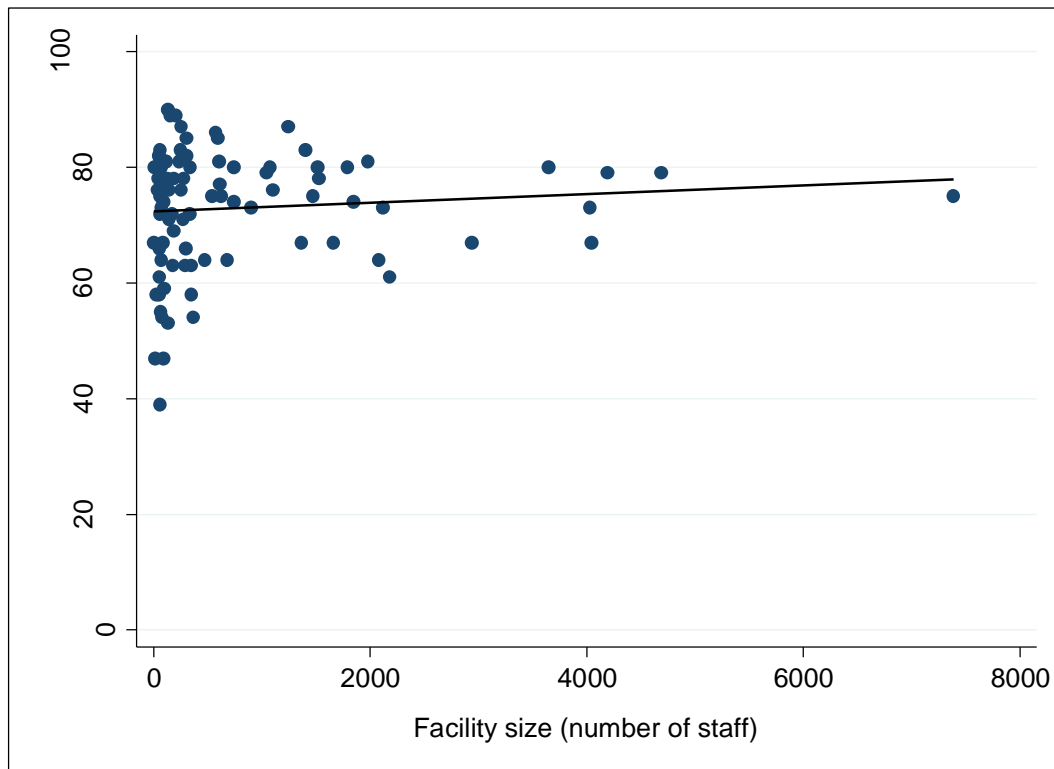


Figure 5: Influenza immunization coverage for staff of acute care facilities by facility within each health authority, 2015/16

