



**BC Centre for Disease Control**  
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# Immunization Uptake in Grade 9 Students

## 2002-2017

## Grade 9 Students with Up-to-date Immunizations: Notes

### DATA SOURCES

Summary reports by Health Service Delivery Areas and/or Health Authorities

For Vancouver Island Health Authority (VIHA) in 2014 to 2017: Panorama immunization registry and enrollment estimates from the BC Ministry of Education (MoE).

For the Rutland branch in the Okanagan Health Service Delivery Area of the Interior Health Authority (IHA) in 2017: Panorama immunization registry data based on the grade cohort defined as students attending Grade 6 at a school within the Rutland branch's service area.

### YEARS

2002-2017 Data last updated August 31, 2017.  
Coverage reported on any given year affects coverage as of June 30 of that year (eg. 2017 coverage is for students completing Grade 9 by June 30, 2017).

### NOTES

1. The numerator used to calculate percent uptake was the number of students enrolled in Grade 9 as of June 30 of the specified year who were up-to-date for age for the vaccine in question (per up-to-date for age definitions below).

#### 2. Up-to-date for age definitions

**Tetanus/ diphtheria** The proportion of students enrolled in Grade 9 as of June 30 who completed a primary series of tetanus/diphtheria-containing vaccine before ten years of age and received a tetanus/diphtheria booster dose on or after the tenth birthday and by June 30, or completed a primary series of tetanus/diphtheria-containing vaccine on or after the tenth birthday and by June 30. (See Note #3)

**Pertussis** The proportion of students enrolled in Grade 9 as of June 30 who completed a primary series of pertussis-containing vaccine before ten years of age and received an acellular pertussis booster dose on or after the tenth birthday and by June 30, or completed a primary series of acellular pertussis-containing vaccine on or after the tenth birthday and by June 30. (See Note #3)

**Meningococcal Quadrivalent Conjugate** The proportion of students enrolled in Grade 9 as of June 30 who received at least one dose of meningococcal quadrivalent conjugate vaccine in Grade 7 or later.

**Human Papillomavirus** The proportion of female students enrolled in Grade 9 as of June 30 who were up-to-date for age for Human Papillomavirus vaccine (HPV) by June 30.

#### 3. Completion of the primary series

Some regions have been unable to routinely ascertain completion of the primary series for tetanus/diphtheria and pertussis. In these regions, the numbers reported represent the proportions of students enrolled in Grade 9 as of June 30 who received any tetanus/diphtheria- or pertussis- containing vaccine within the past five years and by June 30, regardless of whether the primary series was complete. The regions unable to completely ascertain primary series completion in tetanus/diphtheria and pertussis were:

<b>Years</b>	<b>Regions</b>
2002-2011	IHA, FHA, VIHA, NHA and NSCG
2012	IHA, FHA, VIHA, and the rural coastal part of NSCG
2013	IHA, FHA, VIHA
2014	IHA, FHA, VIHA
2015	FHA, VIHA
2016-2017	FHA

4. Unless otherwise indicated, the denominator used to calculate percent uptake was the number of students enrolled in Grade 9 as of June 30 of the specified year, according to class lists. For HPV uptake, only the number of female students enrolled in Grade 9 as of June 30 was used.

**Exceptions:**

- a. In 2002-2011, the Vancouver and Richmond Health Service Delivery Areas used the grade cohort as identified in PARIS as the denominator for their Grade 9 vaccine coverage.
  - b. In 2012, the Vancouver and Richmond Health Service Delivery Areas and the Coastal Urban (North Vancouver and West Vancouver) regions used the grade cohort as identified in PARIS as the denominator for their Grade 9 vaccine coverage. Coastal Rural and Bella Coola used class lists.
  - c. In 2013-2017, all Health Service Delivery Areas in Vancouver Coastal Health (Vancouver, Richmond and North Shore/Coast Garibaldi) used the grade cohort as identified in PARIS as the denominator for Grade 9 vaccine coverage.
  - d. In 2014-2017, all Health Service Delivery Areas in VIHA used enrollment estimates from the BC MoE.
  - e. In 2017, the Rutland branch in the Okanagan HSDA used the grade cohort as defined in Panorama.
5. Due to the difference in methods used for calculate coverage in the Rutland branch in the Okanagan HSDA in 2017, the Okanagan and IHA results, and corresponding provincial data for 2017 are not directly comparable to previous years.
  6. Due to a difference in methods used for enumerating the numerator and denominator, the VIHA results, and corresponding provincial data for 2014 to 2017 are not directly comparable to previous years. Related to implementation of the new public health information system (called Panorama) in July 2013, VIHA was unable to reconcile all records of students enrolled in schools; therefore coverage was calculated using numerator data from Panorama on active records for those born in 1999 (for 2014), 2000 (for 2015), 2001 (for 2016), and 2002 (for 2017), without the ability to confirm school/Grade 9 enrolment; denominators were aggregate data from the MoE's data on enrollment in Grade 9 to attempt to account for those who have moved out of VIHA. This change has led to inaccurate ascertainment of coverage rates, which may be artifactually higher or lower than true coverage rates depending on the antigen.  
  
School district boundaries do not directly line up with health region boundaries. MoE enrollment data are based on a process that requires the Health Authority to identify schools corresponding to each Health Service Delivery Area. The MoE enrollment data exclude youth custody and continuing education schools.  
  
Ideally, numerators and denominators should be taken from the same data source. Using different data sources for numerators and denominators can result in inaccurate results, including coverage calculations exceeding 100%.  
  
When the 2011-2013 coverage estimates for the VIHA Health Service Delivery Areas (HSDAs) that were calculated using class list enrolment reconciled against immunization registry for the numerator data and class lists for denominator data were compared to estimates obtained using the methods used in 2014-2017, large differences were identified. As an example, pertussis coverage estimates were 11-21% higher by HSDA and year using the routine methods.
  7. In 2017, the first year of the In the first year of the meningococcal quadrivalent conjugate vaccine program for Grade 9 students, some parents are believed to have refused the vaccine for their children, thinking it was the same as the meningococcal C conjugate vaccine their children received in Grade 6.
  8. In 2015, one school in the Kootenay Boundary Health Service Delivery Area did not provide public health with Grade 9 class lists. As the children attending this schools could not be identified, they could not be included in the immunization coverage analysis. Based on information posted on the BC Ministry of Education's website, this school accounts for approximately 0.9% of Grade 9 students in Kootenay Boundary.
  9. Due to HPV program changes in the 2014/15 school year, HPV coverage statistics could not be obtained for three schools in the Fraser East, eleven schools in the Fraser South, and three schools in the Okanagan Health Service Delivery Areas. These schools account for approximately 13%, 27%, and 36% of Grade 9 girls in Fraser East, Fraser South, and Okanagan, respectively.

