

History of Immunization in BC

School Immunization Programs		
Vaccine	Year	Group
Rubella	1974-1985	Grade 5 girls (birth year cohort 1964-1975)
Measles/Mumps/Rubella (MMR)	1986	Catch-up program for all children from Kindergarten to grade 12
Hepatitis B	1992-present	Grade 6 (birth year cohort 1981)
Measles/Rubella (MR)	1996	Elementary through post-secondary school students (birth year cohort 1979-1991)
Hepatitis B	1997	Grade 12 (birth year cohort 1980)
Hepatitis B (2-dose schedule)	2001-present	Grade 6 (birth year cohort 1990)
Hepatitis B (thimerosal-free)	2003-present	Grade 6 (birth year cohort 1992)
Meningococcal C conjugate	2003-Jun 2016	Grade 6 (birth year cohort 1992)
Meningococcal C conjugate	2004-2006	Grade 9 (birth year cohort 1990-1991)
Tetanus, diphtheria, acellular pertussis	2004-present	Grade 9 (replaced Td booster) (birth year cohort 1989)
Varicella	2004-present	Susceptible children at school entry and grade 6 (birth year cohorts 1999 and 1993)
Meningococcal C conjugate	2005-2007	Grade 12 (birth year cohort 1988-1989)
Human papillomavirus (HPV)	2008-present	Grade 6 girls (birth year cohort 1997)
Human papillomavirus (HPV)	2008-2011	Grade 9 girls (birth year cohort 1994) Program planned for 3 school years only (i.e., 2008/09, 2009/10 and 2010/11)
Human papillomavirus (HPV)	2014 (Oct)	2-dose schedule for girls in grade 6
Meningococcal quadrivalent conjugate	2016 (Sep)	Grade 9 (birth year cohort 2002)
Human papillomavirus (HPV)	2016 (Sep)	Gardasil®9 replaces Gardasil® for girls in grade 6 (birth year cohort 2005)
Human papillomavirus (HPV)	2017 (Aug)	Grade 6 boys (birth year cohort 2006)

Indications/Comments in the following tables refer to new groups added to those for whom the vaccine is already indicated, unless otherwise stated.

Diphtheria, Tetanus, Pertussis, and Polio Containing Vaccines

Vaccine	Year	Indications/Comments
Diphtheria toxoid	1929	
TAB vaccine	1937	Typhoid, paratyphoid A and B
TABT vaccine	1943	Tetanus toxoid, typhoid, paratyphoid A and B
DPT	1948	Diphtheria, pertussis, and tetanus
Diphtheria (40 LF) and tetanus (DT)	1948	Primary immunization only
DPT Polio	1959	Diphtheria, pertussis, tetanus, and inactivated polio vaccine (IPV)
DT-IPV	1960	Diphtheria, tetanus, and polio
Tetanus/IPV	1960	Tetanus and polio
Diphtheria (10 LF) and tetanus (DT)	1965	Reinforcing immunization
DPT, DT, and Td	1981	Contained thimerosal
Td/IPV	1993	Tetanus, diphtheria and polio
Pentavalent vaccine (DPT-IPV-Hib)	1994	<ul style="list-style-type: none"> Diphtheria, tetanus, pertussis, polio, and <i>Haemophilus influenzae</i> type B Did not contain thimerosal
Td/IPV	1995	Bone marrow transplant recipients
Acellular combination vaccines (PENTACEL® and QUADRICEL®)	1997	<ul style="list-style-type: none"> PENTACEL® = Pentavalent (DTaP-IPV/Hib) QUADRICEL® = Quadrivalent (DTaP-IPV) Acellular pertussis component
Tetanus	2000 (Dec 31)	Sanofi Pasteur stopped manufacturing monovalent tetanus vaccine
Tdap (ADACEL®)	2004	<ul style="list-style-type: none"> Tetanus, diphtheria, and acellular pertussis Replaced Td booster for grade 9 students (birth year cohort 1989)
Tdap	2006	<ul style="list-style-type: none"> Replaced Td for immunization of unimmunized adults 19 years of age and older Available for all those 7 years of age and older
Pentavalent vaccine (PEDIACEL®)	2007	<ul style="list-style-type: none"> Replaced PENTACEL® IPV component manufactured with vero cell technology
Tdap and Td/IPV	2007	Hematopoietic stem cell transplant (HSCT) and solid organ transplant candidates or recipients
Tdap	2007	<ul style="list-style-type: none"> Adults who have not been immunized and immigrants of unknown immunization status are to receive 1 dose of Tdap, followed by 2 doses of Td ADACEL® approved for use in individuals 4 years of age and older

