

Two-Year Olds with Up-to-Date Immunizations

SUMMARY

The percent of children up-to-date for age for all vaccine agents combined increased from 63.5% in children born in 2004 to 64.0% in children born in 2007. When vaccine agents were considered individually 57.5%-88.3% of children born in 2007 were up to-date for age for each agent.

NOTES

The data were extracted from the Integrated Public Health Information System (iPHIS) immunization registry and included all children with active records in iPHIS. Only coverage rates for the Health Authorities using the iPHIS immunization registry could be calculated (IHA, VIHA and NHA for children born in 2002; IHA, FHA, VIHA and NHA for children born in 2003; IHA, FHA, VIHA, NHA and North Shore/Coast Garibaldi for children born in 2004-2006). Provincial-level results include only the regions using iPHIS, data for Vancouver/Richmond HSDA (VCH) are not available. Because the provincial-level results include different Health Authorities in different years, provincial-level results are not comparable year-to-year.

Up to Date Definitions

Up-to-date for age	4 doses diphtheria/tetanus/pertussis, 3 doses hepatitis B, 2 doses measles, 1 dose mumps/rubella, 3 doses polio, at least 1 dose of <i>Haemophilus influenzae</i> type b after 15 months of age, 1 dose varicella (or recorded exemption for varicella due to previous disease or protective antibody levels), up-to-date for pneumococcal conjugate as defined by age at first dose, at least 1 dose of meningococcal C conjugate on or after 12 months of age.
Up-to-date minus the booster	3 doses diphtheria/tetanus/pertussis, 3 doses hepatitis B, 1 dose measles/mumps/rubella, 2 doses polio, 1-3 doses of <i>Haemophilus influenzae</i> type b (depending on age of first dose), 1 dose varicella (or recorded exemption for varicella due to previous disease or protective antibody levels), up-to-date for pneumococcal conjugate as defined by age at first dose, at least 1 dose of meningococcal C conjugate on or after 12 months of age.
D/T/aP/IPV	4 doses diphtheria/tetanus/pertussis, 3 doses polio
D/T/aP/IPV/HIB	4 doses diphtheria/tetanus/pertussis, 3 doses polio, at least 1 dose of <i>Haemophilus influenzae</i> type b after 15 months of age
Hep B	3 doses hepatitis B
Hib	At least 1 dose <i>Haemophilus influenzae</i> type b after 15 months of age
MMR	2 doses of a measles-containing vaccine and at least 1 dose of a mumps/rubella-containing vaccine
Polio	3 doses polio
Varicella	1 dose of varicella or recorded exemption for varicella due to previous disease or protective antibody levels
Meningococcal C conjugate	At least 1 dose of meningococcal C conjugate on or after 12 months of age
Pneumococcal conjugate	As defined by age of first dose: 3 doses pneumococcal conjugate if dose 1 before 12 months of age 2 doses pneumococcal conjugate if dose 1 between 12 and 23 months of age

Meningococcal C conjugate, Pneumococcal conjugate and Varicella vaccines were added to the British Columbia immunization schedule for infants born on or after July 1, 2002, July 1, 2003 and January 1, 2004, respectively.