10. While all grade 9 students attending BC schools are intended to be included in this report, some students may be under-represented. This includes home-schooled students and international students who are not identified to public health. It also includes students who attend schools that do not receive services from regional public health, including some schools serviced by First Nations Health Services Organizations, distance/distributed learning schools and schools refusing any contact with public health due to religious or philosophical reasons.
11. In 2002 and 2003 data were submitted by the Health Authorities and compiled by the Prevention and Wellness Planning Division, BC Ministry of Health Services. For this report, data from 2002 and 2003 were obtained from the Health Data Warehouse, BC Ministry of Health Services. From 2004 onward, data were submitted by the Health Service Delivery Areas and/or Health Authorities and compiled by the BC Centre for Disease Control.
12. Data may not be comparable by Health Service Delivery Area from year to year due to ongoing changes in data collection methods and changes in geographic health area boundaries. However, assuming consistency in reporting practices, overall trends in immunization coverage can be assessed by examining these data.

**13. 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

For an explanation of BC Health Authorities, please visit:

<http://www.health.gov.bc.ca/socsec/index.html>

**Grade 9 Students Immunized: Tetanus / Diphtheria**

HEALTH AUTHORITY / HEALTH SERVICE DELIVERY AREA	YEAR															
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*	2015*	2016*	2017*
<b>INTERIOR</b>	<b>90.0%</b>	<b>89.8%</b>	<b>87.7%</b>	<b>87.9%</b>	<b>89.3%</b>	<b>88.5%</b>	<b>86.8%</b>	<b>89.1%</b>	<b>86.1%</b>	<b>86.3%</b>	<b>83.8%</b>	<b>83.4%</b>	<b>82.2%</b>	<b>81.0%</b>	<b>83.0%</b>	<b>82.4%</b>
East Kootenay	88.4%	94.3%	91.0%	92.0%	91.9%	95.8%	91.4%	92.5%	91.2%	89.4%	91.0%	87.7%	82.8%	85.0%	89.1%	87.7%
Kootenay Boundary	86.8%	84.0%	86.1%	86.2%	88.5%	85.4%	84.0%	83.9%	83.3%	83.0%	81.1%	82.0%	77.9%	74.3%	79.2%	75.4%
Okanagan	88.3%	88.0%	86.3%	83.9%	85.9%	86.1%	85.0%	87.2%	83.0%	83.8%	78.5%	78.8%	78.8%	78.0%	78.5%	81.2%
Thompson Cariboo Shuswap	94.0%	92.7%	88.9%	92.6%	93.4%	90.9%	88.8%	92.4%	90.0%	90.0%	90.5%	89.4%	88.2%	86.9%	89.6%	84.7%
<b>FRASER</b>	<b>85.7%</b>	<b>87.0%</b>	<b>84.5%</b>	<b>85.9%</b>	<b>85.7%</b>	<b>89.4%</b>	<b>87.7%</b>	<b>88.9%</b>	<b>85.4%</b>	<b>88.3%</b>	<b>85.4%</b>	<b>84.6%</b>	<b>84.3%</b>	<b>79.0%</b>	<b>82.1%</b>	<b>80.8%</b>
Fraser East	89.2%	86.6%	88.6%	87.5%	86.3%	88.0%	83.3%	90.1%	82.7%	87.5%	80.3%	83.7%	84.4%	75.9%	79.4%	78.7%
Fraser North	85.5%	86.1%	81.8%	85.6%	85.5%	90.0%	90.1%	88.6%	84.3%	84.6%	85.2%	81.1%	83.4%	75.0%	79.9%	78.4%
Fraser South	84.3%	87.9%	85.0%	85.5%	85.5%	89.5%	87.7%	88.5%	87.3%	91.3%	87.6%	87.5%	85.0%	83.0%	84.7%	83.2%
<b>VANCOUVER COASTAL</b>	<b>80.5%</b>	<b>77.2%</b>	<b>79.4%</b>	<b>80.5%</b>	<b>83.5%</b>	<b>88.8%</b>	<b>88.8%</b>	<b>90.8%</b>	<b>90.3%</b>	<b>85.4%</b>	<b>85.2%</b>	<b>82.4%</b>	<b>84.5%</b>	<b>83.9%</b>	<b>83.4%</b>	<b>84.2%</b>
Richmond	80.3%	80.2%	81.2%	81.6%	81.6%	91.9%	90.8%	94.8%	94.2%	93.6%	93.5%	93.3%	94.8%	93.4%	90.1%	89.8%
Vancouver	75.8%	71.9%	74.1%	73.5%	80.5%	88.3%	88.5%	90.8%	89.1%	80.3%	83.8%	85.5%	86.5%	85.5%	84.5%	84.6%
North Shore / Coast Garibaldi	88.0%	84.6%	86.8%	91.4%	89.2%	87.8%	88.2%	88.5%	90.1%	87.7%	82.3%	69.8%	75.1%	75.6%	77.5%	80.4%
<b>VANCOUVER ISLAND *</b>	<b>90.2%</b>	<b>89.3%</b>	<b>86.6%</b>	<b>87.9%</b>	<b>86.8%</b>	<b>86.5%</b>	<b>87.6%</b>	<b>88.5%</b>	<b>84.0%</b>	<b>87.0%</b>	<b>83.5%</b>	<b>80.6%</b>	<b>73.4%</b>	<b>73.6%</b>	<b>75.8%</b>	<b>71.8%</b>
South Vancouver Island	92.0%	92.0%	90.0%	87.8%	87.0%	86.0%	90.6%	87.1%	83.1%	88.2%	85.3%	81.7%	71.1%	72.6%	78.7%	72.7%
Central Vancouver Island	87.9%	87.1%	81.7%	88.2%	89.0%	86.7%	85.0%	91.4%	86.8%	84.6%	81.9%	80.2%	75.8%	74.9%	73.0%	69.5%
North Vancouver Island	88.4%	87.5%	88.3%	87.3%	81.5%	87.6%	85.8%	85.9%	80.2%	88.8%	82.0%	78.3%	74.3%	73.6%	74.0%	74.2%
<b>NORTHERN</b>	<b>91.4%</b>	<b>90.7%</b>	<b>90.7%</b>	<b>91.5%</b>	<b>87.6%</b>	<b>90.1%</b>	<b>90.2%</b>	<b>91.0%</b>	<b>90.3%</b>	<b>90.7%</b>	<b>90.1%</b>	<b>87.8%</b>	<b>85.6%</b>	<b>83.6%</b>	<b>87.5%</b>	<b>86.3%</b>
Northwest	91.8%	92.5%	88.2%	91.8%	87.2%	88.8%	90.2%	91.6%	87.5%	91.5%	91.5%	86.6%	86.5%	91.5%	91.0%	87.0%
Northern Interior	91.0%	88.8%	93.2%	91.2%	88.0%	89.4%	91.9%	93.4%	92.6%	90.5%	89.4%	92.0%	86.6%	83.9%	87.8%	88.7%
Northeast	91.9%	92.0%	88.6%	91.9%	87.3%	93.0%	86.3%	85.0%	88.9%	90.4%	89.9%	79.8%	82.2%	74.3%	83.2%	80.7%
<b>BRITISH COLUMBIA *</b>	<b>86.6%</b>	<b>86.0%</b>	<b>84.8%</b>	<b>85.9%</b>	<b>86.1%</b>	<b>88.7%</b>	<b>88.0%</b>	<b>89.4%</b>	<b>86.7%</b>	<b>87.2%</b>	<b>85.2%</b>	<b>83.6%</b>	<b>82.3%</b>	<b>79.9%</b>	<b>81.9%</b>	<b>80.8%</b>