Diphtheria, Tetanus, Pertussis, and Polio Containing Vaccines (cont'd)

Vaccine	Year	Indications/Comments
Tdap and Td-IPV	2008	Clarification that HSCT and solid organ transplant candidates and recipients 7 years of age and older are recommended to receive 1 dose of Tdap, followed by 2 doses of Td/IPV
Hexavalent vaccine (DTap-HB-IPV-Hib) (INFANRIX hexa®)	2009 (Feb)	Replaces PEDIACEL® for infants and children under 7 years of age starting their primary series
Tdap-IPV	2012 (Apr)	Replaces QUADRACEL® at school entry as an interim measure to address QUADRACEL® shortages
DTaP-IPV	2013 (Apr)	QUADRACEL® shortage ends, and QUADRACEL® replaces Tdap-IPV at school entry.
DTaP-IPV-Hib	2012 (Oct)	Recommended for HSCT recipients 18 years of age and older
DTaP-IPV-Hib	2014 (Jun)	Recommended for HSCT recipients less than 18 years of age.
Tdap-IPV	2017 (Oct)	Replaces DTaP-IPV at school entry.

***Haemophilus influenzae* type B (Hib) Vaccine**

Vaccine	Year	Indications/Comments
Hib (PRP)	1986	Children 2-59 months of age
Hib conjugate (PRP)	1988	Children 18-59 months of age
Hib 3 rd generation conjugate	1992	Children 2-59 months of age
Pentavalent vaccine (DPT-IPV-Hib)	1994	Children 2-59 months of age
Hib conjugate (Act-HIB®)	1995	Bone marrow transplant recipients
Hib conjugate (Act-HIB®)	2002	Cochlear transplant candidates and recipients
Hib conjugate (Act-HIB®)	2005	Islet cell transplant recipients
Hib conjugate (Act-HIB®)	2007	Asplenic 5 years of age and older, regardless of previous Hib immunization history
Hib conjugate (Act-HIB®)	2016 (May)	Individuals 5 years of age and older with congenital immunodeficiency, regardless of previous Hib immunization history

Hepatitis A Vaccine	
Year	Indications/Comments
1994	Individuals with hemophilia A or B receiving plasma-derived factors and testing negative for anti-HAV
1998	<ul style="list-style-type: none"> • Illicit drug users • Anti-HCV positive persons who are anti-HAV negative
2001	<ul style="list-style-type: none"> • Men who have sex with men • Anti-HAV negative individuals chronically infected with hepatitis B virus • Anti-HAV negative individuals with other chronic liver disease (including cirrhosis)
2001	Ig indicated for 2 new groups of contacts of case of hepatitis A: drug sharing contacts and co-workers when the case is a food handler
2002	Vaccine replaced Ig as treatment of choice for contacts of case of hepatitis A
2003	Liver transplant candidates and recipients
2004	HIV positive individuals eligible for 3-dose series of hepatitis A vaccine
2005	Bone marrow and HSCT clients
2006	Chronic (lifelong) blood transfusions
2008	Hemochromatosis
2012	Aboriginal persons 6 months-18 years

Hepatitis B Immune Globulin	
Year	Indications/Comments
1993	Infants 12 months of age and under when mother or primary caregiver is HBsAg positive
1994	<ul style="list-style-type: none"> • Newborns 0-7 days of age when mother is a chronic hepatitis B carrier • Newborns and infants under 1 year of age when mother, father, or primary caregiver has acute hepatitis B infection
1996	Sexual partners of a person diagnosed with acute hepatitis B infection
2001	Newborns when mother is at high risk for hepatitis B infection and her infectious status is unknown or negative
2007	Infant under 12 months of age whose mother has acute hepatitis B
2008	<ul style="list-style-type: none"> • Sex with a person who has acute or chronic hepatitis B infection • Should be given as soon as possible after exposure but it may be given up to 7 days following percutaneous exposure and up to 14 days following permucosal or sexual exposures