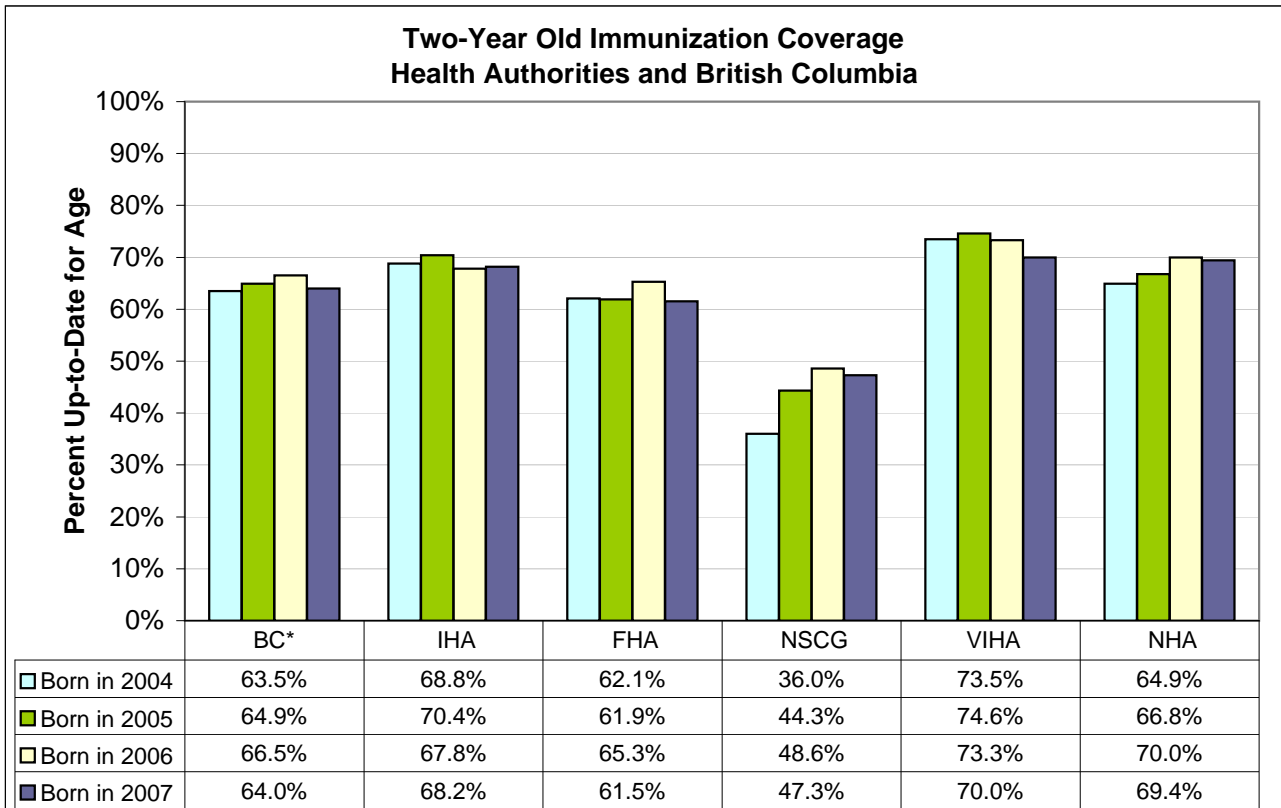
All analyses were conducted using business rules which calculated ages and time intervals at receipt of immunization. Each dose was counted as a valid dose only if NOT given prior to the earliest eligible age, or at time interval LESS than the shortest recommended interval. A child was assessed as "up to date" if all recommended doses were given by the 2nd birthday.

The best attempts are made to collect as accurate and consistent results as possible; however, data need to be interpreted with caution due to regional differences in the type of vaccine provider (physician versus public health nurses), the lack of data for First Nations on reserve, and use of immunization registries.

Abbreviations:

IHA = Interior Health Authority	VIHA = Vancouver Island Health Authority
FHA = Fraser Health Authority	NHA = Northern Health Authority
VCHA = Vancouver Coastal Health Authority	BC = Province of British Columbia
NSCG = North Shore/Coast Garibaldi Health Service Delivery Area (part of VCHA)	
For an explanation of BC Health Authorities, please visit:	http://www.health.gov.bc.ca/socsec/index.html

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	Year of Birth					
	2002	2003	2004	2005	2006	2007
British Columbia (BC)*						
Up-to-date for age	n/a	n/a	63.5%	64.9%	66.5%	64.0%
Minus the booster	n/a	n/a	66.4%	68.1%	74.3%	72.6%
<i>Specific Agents included in the "up-to-date for age"</i>						
D/T/aP/IPV	74.7%	73.3%	78.1%	74.6%	76.0%	73.0%
D/T/aP/IPV/HIB	74.5%	73.0%	77.9%	74.4%	75.7%	72.9%
Hep B	86.9%	84.5%	87.4%	85.2%	86.2%	81.6%
Hib	78.8%	79.4%	83.4%	79.7%	80.7%	78.0%
MMR	73.7%	74.5%	79.1%	75.3%	76.4%	73.7%
Polio	78.3%	78.2%	82.2%	78.4%	79.6%	76.5%
Varicella	n/a	n/a	78.9%	82.0%	83.8%	81.8%
Pneumococcal conjugate	n/a	n/a	77.6%	77.5%	82.2%	81.3%
Meningococcal C conjugate	n/a	82.6%	88.7%	86.7%	86.1%	85.0%
Interior Health Authority (IHA)						
Up-to-date for age	n/a	n/a	68.8%	70.4%	67.8%	68.2%
Minus the booster	n/a	n/a	71.2%	73.6%	76.8%	77.0%
<i>Specific Agents included in the "up-to-date for age"</i>						
D/T/aP/IPV	76.6%	77.4%	78.9%	79.0%	77.1%	76.3%
D/T/aP/IPV/HIB	76.3%	77.2%	78.9%	78.9%	76.9%	76.2%
Hep B	86.2%	86.5%	87.2%	87.5%	86.3%	84.7%
Hib	79.8%	80.8%	83.1%	82.0%	79.6%	79.0%
MMR	75.6%	76.7%	79.4%	78.4%	75.8%	75.7%
Polio	79.4%	80.4%	81.8%	81.0%	79.2%	78.3%
Varicella	n/a	n/a	79.7%	85.1%	83.8%	82.9%
Pneumococcal conjugate	n/a	n/a	79.1%	81.5%	85.6%	85.8%
Meningococcal C conjugate	n/a	84.3%	89.3%	89.9%	86.0%	86.9%

* Includes IHA, VIHA and NHA for children born in 2002; IHA, FHA, VIHA and NHA for children born in 2003; IHA, FHA, VIHA, NHA and NSCG for children born in 2004-2007. Data are not available for Vancouver/Richmond HSDA (VCHA). Because the BC results include different Health Authorities in different years, BC results are not comparable year-to-year.