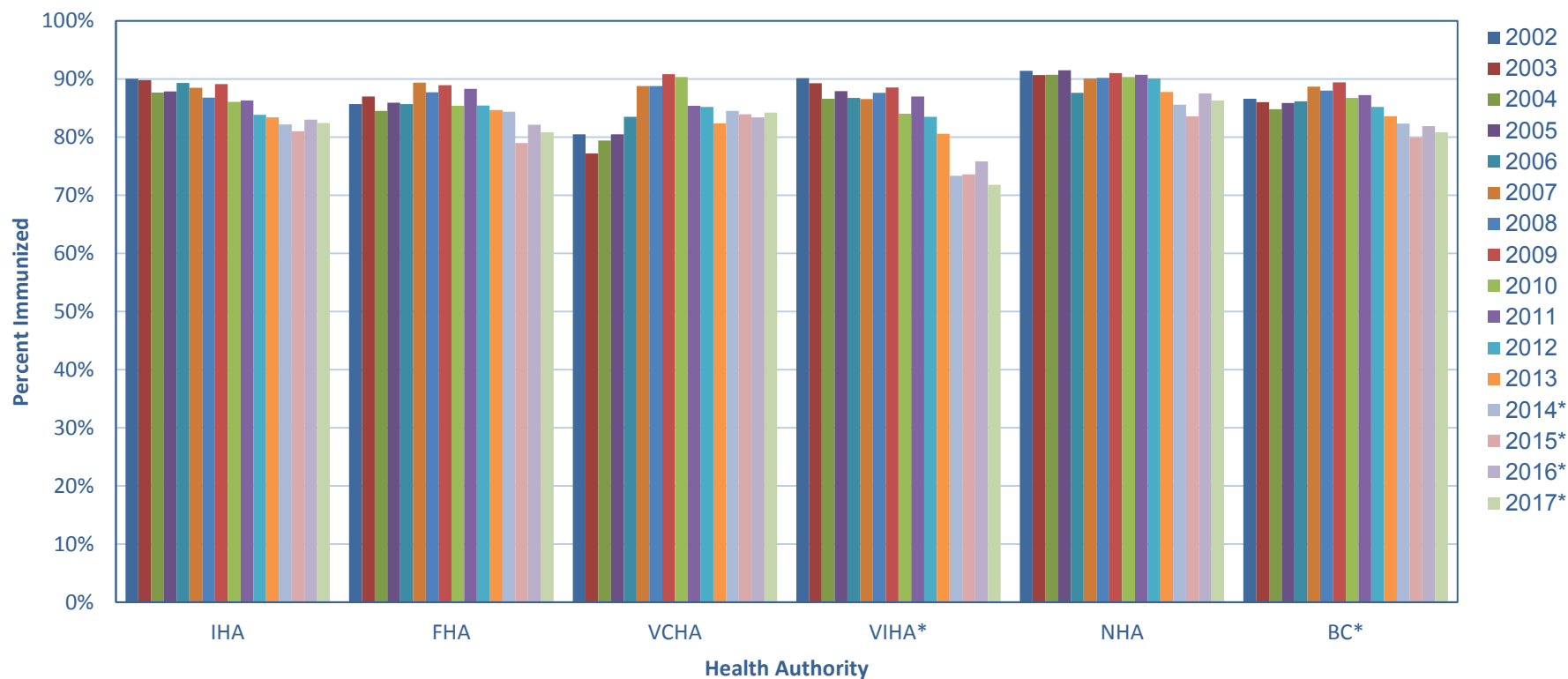
See Data Sources and Notes.

\* The 2014 to 2017 VIHA and BC estimates are not directly comparable to previous years. See Note #6, page 2.

Tetanus/diphtheria coverage in Grade 9 students decreased since peaking at 89.4% in 2009. In 2017, tetanus/diphtheria coverage increased in VCHA (0.8%) and decreased in VIHA (4.0%), FHA (1.3%), NHA (1.2%) and IHA (0.6%). The recent drops in coverage in some of the HSDAs may be attributed to changing methods to ascertain coverage, as more stringent criteria were applied to only count children who had received a completed primary series.

Rates and trends varied by Health Service Delivery Area. In 2017, tetanus/diphtheria coverage rates in the Health Service Delivery Areas ranged from 69.5% to 89.8%.