Hepatitis B Vaccine		
Vaccine	Year	Indications/Comments
Heptavax	1984	Plasma derived hepatitis B vaccine provided by Canadian Red Cross to neonates of HBsAg positive mothers
Recombinant	1987	Available in Canada
Recombinant	1990	<ul style="list-style-type: none"> Sexual contacts and household contacts (12 years of age and under) of HBsAg positive persons At risk “street people”
Recombinant	1992	<ul style="list-style-type: none"> All grade 6 students (birth year cohort 1981) Students in selected health care programs, STD clients, sex trade workers, individuals with multiple sexual partners, users of illicit IV drugs, and all household and sexual contacts of HBsAg positive individuals
Recombinant	1993	<ul style="list-style-type: none"> Pre-dialysis, hemodialysis, and peritoneal dialysis patients Long-term inmates (6 months or longer) of provincial correctional institutions Additional groups of health care students
Recombinant	1995	Bone marrow transplant recipients
Recombinant	1996	Prophylaxis for sexual assault exposure
Recombinant	1997	<ul style="list-style-type: none"> All grade 12 students (birth year cohort 1980) Persons who are anti-HCV positive and anti-HBc and HBsAg negative
Recombinant	2001	<ul style="list-style-type: none"> Infants whose mother or primary caregiver has risk factors for hepatitis B infection and their infectious state is unknown or negative Individuals with chronic liver disease (including cirrhosis) who do not have past or current evidence of hepatitis B infection
Recombinant	2001 (Mar)	All infants at 2-4-6 months of age (infants born on or after January 1, 2001)
Recombinant (thimerosal-free)	2001 (Jun)	<ul style="list-style-type: none"> All infants and children under 7 years of age who qualify for free vaccine Children under 7 years of age whose families have immigrated to Canada from areas of high hepatitis B infectivity Children 7-12 years of age (inclusive) whose family has immigrated to Canada within the past year
Recombinant (RECOMBIVAX HB®) Merck Frosst	2001	2-dose series for grade 6 students (birth year cohort 1990)

Hepatitis B Vaccine (cont'd)		
Vaccine	Year	Indications/Comments
Recombinant	2002	<ul style="list-style-type: none"> Staff and residents of community group homes for the developmentally disabled Previously unimmunized children and staff in childcare settings where there is a child infected with hepatitis B Previously unimmunized teachers and classroom contacts of developmentally challenged known hepatitis B carriers whose behaviour or medical condition increases risk to others
Recombinant Thimerosal free	2003	Grade 6 students
Recombinant	2003	Liver transplant candidates and recipients
Recombinant	2005	HIV positive individuals
Recombinant	2007	Household contacts of internationally adopted children (who are chronic carriers or have unknown hepatitis B status)
Recombinant	2008	Hemochromatosis
Recombinant	2009-2011	Grade 6 program: due to shortage of adult formulation, the option to administer 2 doses of the pediatric formulation (equivalent to 1 mL dose) concomitantly at 0 and 6 months was added

Human Papillomavirus Vaccine		
Vaccine	Year	Indications/Comments
Gardasil®	2008 (Sep)	<ul style="list-style-type: none"> Girls in grade 6 and 9 (birth year cohorts 1994 and 1997) Program for grade 9 girls is to continue for 2 more school years only (i.e., 2009/10 and 2010/11)
Gardasil®	2010 (Sep)	Extended dose schedule for girls in grade 6 (2 doses in grade 6 and the 3 rd dose in grade 11)
Cervarix®	2012 (Apr)	Women born in 1991-1993
Cervarix®	2013 (Jul)	Program expanded to include women up to 26 years of age (birth year cohorts 1987-1990)
Gardasil®	2013 (Sep)	3 rd dose for girls who commenced vaccination in grade 6 moved to grade 9
Gardasil®	2014 (Oct)	2-dose schedule for girls in grade 6 and eligible girls 9-14 years of age (inclusive)
Gardasil®	2015 (Sep)	Program expanded to include high risk males up to 26 years of age (inclusive)
Gardasil®9	2016 (Aug)	Gardasil®9 indicated for females 9-26 years of age who are HIV positive and have not received a complete series of HPV vaccine
Gardasil®9	2016 (Sep)	Gardasil®9 replaces Gardasil® for girls in grade 6 (birth year cohort 2005)
Gardasil®9	2017 (May)	Gardasil®9 replaces Gardasil® for all indications
Gardasil®9	2017 (Aug)	Program expanded to include boys in grade 6 (birth year cohort 2006) and transgender individuals 9-26 years of age