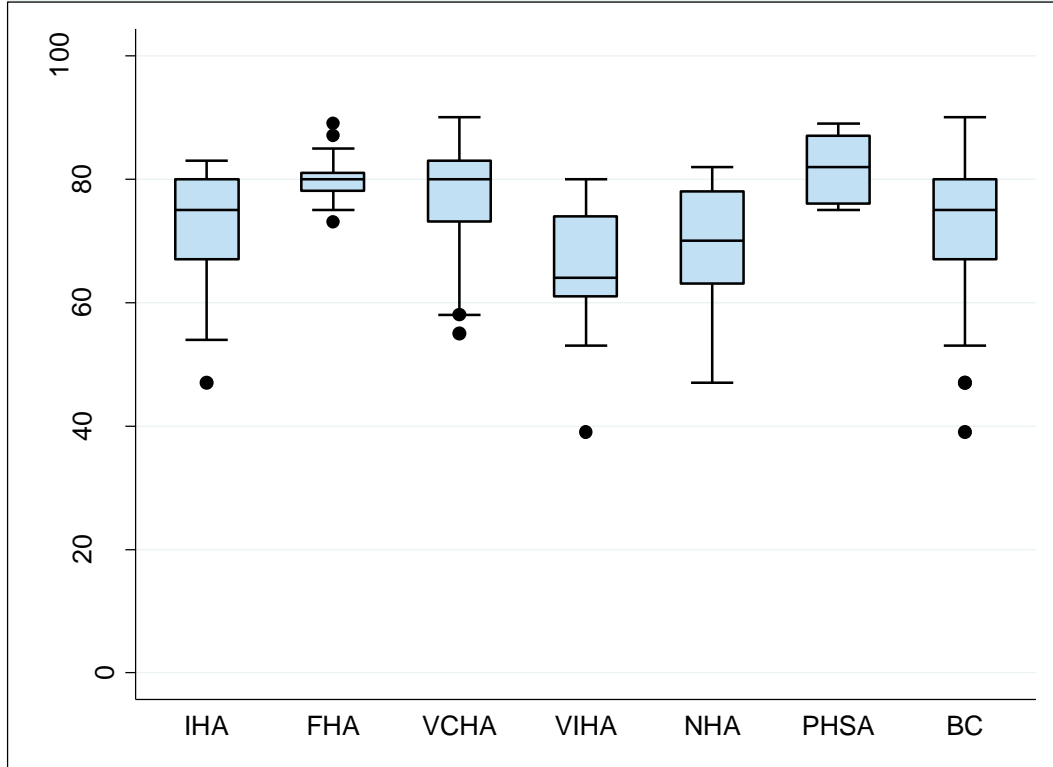


Figure 5 illustrates the range of influenza immunization coverage for acute care facilities within each health authority and for BC for the 2015/16 influenza season. The horizontal line below each box represents the lowest observed coverage value that is greater than or equal to the first quartile minus 1.5 times the interquartile range; the lower edge of each box represents the 25th percentile; the solid horizontal line within each box represents the median coverage value; the upper edge of each box represents the 75th percentile; the horizontal line above each box represents the highest observed coverage value that is less than or equal to the third quartile plus the interquartile range, and the dots represent facilities with unusually low or high coverage values which may be outliers.

Table 4: Immunization coverage for staff of acute care facilities by health authority, health service delivery area, 2007/08 to 2015/16

		Influenza season									
Health authority		2007/08	2008/09	2009/10	2009/10 H1N1	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
INTERIOR	immunized	5,083	5,192	4,610	5,317	4,490	4,558	6,540	7,419	8,152	7,982
	total staff	9,545	10,213	10,249	10,307	10,132	10,473	8,593	10,726	10,647	10,989
	% immunized	53	51	45	52	44	44	76	69	77	73
East Kootenay	immunized	597	656	547	620	560	540	684	739	780	758
	total staff	858	1,067	1,038	999	1,033	1,031	812	970	953	982
	% immunized	70	61	53	62	54	52	84	76	82	77
Kootenay Boundary	immunized	592	605	504	497	422	381	706	817	928	891
	total staff	1,280	1,350	1,382	1,382	1,324	1,306	995	1,230	1,197	1,220
	% immunized	46	45	36	36	32	29	71	66	78	73
Okanagan	immunized	2,140	2,074	1,972	2,376	1,793	2,156	3,323	3,901	3,886	3,829
	total staff	4,539	4,631	4,652	4,600	4,635	5,412	4,593	5,845	5,283	5,509
	% immunized	47	45	42	52	39	40	72	67	74	70
Thomps Carib Shuswap	immunized	1,754	1,857	1,587	1,824	1,715	1,481	1,827	1,962	2,558	2,504
	total staff	2,868	3,165	3,177	3,326	3,140	2,724	2,193	2,681	3,214	3,278
	% immunized	61	59	50	55	55	54	83	73	80	76
FRASER	immunized	7,748	5,031	2,586	7,371	5,173	5,446	11,013	15,247	15,399	15,547
	total staff	19,180	15,154	15,867	15,867	16,984	15,881	14,883	19,001	19,262	19,742
	% immunized	40	33	16	46	30	34	74	80	80	79
Fraser East	immunized	1,619	912	520	1,318	1,033	1,219	2,053	2,761	2,859	2,745
	total staff	3,841	2,759	2,860	2,860	3,119	3,115	2,781	3,510	3,635	3,655
	% immunized	42	33	18	46	33	39	74	79	79	75
Fraser North	immunized	3,051	2,221	1,158	3,301	2,289	2,110	4,390	5,893	5,790	6,007
	total staff	7,405	6,496	6,612	6,612	7,003	6,228	5,825	7,301	7,167	7,492
	% immunized	41	34	18	50	33	34	75	81	81	80
Fraser South	immunized	3,078	1,898	908	2,752	1,851	2,117	4,570	6,593	6,750	6,795
	total staff	7,934	5,899	6,395	6,395	6,862	6,538	6,277	8,190	8,460	8,595
	% immunized	39	32	14	43	27	32	73	81	80	79