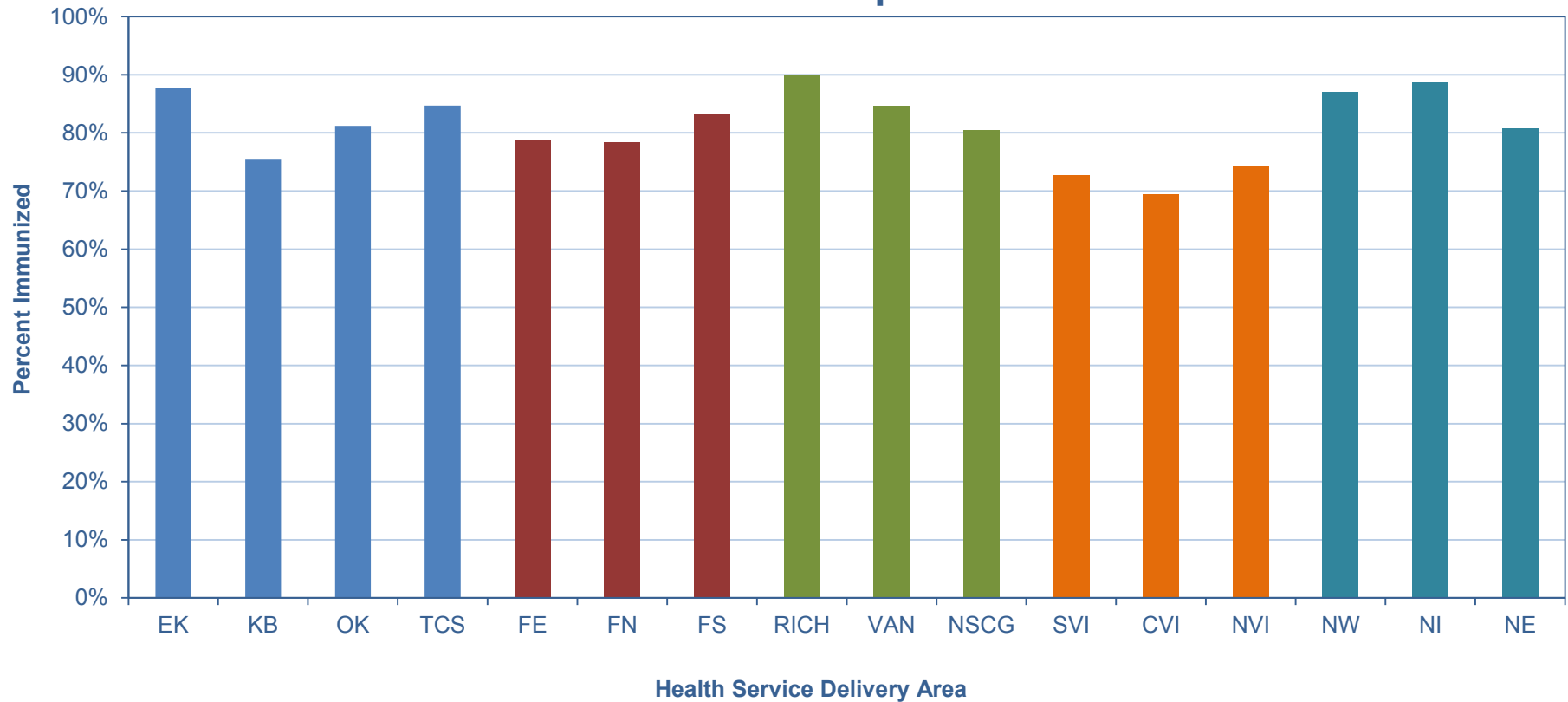
## Grade 9 Students Immunized, 2002-2017\* Tetanus and Diphtheria Vaccine



See Data Sources and Notes.

\* The 2014 to 2017 VIHA and BC estimates are not directly comparable to previous years. See Note #6, page 2.

### Grade 9 Students Immunized, 2017\* Tetanus and Diphtheria Vaccine



See Data Sources and Notes.

\* The 2017 VIHA estimates are not directly comparable to years prior to 2014. See Note #6, page 2.

**Grade 9 Students Immunized: Pertussis**

HEALTH AUTHORITY / HEALTH SERVICE DELIVERY AREA	YEAR													
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*	2015*	2016*	2017*
<b>INTERIOR</b>	<b>82.8%</b>	<b>85.7%</b>	<b>86.7%</b>	<b>84.6%</b>	<b>84.7%</b>	<b>87.4%</b>	<b>83.4%</b>	<b>85.6%</b>	<b>82.8%</b>	<b>81.4%</b>	<b>80.5%</b>	<b>80.3%</b>	<b>79.8%</b>	<b>80.5%</b>
East Kootenay	76.7%	89.3%	90.1%	93.9%	88.8%	90.9%	90.0%	88.5%	89.8%	84.3%	81.5%	84.6%	85.0%	85.9%
Kootenay Boundary	80.5%	83.1%	85.1%	82.3%	79.8%	81.3%	67.1%	80.8%	78.6%	79.6%	73.7%	72.2%	73.8%	72.1%
Okanagan	84.1%	82.3%	84.3%	81.1%	83.3%	85.8%	82.2%	83.4%	78.0%	77.1%	77.8%	77.7%	76.1%	79.4%
Thompson Cariboo Shuswap	84.0%	90.3%	89.2%	87.8%	87.0%	90.7%	88.4%	89.4%	89.3%	87.6%	86.4%	86.1%	86.2%	83.2%
<b>FRASER</b>	<b>82.7%</b>	<b>84.5%</b>	<b>84.3%</b>	<b>86.7%</b>	<b>85.5%</b>	<b>86.2%</b>	<b>84.2%</b>	<b>85.1%</b>	<b>83.5%</b>	<b>81.6%</b>	<b>79.1%</b>	<b>78.4%</b>	<b>80.1%</b>	<b>79.4%</b>
Fraser East	87.2%	86.0%	84.6%	85.9%	81.8%	83.6%	82.3%	81.4%	78.5%	74.0%	73.8%	73.2%	73.8%	75.2%
Fraser North	N/A	84.4%	84.3%	86.0%	86.9%	86.9%	82.5%	84.5%	82.9%	80.2%	77.5%	74.8%	78.6%	77.6%
Fraser South	80.9%	84.1%	84.2%	87.5%	85.9%	86.8%	86.1%	86.9%	85.8%	85.5%	82.1%	82.8%	83.5%	82.2%
<b>VANCOUVER COASTAL</b>	<b>61.2%</b>	<b>70.4%</b>	<b>81.5%</b>	<b>87.1%</b>	<b>87.8%</b>	<b>90.1%</b>	<b>89.5%</b>	<b>84.3%</b>	<b>84.5%</b>	<b>81.8%</b>	<b>84.0%</b>	<b>83.3%</b>	<b>82.9%</b>	<b>83.9%</b>
Richmond	28.9%	65.9%	79.5%	91.0%	90.5%	94.7%	93.9%	93.3%	93.3%	93.0%	94.7%	93.2%	90.0%	89.5%
Vancouver	59.3%	60.0%	78.4%	87.2%	87.8%	90.3%	88.5%	79.8%	83.3%	85.1%	86.2%	85.1%	84.1%	84.3%
North Shore / Coast Garibaldi	83.1%	89.9%	87.4%	84.9%	86.4%	86.9%	88.5%	86.5%	81.0%	68.8%	74.1%	74.5%	76.7%	79.9%
<b>VANCOUVER ISLAND *</b>	<b>83.2%</b>	<b>85.8%</b>	<b>85.2%</b>	<b>84.6%</b>	<b>84.7%</b>	<b>87.4%</b>	<b>83.1%</b>	<b>85.9%</b>	<b>82.4%</b>	<b>79.2%</b>	<b>72.9%</b>	<b>73.1%</b>	<b>75.4%</b>	<b>71.5%</b>
South Vancouver Island	84.0%	85.6%	85.5%	84.4%	87.1%	86.4%	82.3%	87.2%	84.1%	79.3%	71.0%	72.3%	78.4%	72.4%
Central Vancouver Island	80.2%	85.9%	87.2%	85.0%	82.5%	90.0%	86.3%	84.1%	81.1%	80.0%	75.2%	74.2%	72.5%	69.2%
North Vancouver Island	87.6%	85.8%	80.6%	84.0%	83.5%	84.7%	78.4%	86.6%	80.4%	77.1%	73.0%	73.1%	73.0%	73.9%
<b>NORTHERN</b>	<b>86.8%</b>	<b>89.3%</b>	<b>85.6%</b>	<b>85.2%</b>	<b>87.8%</b>	<b>89.5%</b>	<b>88.6%</b>	<b>89.7%</b>	<b>88.9%</b>	<b>86.4%</b>	<b>84.7%</b>	<b>82.5%</b>	<b>82.3%</b>	<b>83.6%</b>
Northwest	83.9%	89.1%	84.7%	86.8%	87.7%	90.0%	85.4%	90.8%	90.5%	85.8%	84.3%	89.1%	81.6%	82.0%
Northern Interior	90.6%	89.1%	86.4%	83.9%	89.0%	91.9%	90.6%	89.5%	87.7%	89.8%	86.1%	83.2%	85.3%	86.0%
Northeast	82.2%	90.1%	85.0%	86.1%	85.6%	83.5%	88.2%	89.0%	89.9%	79.8%	81.9%	74.1%	77.1%	80.4%
<b>BRITISH COLUMBIA *</b>	<b>77.9%</b>	<b>82.3%</b>	<b>84.3%</b>	<b>86.0%</b>	<b>85.9%</b>	<b>87.7%</b>	<b>85.4%</b>	<b>85.5%</b>	<b>83.8%</b>	<b>81.6%</b>	<b>79.8%</b>	<b>79.3%</b>	<b>80.1%</b>	<b>79.6%</b>