Influenza Vaccine		
Vaccine	Year	Indications/Comments
Trivalent, whole virus	Early 1970's	<ul style="list-style-type: none"> Residents of community care facilities High risk individuals
Trivalent, inactivated, split-virus	2000/01	<ul style="list-style-type: none"> First responders (police, firefighters, ambulance attendants) Independent health care practitioners and their staff
Fluviral®	2004/05	Infants 6-23 months, their household contacts, and their child care providers
Fluviral®	2005/06	<ul style="list-style-type: none"> Adults and children with any condition that can compromise respiratory function or the handling of respiratory secretions, or that can increase the risk of aspiration Inmates of provincial correctional facilities People working with poultry and/or swine
Influvac™	2005/06	Thimerosal-free vaccine available on case-by-case basis for persons with history of anaphylactic reaction to thimerosal
Vaxigrip® (Thimerosal-reduced)	2005/06	<ul style="list-style-type: none"> Children 6-23 months of age Pregnant or breastfeeding women in high risk groups Pregnant women in their 3rd trimester who are expected to deliver during the influenza season
<ul style="list-style-type: none"> Fluviral® Vaxigrip® 	2006/07	<ul style="list-style-type: none"> People working with live poultry or swine Thimerosal-free vaccine not available this season
<ul style="list-style-type: none"> Fluviral® Vaxigrip® 	2007/08	<ul style="list-style-type: none"> Pregnant women in the 3rd trimester now in “people at high risk” group Household contacts (including children) of people at high risk whether or not they have been immunized Added to routine schedule for infants 6-23 months of age during influenza season
	2008 (Feb)	<ul style="list-style-type: none"> Individuals with severe rheumatoid arthritis requiring immunosuppressive therapy Clarification that HCW groups include those in community settings, as well as staff in health care facilities
<ul style="list-style-type: none"> Fluviral® Vaxigrip® 	2008/09	Those who provide care or service in potential outbreak settings housing high risk persons (e.g., crew on ships)
<p>Pandemic Influenza H1N1:</p> <p>Adjuvanted:</p> <ul style="list-style-type: none"> Arepanrix™ <p>Non-adjuvanted:</p> <ul style="list-style-type: none"> 2009 pandemic monovalent Clinical formulation 	2009/10	<ul style="list-style-type: none"> > 95% of the pandemic influenza H1N1 formulation distributed was adjuvanted; non-adjuvanted vaccine was available in limited amounts for pregnant women. Vaccine was provided free to all BC residents but the limited supply initially required priority sequencing Seasonal vaccine was delayed until after pandemic H1N1 vaccine became available, except for the elderly who could receive the vaccine whenever available Simultaneous pandemic H1N1 and seasonal vaccine administration was permitted Seasonal vaccine was provided to the usual eligible groups

Influenza Vaccine (cont'd)		
Vaccine	Year	Indications/Comments
<ul style="list-style-type: none"> Fluviral® Vaxigrip® 	2010/11	<ul style="list-style-type: none"> Adults who are morbidly obese (BMI ≥ 40) Aboriginal peoples (on and off reserve) for the 2010-2011 season only
<ul style="list-style-type: none"> AGRIFLU® FLUAD® FLUVIRAL® 	2011/12	<ul style="list-style-type: none"> Eligibility: vaccine for Aboriginal peoples (on and off reserve) was introduced last season, and has been extended for the 2011-2012 season. The trivalent influenza vaccine dosage for infants 6-35 months of age is 0.5 mL, 1 or 2 doses depending on whether a dose has been received in a previous year Mild egg allergy is not a contraindication to trivalent influenza vaccine; individuals with mild egg allergy manifest only as hives can safely receive vaccine New pages provide information about vaccine safety issues related to influenza vaccine: egg allergy, oculo-respiratory syndrome, and possibly elevated risk of febrile seizures when trivalent influenza vaccine is given concomitantly with PCV13 Pages for vaccines approved for use in Canada, but not part of the BC public campaign have been added as references for community vaccine providers
<ul style="list-style-type: none"> AGRIFLU® FLUAD® FLUMIST® VAXIGRIP® 	2012/13	<ul style="list-style-type: none"> Eligibility: vaccine for Aboriginal peoples (on and off reserve) was introduced in the 2010-2011 season and has been extended for the 2012-2013 season Healthy children 24-59 months of age Household contacts of healthy children 24-59 months of age Those providing regular child care to healthy children 24-59 months of age, whether in or out of the home FLUMIST® 15,000 doses allotted to Vancouver Coastal Health for pilot project with healthy children 2-17 years of age
<ul style="list-style-type: none"> AGRIFLU® FLUAD® FLULAVAL® FLUMIST® FLUVIRAL® XANAFLU® 	2013/14	<ul style="list-style-type: none"> Eligibility: vaccine for Aboriginal peoples (on and off reserve) introduced in 2010-11 season extended for the 2013-14 season Pregnant women in any stage of pregnancy during influenza season Children who are morbidly obese (BMI assessed as ≥ 95th percentile adjusted for age and sex) Visitors to health care facilities and other patient care locations FLUMIST® recommended for eligible children 2-17 years of age Individuals who are egg allergic (including those who have experienced anaphylaxis following egg ingestion) can be immunized with inactivated influenza vaccine in any setting following standard vaccine administration practices