Table 4 (continued): Immunization coverage for staff of acute care facilities by health authority, health service delivery area, 2007/08 to 2015/16

Health authority		Influenza season									
		2007/08	2008/09	2009/10	2009/10 H1N1	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
VANCOUVER COASTAL	immunized	6,236	7,152	6,841	7,639	5,644	5,541	5,553	12,060	12,274	12,702
	total staff	15,991	15,975	14,506	14,506	12,173	12,897	7,828	15,982	16,312	16,785
	% immunized	39	45	47	53	46	43	71	75	75	76
Richmond	immunized	496	648	634	716	516	520	792	1,055	1,086	1,119
	total staff	1,221	1,414	1,265	1,265	1,016	1,085	993	1,327	1,285	1,353
	% immunized	41	46	50	57	51	48	80	80	85	83
Vancouver	immunized	4,619	5,082	5,145	5,565	4,193	4,219	3,364	8,994	9,093	9,558
	total staff	12,037	11,540	10,600	10,600	9,026	9,805	4,996	12,003	12,400	12,767
	% immunized	38	44	49	53	46	43	67	75	73	75
N Shore/Coast Garibaldi	immunized	1,121	1,422	1,062	1,358	935	802	1,397	2,011	2,095	2,025
	total staff	2,733	3,021	2,641	2,641	2,131	2,007	1,839	2,652	2,627	2,665
	% immunized	41	47	40	51	44	40	76	76	80	76
VANCOUVER ISLAND	immunized	3,856	4,075	3,727	3,881	3,941	3,844	6,143	8,241	7,811	7,593
	total staff	9,113	9,981	10,175	9,183	10,021	9,166	8,345	11,360	11,119	11,592
	% immunized	42	41	37	42	39	42	74	73	70	66
South Van Island	immunized	2,110	2,130	1,987	2,389	2,035	1,944	3,975	4,722	4,458	4,312
	total staff	5,028	5,476	5,540	5,540	5,405	4,860	5,295	6,402	6,395	6,585
	% immunized	42	39	36	43	38	40	75	74	70	65
Central Van Island	immunized	1,078	1,173	982	1,163	1,184	1,139	1,673	2,070	2,060	1,970
	total staff	2,546	2,843	2,932	2,932	2,982	2,766	2,401	3,119	3,080	3,231
	% immunized	42	41	33	40	40	41	70	66	67	61
North Van Island	immunized	668	772	758	329	722	761	495	1,449	1,293	1,311
	total staff	1,539	1,662	1,703	711	1,634	1,540	649	1,839	1,644	1,776
	% immunized	43	46	45	46	44	49	76	79	79	74

Table 4 (continued): Immunization coverage for staff of acute care facilities by health authority, health service delivery area, 2006/07 to 2014/15

Health authority		Influenza season									
		2007/08	2008/09	2009/10	2009/10 H1N1	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
NORTHERN	immunized	2,018	1,972	1,558	1,737	1,832	1,623	2,612	2,913	3,012	2,849
	total staff	4,477	4,630	4,251	4,260	4,396	4,354	3,459	3,992	4,007	4,232
	% immunized	45	43	37	41	42	37	76	73	75	67
Northwest	immunized	525	486	372	478	498	548	673	732	774	736
	total staff	1,219	1,228	1,100	1,108	1,094	1,121	909	1,017	1,035	1,078
	% immunized	43	40	34	43	46	49	74	72	75	68
Northern Interior	immunized	1,110	1,105	875	966	997	785	1,473	1,661	1,695	1,618
	total staff	2,499	2,625	2,444	2,445	2,565	2,467	1,908	2,229	2,228	2,387
	% immunized	44	42	36	40	39	32	77	75	76	68
Northeast	immunized	383	381	311	293	337	290	466	520	543	495
	total staff	759	777	707	707	737	766	642	746	744	767
	% immunized	50	49	44	41	46	38	73	70	73	65
PHSA	immunized	3,353	2,785	2,753	3,093	2,015	2,363	4,038	4,998	4,932	5,215
	total staff	7,556	7,037	8,536	8,536	4,389	5,441	5,710	6,398	6,233	6,622
	% immunized	44	40	32	36	46	43	71	78	79	79
BC	immunized	28,294	26,207	22,075	29,038	23,095	23,375	35,899	50,878	51,580	51,888
	total staff	65,862	62,990	63,584	62,659	58,095	58,212	48,818	67,459	67,580	69,962
	% immunized	43	42	35	46	40	40	74	75	76	74