See Data Sources and Notes.

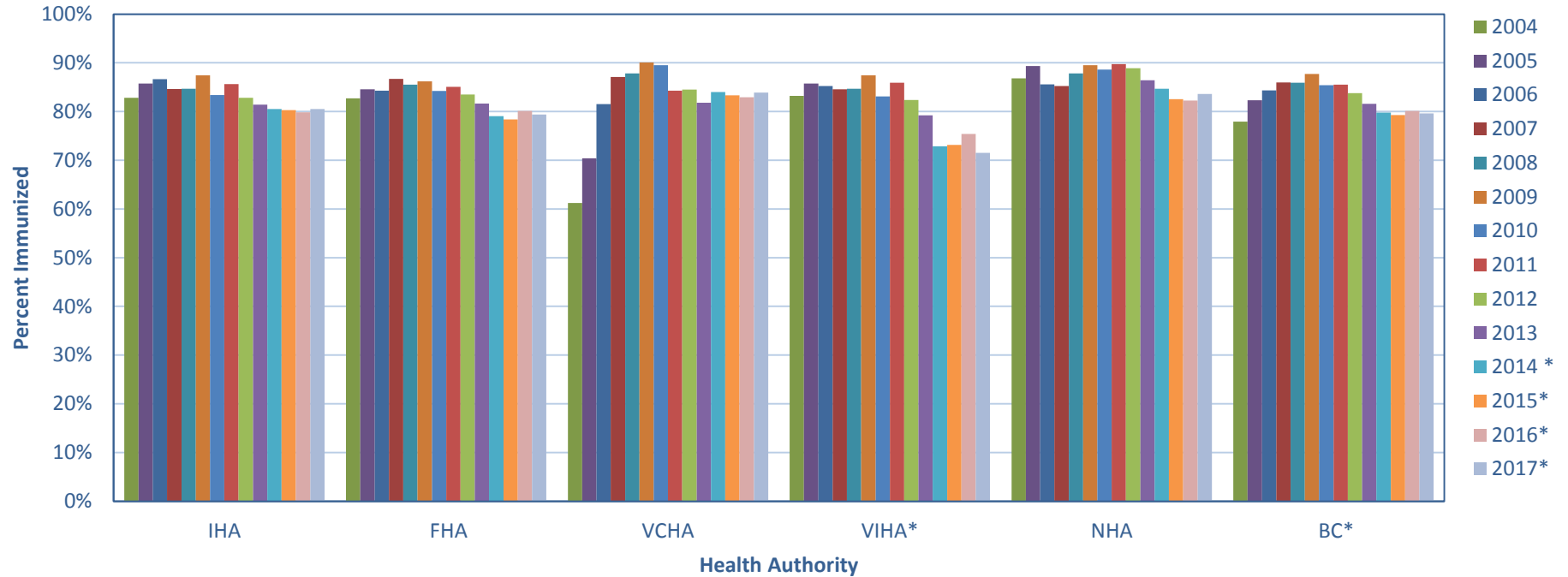
\* The 2014 to 2017 VIHA and BC estimates are not directly comparable to previous years. See Note #6, page 2.

Pertussis coverage in Grade 9 students has remained steady over the past four years after declining since a peak in 2009 to 2012. In 2017, pertussis coverage increased in NHA (1.3%), VCHA (1.0%) and IHA (0.7%) and decreased in VIHA (3.9%) and FHA (0.7%). The recent drops in coverage in some of the HSDAs may be attributed to changing methods to ascertain coverage, as more stringent criteria were applied to only count children who had received a completed primary series.

Rates and trends varied by Health Service Delivery Area. In 2017, pertussis coverage rates in the Health Service Delivery Areas ranged from 69.2% to 89.5%.