Influenza Vaccine (cont'd)		
Vaccine	Year	Indications/Comments
<ul style="list-style-type: none"> • AGRIFLU® • FLUAD® • FLUMIST® • FLUMIST® QUADRIVALENT • FLUVIRAL® 	2014/15	<ul style="list-style-type: none"> • Eligibility: vaccine for Aboriginal peoples (on and off reserve) now routine • FLUMIST® and FLUMIST® QUADRIVALENT both available for eligible children 2-17 years of age with the majority of the vaccine being the quadrivalent formulation
<ul style="list-style-type: none"> • AGRIFLU® • FLUAD® • FLULAVAL® TETRA • FLUMIST® QUADRIVALENT • FLUVIRAL® • FLUZONE® QUADRIVALENT 	2015/16	<ul style="list-style-type: none"> • No changes to eligibility • Quadrivalent formulations recommended for eligible children 6 months to 17 years of age
<ul style="list-style-type: none"> • AGRIFLU® • FLUAD® • FLULAVAL® TETRA • FLUMIST® QUADRIVALENT • FLUVIRAL® 	2016/17	<ul style="list-style-type: none"> • No changes to eligibility • Preferential use recommendation for FLUMIST® QUADRIVALENT in children 2-8 years of age removed • Contraindication to the use of FLUMIST® QUADRIVALENT in egg allergic individuals removed
<ul style="list-style-type: none"> • AGRIFLU® • FLULAVAL® TETRA • FLUMIST® QUADRIVALENT • FLUVIRAL® • FLUZONE® QUADRIVALENT 	2017/18	<ul style="list-style-type: none"> • No changes to eligibility

Measles, Mumps and Rubella Vaccines

Vaccine	Year	Indications/Comments
Measles	1969	Measles (rubeola) live vaccine recommended for infants at 12 months of age, preschool, and susceptible school children
Rubella	1970	<ul style="list-style-type: none"> • Rubella vaccine recommended for infants and children 12 months to 11 years of age • Mass immunization program carried out by health units
Rubella	1974	Rubella vaccine provided free of charge to all young women
MMR	1981	Combined measles, mumps, rubella vaccine provided for all children 12 months of age and older
Rubella	1986	Rubella vaccine for grade 5 girls discontinued
MMR	1986	Catch-up program for all children from Kindergarten to grade 12
MR	1996	<ul style="list-style-type: none"> • Measles, rubella vaccine provided to all children 19 months of age and older (toddlers, preschool children, elementary, secondary, and post-secondary students) in province-wide campaign. Second dose was for measles protection. • A 2nd dose of MMR vaccine introduced at 18 months as part of the routine schedule
Measles	1998	A 2 nd dose of measles-containing vaccine recommended for persons 18 months to 18 years of age (inclusive)
Rubella	1998 (Dec)	Sanofi Pasteur stopped manufacturing monovalent measles vaccine
Measles	2001 (Mar 31)	Sanofi Pasteur stopped manufacturing monovalent measles vaccine
MMR	2005	A 2 nd dose of MMR provided to HCWs and childcare workers born after 1956
MMR	2006	<ul style="list-style-type: none"> • A 2nd dose of MMR provided free for women of childbearing age who are susceptible to rubella • A dose of MMR recommended for HCWs and childcare workers who lack proof of 1 dose of mumps vaccine, or physician diagnosed disease or lab confirmation of immunity
MMR	2007	Post-secondary students and military recruits (2 doses recommended)
MMR	2008	A 2 nd dose of MMR recommended 6-12 months after the 1 st dose for hematopoietic stem cell transplant recipients