References

1. Immunize BC: a strategic framework for immunization in B.C. 2007. Victoria, BC: British Columbia Ministry of Health. Available at: <http://www.health.gov.bc.ca/library/publications/year/2007/immunizebc.pdf>
2. Public Health Agency of Canada. Final Report of Outcomes from the National Consensus Conference for Vaccine-Preventable Diseases in Canada. *Can Commun Dis Rep* 2007;33S3:1-56. Available at: <http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/08pdf/34s2-eng.pdf>

APPENDIX

Additional vaccination and Policy compliance information for staff of acute care facilities British Columbia, 2015/16

Since 2013/14, health authority staff covered by the Influenza Prevention Policy have been required to self-report their influenza vaccination via an online self-reporting website. For the first time, in the 2015/16 season, all staff were asked to self-report either being vaccinated, or declining vaccination with the commitment to wear a mask in patient care areas throughout the influenza season. Self-reporting was only possible for facilities that use the electronic Workplace Health Indicator Tracking and Evaluation (WHITE) database of occupational health records.

This appendix presents self-reported compliance with the policy for all acute care staff who have records in the WHITE database.

Objectives

- i) To quantify the percentages of staff in acute care facilities in British Columbia who self-reported vaccination or vaccine declinations as per the Influenza Prevention Policy
- ii) To quantify self-reported vaccination and vaccine declinations by job type
- iii) To quantify the source of influenza vaccination among acute care staff by immunizer type

Methods

The only source of data for analyses in this appendix is an anonymized individual healthcare worker level dataset from the electronic Workplace Health Indicator Tracking and Evaluation (WHITE) database of occupational health records.

Staff whose records were included in the analysis must have been employed by a health authority and have worked for a minimum of 8 hours during the influenza season, defined as the period December 1, 2015 to April 15, 2016. Staff who were not on a health authority's payroll (contracted staff, trainees, etc.) were not included in the WHITE database. Physicians and medical residents were not included in the WHITE database for most facilities.

Staff were defined as all persons who work or train on a full time, part time or casual basis in a facility or hospital who have direct or indirect contact with patients or residents, regardless of whether they are health care providers. This includes administrative and non-patient care staff (e.g., medical records, housekeeping and dietary) and excludes volunteers.

Some healthcare workers (HCWs) worked at multiple facilities or in multiple positions during the influenza season. For coverage statistics at the provincial, health authority or

health service delivery area level, each healthcare worker was included only in the facility and the job at which they worked the most hours.

Data on 'policy compliance status' (Table 2) originates from the self-reporting website at which staff have the option to record their vaccination or vaccine declination. The self-reporting website populates each HCW's WHITE database record. Data on HCWs' job descriptions (Table 3) is recorded in WHITE using job codes designated by Health Sector Compensation Information Systems (HSCIS). HSCIS codes are grouped into 162 subfamilies, which have been further collapsed into 11 job categories and 1 'other' category for the purposes of this report. Data on the immunizer type (Table 4) is reported by staff on the self-reporting website.

Results

Table 1: Acute care facilities included in WHITE by health authority, 2015/16

Health authority	Acute care facilities		
	Reported	Total	% reported in WHITE
Interior	27	27	100
Fraser	13	13	100
Vancouver Coastal	14	14	100
Vancouver Island	12	13	92
Northern	18	18	100
Provincial Health Services	6	6	100
British Columbia	90	91	99

Table 2: Policy compliance status for staff of the 90 acute care facilities using WHITE by health authority and health service delivery area, 2015/16

Health authority	Acute care facility staff						Total
	Vaccinated	%	Declined	%	Not reported	%	
Interior	7,982	73	854	8	2,153	20	10,989
East Kootenay	758	77	78	8	146	15	982
Kootenay Boundary	891	73	85	7	244	20	1,220
Okanagan	3829	70	473	9	1,207	22	5,509
Thompson/Cariboo/Shuswap	2504	76	218	7	556	17	3,278
Fraser	15,547	79	1,720	9	2,475	13	19,742
Fraser East	2745	75	379	10	531	15	3,655
Fraser North	6007	80	560	7	925	12	7,492
Fraser South	6795	79	781	9	1,019	12	8,595
Vancouver Coastal	12,702	76	1,294	8	2,789	17	16,785
Richmond	1119	83	116	9	118	9	1,353
Vancouver	9558	75	930	7	2,279	18	12,767
N Shore/Coast Garibaldi	2025	76	248	9	392	15	2,665
Vancouver Island	6,936	65	365	3	3,391	32	10,692
South Vancouver Island	4312	65	183	3	2,090	32	6,585
Central Vancouver Island	1970	61	149	5	1,112	34	3,231
North Vancouver Island	654	75	33	4	189	22	876
Northern	2,849	67	379	9	1,004	24	4,232
Northwest	736	68	94	9	248	23	1,078
Northern Interior	1618	68	196	8	573	24	2,387
Northeast	495	65	89	12	183	24	767
PHSA	5,215	79	489	7	918	14	6,622
BC	51,231	74	5,101	7	12,730	18	69,062