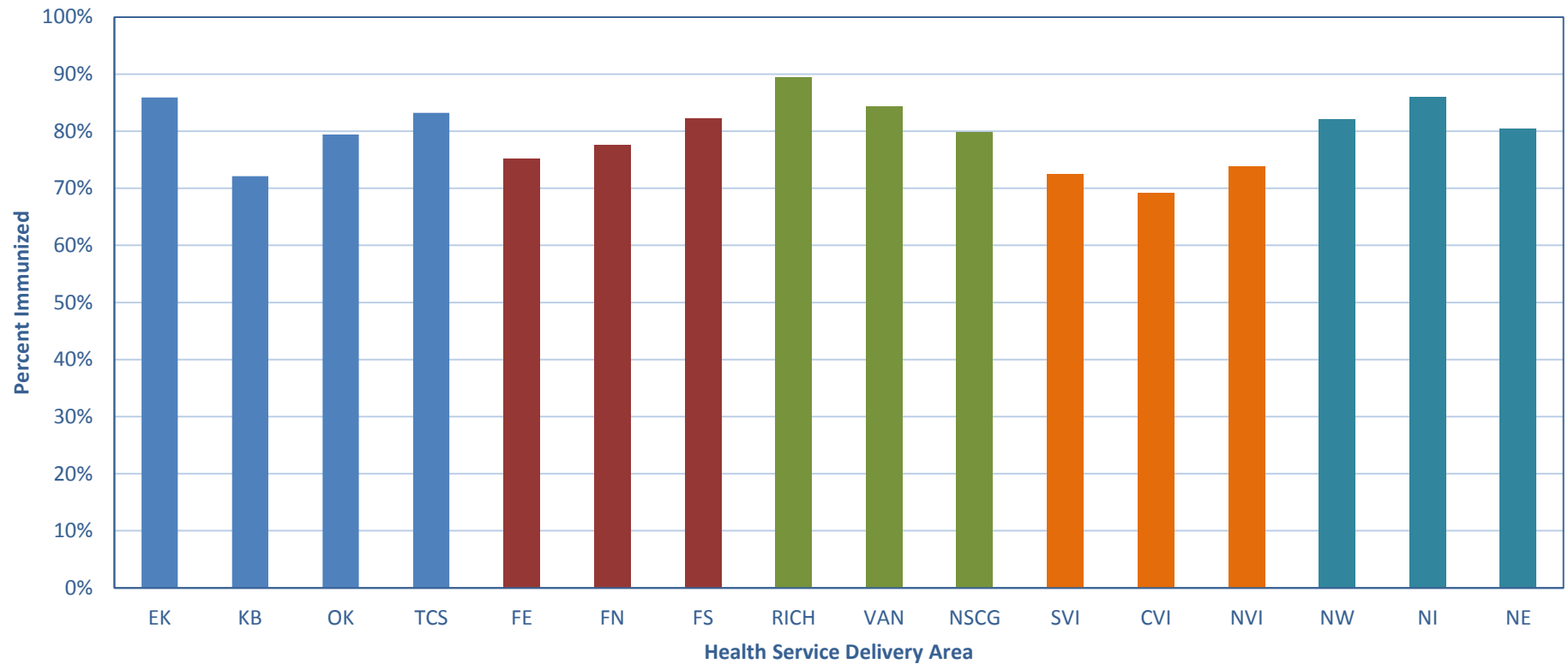
## Grade 9 Students Immunized, 2004-2017\* Pertussis Vaccine



See Data Sources and Notes.

\* The 2014 to 2017 VIHA and BC estimates are not directly comparable to previous years. See Note #6, page 2.

## Grade 9 Students Immunized, 2017\* Pertussis Vaccine



See Data Sources and Notes.

\* The 2017 VIHA estimates are not directly comparable to years prior to 2014. See Note #6, page 2.

**Grade 9 Students Immunized: Meningococcal Quadrivalent Conjugate Vaccine**

HEALTH AUTHORITY / HEALTH SERVICE DELIVERY AREA	YEAR
	2017
<b>INTERIOR</b>	<b>80.0%</b>
East Kootenay	86.0%
Kootenay Boundary	70.4%
Okanagan	79.0%
Thompson Cariboo Shuswap	82.7%
<b>FRASER</b>	<b>76.2%</b>
Fraser East	74.0%
Fraser North	77.8%
Fraser South	75.9%
<b>VANCOUVER COASTAL</b>	<b>87.8%</b>
Richmond	91.3%
Vancouver	87.9%
North Shore / Coast Garibaldi	85.3%
<b>VANCOUVER ISLAND *</b>	<b>73.7%</b>
South Vancouver Island	75.5%
Central Vancouver Island	71.5%
North Vancouver Island	73.7%
<b>NORTHERN</b>	<b>83.9%</b>
Northwest	86.4%
Northern Interior	84.9%
Northeast	79.2%
<b>BRITISH COLUMBIA *</b>	<b>79.4%</b>

See Data Sources and Notes.

In the first year of the meningococcal quadrivalent conjugate vaccine program for grade 9 students, 79.6% of eligible students were immunized.

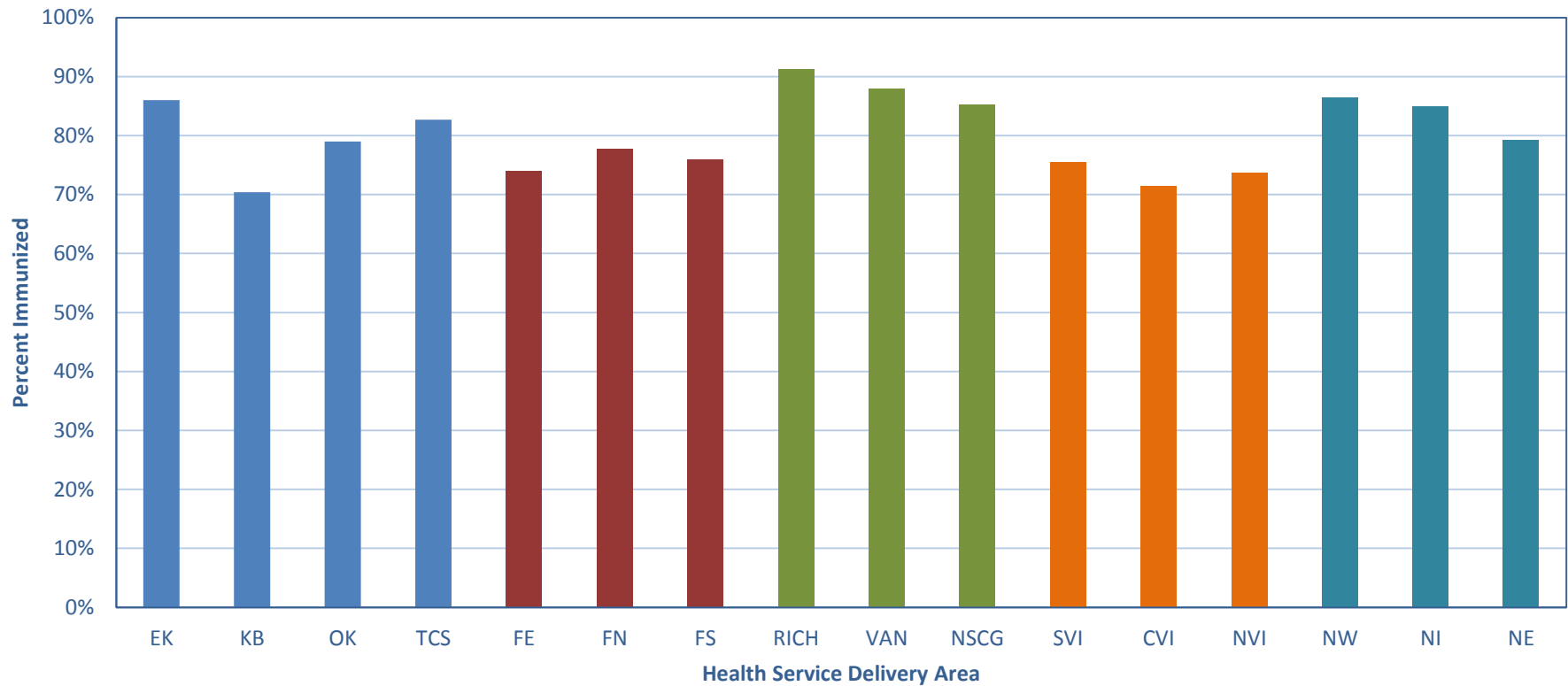
Rates varied by Health Service Delivery Area. In 2017, meningococcal quadrivalent conjugate vaccine coverage rates in the Health Service Delivery Areas ranged from 70.4% to 91.3%.