Measles, Mumps and Rubella Vaccines (cont'd)		
Vaccine	Year	Indications/Comments
MMR	2009	<p>Provided free for all individuals who are susceptible to measles, mumps, or rubella:</p> <ul style="list-style-type: none"> • Measles: 2 doses of a measles-containing vaccine are recommended for all individuals born on or after January 1, 1957 who do not have a history of lab-confirmed measles disease • Mumps: 2 doses of a mumps-containing vaccine are recommended for all individuals born on or after January 1, 1970; 1 dose is recommended for all individuals born January 1, 1957 to December 31, 1969 who do not have evidence of immunity to mumps disease • Rubella: 1 dose of a rubella-containing vaccine is recommended for all individuals who do not have evidence of rubella immunity. One dose is considered evidence of immunity to rubella
MMR	2012 (Jan)	Dose 2 moved from 18 months of age to school entry (4-6 years of age). To be offered as combined MMRV beginning in 2014.
MMR	2013 (Nov)	Measles: recommendation for 2 doses of measles-containing vaccine changed from those born after 1957 to 1970 (except for health care workers which remained at 1957)
MMR	2014 (Sep)	<p>Mumps: recommendation for 1 dose of mumps-containing vaccine for those born after 1970, except for the following populations for whom 2 doses are recommended:</p> <ul style="list-style-type: none"> • children as per routine schedule • students of post-secondary educational settings • travelers to outside of North America <p>Health care worker recommendations for mumps remain unchanged with documentation of 1 dose if born between 1957 and 1970; 2 doses if born in 1970 or later.</p> <p>Rubella: 1 dose of a rubella-containing vaccine is recommended for those born in 1957 or later. There is no age above which immunity against rubella can be assumed for health care workers.</p>
MMRV	2013 (Nov)	<ul style="list-style-type: none"> • School entry dose for children 4-6 years of age • Susceptible unimmunized or incompletely immunized children 4-12 years of age

Meningococcal Vaccine		
Vaccine	Year	Indications/Comments
Quadrivalent Polysaccharide	1994	Individuals 2 years of age and older with anatomic or functional asplenia
Quadrivalent Polysaccharide	1995	Bone marrow transplant recipients
Men C conjugate	2003 (Apr 1)	High risk individuals
Men C conjugate	2003 (Jul 1)	All infants at 12 months of age (born on or after July 1, 2002)
Men C conjugate	2003 (Sep)	Students in grade 6 (birth year cohort 1992) starting in 2003/04 school year
Men C conjugate and Quadrivalent Polysaccharide	2003	Solid organ transplant recipients
Men C conjugate	2004 (Sep) to 2006 (Jun)	Students in grade 9 starting in 2004/05 school year (birth year cohort 1990-1991)
Men C conjugate	2005 (Jun)	2-dose series (at 2 months and 12 months of age) recommended for all infants born on or after April 1, 2005
Men C conjugate	2005 (Mar) to 2007 (Jun)	Students in grade 12 (birth year cohort 1988-1989)
Men C conjugate and Quadrivalent Polysaccharide	2005	Islet cell transplant recipients
Men C conjugate	2006 (Apr-Nov)	Men who have sex with men due to outbreak among this population
Men C conjugate	2007	Preferred for prophylaxis of contacts of invasive Men C disease
Meningococcal quadrivalent conjugate	2007	<ul style="list-style-type: none"> • Medically high risk individuals 2 years of age and older (including candidates or recipients of solid organ or islet cell transplant or cochlear implant) • Contacts of invasive meningococcal disease • Control of outbreaks of invasive meningococcal disease
Men C conjugate	2008	<ul style="list-style-type: none"> • Infants who receive last dose of Men C conjugate vaccine before 12 months of age requires 1 additional dose at 12 months of age and older • Children 2-11 months of age (inclusive) who are at high risk medically or close contacts of a case of invasive meningococcal group C disease require 3 doses of any MCC vaccine
Meningococcal quadrivalent conjugate	2010 (Jan)	Cochlear implant removed as an indication
Meningococcal quadrivalent conjugate	2014 (Sep)	Medically high risk individuals 2 months of age and older with the introduction of MENVEO®