Note: For the purposes of analysis and reporting, we assume that HCWs who did not report (18% across BC) are unvaccinated. If the distribution of vaccination status is similar among those who reported compared to those who did not report, then we are likely underestimating the immunization coverage.

Table 3: Policy compliance status for staff of the 90 acute care facilities using WHITE by job type, 2015/16

	Acute care facility staff						Total
	Vaccinated	%	Declined	%	Not reported	%	
Nurse	21,040	74	1,842	7	5,453	19	28,335
Admin and Support	9,354	72	1,255	10	2,296	18	12,905
Allied health [‡]	4,610	85	315	6	529	10	5,454
Health care assistant	4,483	68	487	7	1,623	25	6,593
Laboratory worker	2,791	79	428	12	301	9	3,520
Non-lab technologists	2,395	77	327	10	407	13	3,129
Management or Leadership	2,290	83	134	5	319	12	2,743
Pharmacy staff	1,731	86	103	5	173	9	2,007
Business	1,258	66	180	9	461	24	1,899
Medical Staff [§]	847	55	4	0	687	45	1,538
Other	165	83	11	6	22	11	198
Public health	9	90	0	0	1	10	10
Total	50,973	†75	5086	7	12,272	18	*68,331

* Missing 731/69,062 (1%) acute care staff whose job descriptions were not available in WHITE.

† This coverage percentage differs from the overall 2015/16 coverage for acute care staff (74%) due to missing data in the job description field in WHITE and missing data from one acute care facility that does not have HCW immunization data in the WHITE database.

‡ Allied health refers to professions in health care other than medicine and nursing (e.g. dietitians, occupational/physical/respiratory therapists, social workers etc.).

§ Please interpret medical staff reporting results with caution. A minority of medical staff are included in WHITE. In 2015/16 the majority of medical staff (e.g. doctors, dentists and midwives) reported their immunization status to Medical Staff Offices at each health authority.

Table 4: Immunizer type for vaccinated staff of the 90 acute care facilities using WHITE by health authority, 2015/16

Health Authority		IHA	FHA	VCHA	VIHA	NHA	PHSA	BC
Flu Clinic Nurse	No.	4,707	6,838	3,675	4,002	1,380	3,505	24,107
	%	59	44	29	58	48	67	47
Peer Nurse Immunizer	No.	1,601	3,654	2,746	1,733	748	273	10,755
	%	20	24	22	25	26	5	21
Pharmacist	No.	1,016	3,185	4,101	612	312	558	9,784
	%	13	20	32	9	11	11	19
Family Physician	No.	127	813	762	201	43	260	2,206
	%	2	5	6	3	2	5	4
Public Health	No.	353	374	417	191	291	119	1,745
	%	4	2	3	3	10	2	3
Other	No.	102	342	608	143	52	76	1,323
	%	1	2	5	2	2	1	3
Unknown	No.	76	341	393	54	23	424	1,311
	%	0	1	1	0	0	1	3
Total	No.	7,982	15,547	12,702	6,936	2,849	5,215	51,231

Summary

2015/16 is the first season in which WHITE data was analyzed to determine use of the self-reporting system, vaccination rates by job type, and immunizer type. The high non-reporting rates seen in regions of lowest coverage call into question the validity of vaccination coverage reports, since for the purpose of analysis, non-reported status has been considered unvaccinated. Efforts should be made to improve self-reporting rates, including for individuals who have chosen not to be immunized.

Pharmacy, allied health, and management or leadership employees reported the highest immunization coverage by job type (in addition to 'other' staff and public health staff for which numbers were relatively small). Lower coverage among business staff suggest that direct patient care was influential in the decision to be vaccinated.

Immunizer type varied appreciably at the regional level, which may be indicative of the availability of immunizing personnel in the community (e.g. family physicians or pharmacist immunizers) as well as management decisions in how to deliver the influenza vaccine program to HCWs at the workplace.