## Grade 9 Students Immunized, 2017 Meningococcal Quadrivalent Conjugate Vaccine



See Data Sources and Notes.

## Grade 9 Students Immunized, 2017 Meningococcal Quadrivalent Conjugate Vaccine



See Data Sources and Notes.

**Grade 9 Female Students with Up-to-date Immunizations: Human Papillomavirus (HPV)**

HEALTH AUTHORITY / HEALTH SERVICE DELIVERY AREA	YEAR						
	2009	2010	2011	2012	2013	2014 *	2015 <sup>*,†</sup>
<b>INTERIOR</b>	<b>62.0%</b>	<b>58.1%</b>	<b>62.2%</b>			<b>59.0%</b>	<b>70.0%</b>
East Kootenay	71.9%	65.4%	71.2%			67.5%	67.9%
Kootenay Boundary	63.2%	55.3%	58.0%			55.4%	58.2%
Okanagan	60.5%	54.2%	58.2%			51.6%	67.9%
Thompson Cariboo Shuswap	60.2%	62.5%	66.7%			70.0%	77.2%
<b>FRASER</b>	<b>59.2%</b>	<b>54.2%</b>	<b>60.4%</b>			<b>60.7%</b>	<b>64.2%</b>
Fraser East	52.1%	41.3%	50.4%			51.1%	63.0%
Fraser North	62.3%	61.3%	60.8%			57.8%	60.9%
Fraser South	59.8%	54.3%	64.0%			66.3%	68.0%
<b>VANCOUVER COASTAL</b>	<b>67.9%</b>	<b>65.0%</b>	<b>66.3%</b>			<b>77.9%</b>	<b>76.7%</b>
Richmond	75.2%	73.4%	76.3%			89.6%	77.9%
Vancouver	66.2%	63.5%	63.8%			79.1%	80.1%
North Shore / Coast Garibaldi	66.1%	62.5%	64.6%			68.6%	70.1%
<b>VANCOUVER ISLAND *</b>	<b>63.0%</b>	<b>58.9%</b>	<b>60.8%</b>			<b>60.2%</b>	<b>74.1%</b>
South Vancouver Island	65.9%	61.0%	67.8%			60.0%	73.3%
Central Vancouver Island	63.2%	57.8%	53.4%			60.8%	74.2%
North Vancouver Island	55.5%	55.6%	59.9%			59.6%	76.0%
<b>NORTHERN</b>	<b>60.2%</b>	<b>58.1%</b>	<b>56.6%</b>			<b>64.0%</b>	<b>72.1%</b>
Northwest	61.7%	60.0%	62.6%			66.0%	79.6%
Northern Interior	57.8%	56.2%	52.8%			63.0%	70.5%
Northeast	63.5%	59.9%	58.3%			63.8%	67.3%
<b>BRITISH COLUMBIA *</b>	<b>62.1%</b>	<b>58.1%</b>	<b>61.7%</b>			<b>64.3%</b>	<b>70.3%</b>

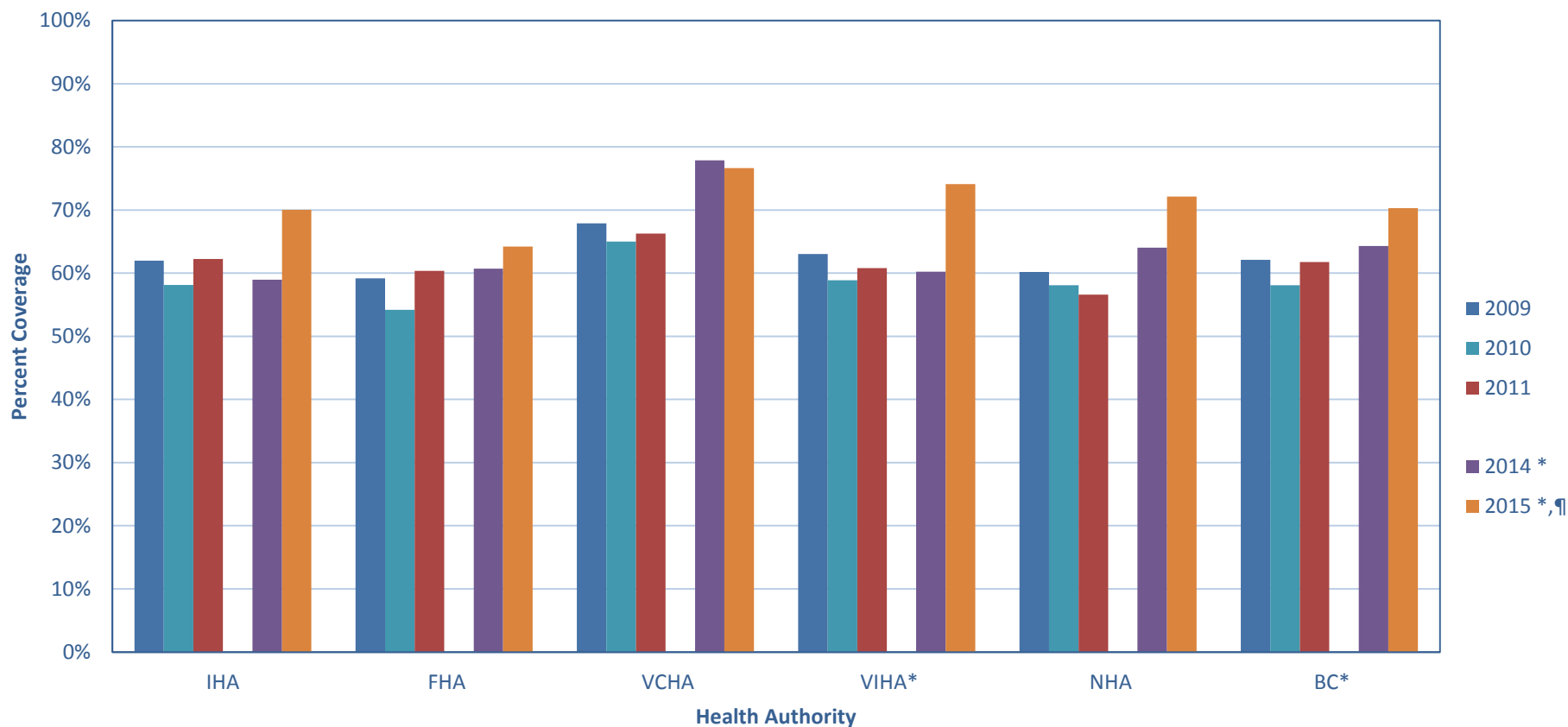
See Data Sources and Notes.