Meningococcal Vaccine (cont'd)		
Vaccine	Year	Indications/Comments
Men B conjugate	2014 (Jun)	<ul style="list-style-type: none"> • Contacts of invasive meningococcal disease caused by serogroup B • Control of outbreaks of invasive meningococcal disease caused by serogroup B
Men C conjugate	2016 (Jun)	Discontinuation of grade 6 program with the introduction of the grade 9 meningococcal quadrivalent conjugate program
Meningococcal quadrivalent conjugate	2016 (Sep)	Grade 9 program (birth year cohort 2002)

Pneumococcal Vaccine		
Vaccine	Year	Indications/Comments
Polysaccharide	1996	Bone marrow transplant recipients and those with functional or anatomic asplenia
Polysaccharide	1997	All residents of extended and intermediate care facilities
Polysaccharide	1998	All persons 65 years of age and older
Polysaccharide	2001	Persons 2-64 years of age at high risk of invasive pneumococcal disease
Conjugate	2003 (Apr 1)	<ul style="list-style-type: none"> • High risk infants and children 2-59 months of age • Aboriginal infants and children 2-59 months of age • 4-dose schedule (at 2, 4, 6, and 18 months of age)
Conjugate	2003 (Sep 1)	All infants starting at 2 months of age (all infants born on or after July 1, 2003)
Polysaccharide	2003	<ul style="list-style-type: none"> • Solid organ transplant recipients • Hepatitis C
Conjugate and polysaccharide	2005	Islet cell transplant recipients
Conjugate and polysaccharide	2006	<ul style="list-style-type: none"> • Cystic fibrosis • Asthma excluded unless management involves ongoing high-dose oral corticosteroid therapy
Conjugate	2007 (Jan)	<ul style="list-style-type: none"> • Schedule change: 3 doses recommended for healthy infants; 4 doses recommended for medically high risk infants • Aboriginal infants schedule is “healthy” infant schedule
Conjugate and polysaccharide	2007	<ul style="list-style-type: none"> • Solid organ transplant candidates and recipients • Islet cell transplant candidates and recipients
Polysaccharide	2008	Homelessness and/or illicit drug use
Conjugate	2008 (Jul)	All infants in BC who are 2-59 months of age are eligible as the first infants born in July, 2003 are now 59 months old
Conjugate	2010 (Jun)	13-valent pneumococcal vaccine replaces 7-valent pneumococcal vaccine for all indications
Conjugate	2013 (Feb)	PCV13 recommended for HSCT recipients 18 years of age and older
Conjugate	2014 (Jun)	PCV13 recommended for all pediatric HSCT recipients
Conjugate	2015 (Mar)	<ul style="list-style-type: none"> • Asplenic to 18 years of age (previously 16 years) • Persons 5 years of age and older with HIV infection

Polio Vaccine		
Vaccine	Year	Indications/Comments
Inactivated polio vaccine (IPV) (Salk)	1955	Field trials
IPV	1957	Routine protection between 6 months and 40 years of age
DPT Polio	1959	Diphtheria, pertussis, tetanus, and inactivated polio vaccine (IPV)
DT-IPV	1960	Diphtheria, tetanus, and polio
Tetanus-IPV	1960	Tetanus and polio
Oral polio vaccine (OPV) (Sabin)	1962	One dose recommended in community wide programs for all ages
OPV	1964	<ul style="list-style-type: none"> Province-wide campaign Recommended for primary and reinforcing immunization for all age groups
OPV	1965	3 doses recommended after 3 months of age after 3 doses of IPV
OPV	1967	3 doses recommended for routine immunization without previous IPV
OPV	1984	Discontinued doses at 6 months and 14 years of age
Enhanced injectable polio (e-IPV)	1990	Replaced previously used IPV
OPV	1994	Discontinued use
IPV (vero cell origin)	2007	Replaced previous IPV product of human diploid cell origin
IPV	2008	<ul style="list-style-type: none"> One dose of IPV recommended for children 7 years of age and older who have not received a polio booster on or after their 4th birthday Children and adults who may be exposed to wild polio viruses (including HCWs)
IPV	2009	<ul style="list-style-type: none"> All HCWs who have not received a complete primary series of polio vaccine should complete a primary series of IPV All HCWs who previously completed a primary series of polio vaccine should be offered a single booster dose of IPV (10 years after the primary series)
IPV	2016 (Jan)	Booster dose recommendation for HCWs revised to specify that it is only recommended for HCWs who may be exposed to feces

Rotavirus Vaccine		
Vaccine	Year	Indications/Comments
ROTARIX®	2012 (Jan)	Routine infant series
RotaTeq®	2018 (Jun)	RotaTeq® replaces Rotarix® as the vaccine routinely given to infants