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	Year of Birth					
	2002	2003	2004	2006	2006	2007
Fraser Health Authority (FHA)						
Up-to-date for age	n/a	n/a	62.1%	61.9%	65.3%	61.5%
Minus the booster	n/a	n/a	65.3%	65.1%	72.6%	69.9%
<i>Specific Agents included in the "up-to-date for age"</i>						
D/T/aP/IPV	n/a	68.3%	76.3%	72.7%	75.4%	71.1%
D/T/aP/IPV/HIB	n/a	67.9%	76.0%	72.4%	75.1%	70.8%
Hep B	n/a	81.5%	86.6%	84.7%	86.4%	79.8%
Hib	n/a	76.8%	83.2%	78.8%	81.6%	77.5%
MMR	n/a	71.1%	78.2%	73.6%	76.7%	73.0%
Polio	n/a	75.1%	81.8%	77.4%	80.1%	75.5%
Varicella	n/a	n/a	78.1%	81.1%	84.5%	81.8%
Pneumococcal conjugate	n/a	n/a	75.4%	75.9%	80.2%	78.6%
Meningococcal C conjugate	n/a	79.6%	87.7%	85.5%	86.5%	84.0%
North Shore/Coast Garibaldi (NSCG)						
Up-to-date for age	n/a	n/a	36.0%	44.3%	48.6%	47.3%
Minus the booster	n/a	n/a	39.0%	47.9%	57.2%	56.4%
<i>Specific Agents included in the "up-to-date for age"</i>						
D/T/aP/IPV	n/a	n/a	49.8%	55.5%	59.8%	57.6%
D/T/aP/IPV/HIB	n/a	n/a	48.7%	54.8%	59.5%	57.5%
Hep B	n/a	n/a	65.7%	67.8%	73.2%	67.1%
Hib	n/a	n/a	59.8%	67.6%	67.6%	66.3%
MMR	n/a	n/a	52.5%	61.1%	61.7%	60.0%
Polio	n/a	n/a	57.2%	63.8%	65.1%	62.4%
Varicella	n/a	n/a	63.1%	70.1%	72.2%	69.8%
Pneumococcal conjugate	n/a	n/a	48.5%	60.8%	66.6%	66.6%
Meningococcal C conjugate	n/a	n/a	65.9%	74.2%	74.5%	73.3%
Vancouver Island Health Authority (VIHA)						
Up-to-date for age	n/a	n/a	73.5%	74.6%	73.3%	70.0%
Minus the booster	n/a	n/a	75.4%	77.4%	80.5%	78.5%
<i>Specific Agents included in the "up-to-date for age"</i>						
D/T/aP/IPV	74.6%	81.2%	83.2%	82.7%	81.5%	78.0%
D/T/aP/IPV/HIB	74.3%	81.0%	83.0%	82.6%	81.3%	77.9%
Hep B	87.5%	87.9%	89.1%	89.6%	89.1%	86.2%
Hib	78.8%	85.5%	86.1%	85.2%	84.4%	81.0%
MMR	72.5%	80.9%	83.0%	82.0%	81.3%	76.7%
Polio	78.2%	84.3%	85.5%	84.6%	83.8%	80.2%
Varicella	n/a	n/a	81.7%	86.1%	86.4%	84.3%
Pneumococcal conjugate	n/a	n/a	82.7%	84.0%	87.7%	86.6%
Meningococcal C conjugate	n/a	86.7%	90.6%	90.2%	89.4%	88.0%
Northern Health Authority (NHA)						
Up-to-date for age	n/a	n/a	64.9%	66.8%	70.0%	69.4%
Minus the booster	n/a	n/a	68.3%	70.2%	78.5%	77.9%
<i>Specific Agents included in the "up-to-date for age"</i>						
D/T/aP/IPV	71.8%	74.5%	76.1%	75.3%	78.2%	78.4%
D/T/aP/IPV/HIB	71.6%	74.3%	75.9%	75.1%	78.1%	78.3%
Hep B	87.0%	88.0%	88.1%	88.6%	88.6%	86.6%
Hib	76.8%	78.3%	79.8%	78.6%	81.1%	81.4%
MMR	72.2%	74.6%	75.8%	75.4%	77.5%	77.5%
Polio	76.4%	77.6%	78.8%	78.1%	80.4%	80.5%
Varicella	n/a	n/a	76.3%	82.0%	84.0%	82.9%
Pneumococcal conjugate	n/a	n/a	76.1%	78.8%	86.2%	87.1%
Meningococcal C conjugate	n/a	85.6%	89.1%	88.9%	87.1%	88.3%