\* The 2014 and 2015 VIHA and BC estimates are not directly comparable to previous years. See Note #6, page 2.

† Some schools are not represented in the 2015 estimates for the Okanagan, Fraser South and Fraser East Health Service Delivery Areas. See Note #9, page 2.

Girls who were in Grade 9 in 2008/09-2010/11 were offered 3 doses of HPV vaccine. Girls who were in Grade 9 in 2011/12 and 2012/13 were offered 3 doses of HPV vaccine in Grade 6 in 2008/09 and 2009/10, respectively. Uptake rates in these groups are included in the Grade 6 results for 2009 and 2010 and were not reassessed in Grade 9. Girls who were in Grade 9 in 2013/14 received 2 doses in Grade 6 and their final (3rd) dose in Grade 9. Completion of two doses was assessed at the end of the 2010/11 school year as part of the Grade 6 HPV coverage report. Completion of three doses was assessed at the end of the 2013/14 school year. In 2014, the HPV program changed such that girls receiving 2 doses at least 150 days apart, with the first dose given before 15 years old, are considered complete. HPV uptake increased in all Health Authorities except one in 2015, likely due to the change in requirements from 3 to 2 doses.

## Grade 9 Female Students with Up-to-date Immunizations, 2009-2015 Human Papillomavirus



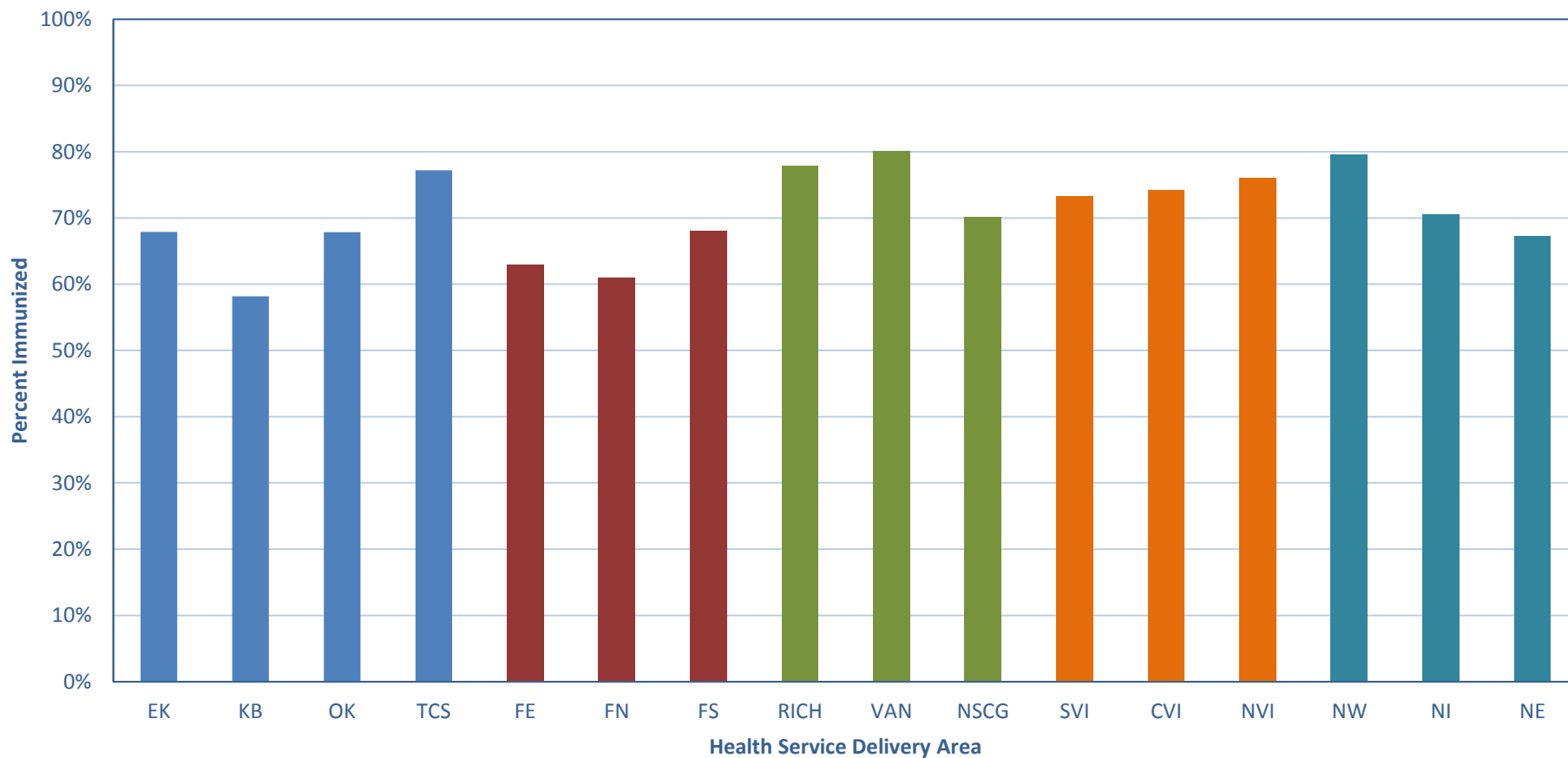
See Data Sources and Notes.

\* The 2014 and 2015 VIHA and BC estimates are not directly comparable to previous years. See Note #6, page 2.

<sup>¶</sup> Some schools are not represented in the 2015 estimates for the Okanagan, Fraser South and Fraser East Health Service Delivery Areas. See Note #9, page 2.

Girls who were in Grade 9 in 2012 and 2013 were offered 3 doses of HPV vaccine when they were in Grade 6 in 2008/09 and 2009/10, respectively. Uptake rates in these groups are included in the Grade 6 results for 2009 and 2010.

## Grade 9 Female Students Immunized, 2015\* Human Papillomavirus



See Data Sources and Notes.

\* The 2014 and 2015 VIHA and BC estimates are not directly comparable to previous years. See Note #6, page 2.