Varicella Vaccine		
Vaccine	Year	Indications/Comments
VARIVAX® III	2002	VARIVAX® III, the 3 rd generation of the Merck Frosst varicella vaccine made available. It is refrigerator stable at 2-8°C until lot expiry
VARILRIX®	2004	<ul style="list-style-type: none"> • High risk and immunocompromised clients • Household contacts of immunocompromised individuals • Health care workers and health care students • Susceptible children at school entry and grade 6 (birth year cohorts 1993 and 1999)
VARIVAX® III	2005 (Jan)	Susceptible infants at 12 months of age (infants born on or after January 1, 2004)
VARILRIX®	2005	Sickle cell disease
VARIVAX® III	2005 (Apr)	Catch-up program for susceptible children 18 months to 48 months of age
VARIVAX® III	2006 (Apr)	<ul style="list-style-type: none"> • Active catch-up program for susceptible children 18-47 months of age • Susceptible children, adolescents, and adults at opportune health encounters (i.e., “universal varicella program”)
VARILRIX®	2007	Susceptible immunocompromised: “receiving inhaled or topical steroids” removed (included under susceptible children, adolescents and adults, including health care workers)
VARIVAX® III VARILRIX®	2007 (Aug)	<ul style="list-style-type: none"> • A person who experienced varicella disease before 12 months of age is considered susceptible • Opportunistic immunization of children who did not receive varicella vaccine at 12 months of age because of previous varicella disease • Adult and child candidates for solid organ transplant (kidney, lung, liver, heart) providing they are not receiving immunosuppressive treatment at the time of immunization
VARILRIX®	2008	Adult and child hematopoietic stem cell transplant recipients (with specialist’s approval only) – use VARILRIX® vaccine only
VARILRIX®	2009	<ul style="list-style-type: none"> • Individuals 12 months of age and older with mildly symptomatic or asymptomatic HIV infection • All candidates for solid organ transplant • Chronic kidney disease/dialysis • ≥ 1 month after completion of high doses (> 2 mg/kg or > 20 mg daily) oral corticosteroid therapy more than 14 days duration
Varicella	2012 (Jan)	2 nd dose of vaccine provided at school entry (4-6 years). To be offered as combined MMRV beginning in 2014
Varicella	2012 (May)	2 doses of varicella vaccine recommended for all susceptible individuals
Varicella	2012 (Sep)	2 nd dose of vaccine provided at grade 6 (beginning 2012/13 school year) for catch-up period to approximately 2016/17

Varicella Vaccine (cont'd)		
Vaccine	Year	Indications/Comments
VARIVAX® III	2013 (Jan)	VARIVAX® III may be used to immunize immunocompromised clients; no longer restricted to VARILRIX®
Varicella	2013 (Dec)	Definition of a varicella susceptible individual revised. A varicella susceptible person is one without a history of varicella or herpes zoster after 12 months of age and without a history of age appropriate varicella immunization. A self-reported history of varicella is adequate for those born before 2004; for those born in 2004 and later, a health care provider diagnosed history is required for reliability.
Varicella	2018 (Jun)	<ul style="list-style-type: none"> • Definition of a varicella susceptible individual revised. As of June 2018, a varicella susceptible person is one without a history of lab confirmed varicella or herpes zoster after 12 months of age and without a history of age appropriate varicella immunization. Individuals with a documented exemption in the immunization registry prior to this date due to previous disease will be considered immune. A self-reported history of varicella or physician diagnosed varicella is adequate only if disease occurred before 2004. • Removed the recommendation for serological testing prior to vaccination of individuals 13 years of age and older who are unimmunized and meet the criteria for susceptibility.

Other	
Year	Indications/Comments
1907	Smallpox vaccine available
1931	Scarlet fever vaccine available
1944	Cholera and typhus vaccines available
1948	Yellow fever vaccine available from the Federal Department of Immigration
1975	Smallpox vaccine no longer part of the routine schedule, as a result of WHO eradication program
Late 1970's	BCG discontinued for health care workers. No specific date on record.
1980	Smallpox vaccine no longer administered
1993	<ul style="list-style-type: none"> • Botulism antitoxin, diphtheria antitoxin, rabies immune globulin (RIG) and rabies vaccine provided without charge when authorized by Emergency Biologicals program • Live attenuated oral typhoid vaccine available
2003	BCG discontinued in First Nations communities