# **Appendix 4.3 History of Vaccine Use in New Brunswick Public Health Programs**

Information in this document is a compilation of documented program information only. This appendix contains the following sub-appendices and simply click below to bring you to the preferred section of the document:

- 4.3.1 History of Vaccine Use in New-Brunswick by Years
- 4.3.2 Vaccine Timeline by Disease
- 4.3.3 School Program
- 4.3.4 COVID-19 Pandemic Vaccine Timeline

4.3.1 -	History of Vaccine Use in New Brunswick - by Years				
2021 to present					
2023 (octobre)	FluMist® quadrivalent influenza vaccine (live, attenuated) is available for children aged two to 17 who are afraid of injections and reluctant to be vaccinated.				
2021-2023	<ul> <li>The following COVID-19 vaccines were offered during the pandemic (click on sub-appendices 4.3.4 in this document for detailed vaccine timelines):</li> <li>mRNA vaccines (Moderna Spikevax and Pfizer Comirnaty)</li> </ul>				
	<ul> <li>Viral Vector vaccines (Astrazeneca Vaxzevria and Janssen Jcovden)</li> </ul>				
2022 (December)	<ul> <li>Protein based vaccine (Novavax Nuvaxovid)</li> <li>Expansion of the distribution of publicly funded Pneumovax 23 vaccine to community pharmacies for individual 65 years and older</li> </ul>				
2022 (September)	<ul> <li>Imvamune (Monkeypox) vaccine is being offered to eligible New-Brunswickers:</li> <li>Cisgender, transgender, or two-spirit individuals of any age who also self-identify as belonging to the gay, bisexual or men-who-have-sex-with-men community and who are or plan to become sexually active with more than one partner; Individuals who self-identify as sex workers; Staff or volunteers in sex-on-premises venues.</li> <li>A second dose at a 28-day interval is recommended for a primary series.</li> </ul>				
2021 (June)	Expansion of Fluzone® High-Dose Quadrivalent vaccine to all individuals aged 65 years and older				
2010 to 2020					
2020 (December)	<ul> <li>First mRNA COVID-19 pandemic vaccine (Pfizer Comirnaty) was administered to a long-term care resident</li> <li>Click on <u>sub-appendix 4.3.4</u> for detailed pandemic vaccine information and eligibility</li> </ul>				

2020 (June)	A universal influenza vaccine program will be publicly funded for all New Brunswick residents 6 months and older					
	<ul> <li>Fluzone® High-Dose vaccine will be offered to residents aged 65 years and older living in long term care facilities (licensed nursing homes)</li> </ul>					
	<ul> <li>Vaccines available: Flulaval® Tetra (GSK); Fluzone® Quadrivalent (Sanofi); Fluzone® High-Dose (Sanofi)</li> </ul>					
	RotaTeq® vaccine (Merck Canada Inc.) replaced ROTARIX® (GlaxoSmithKline Inc.) for the routine infant immunization program.					
2018 (May)	• This vaccine will be administered at 2 months, 4 months, and 6 months of age (the infant must be under 15 weeks of age for 1st dose and under 8 months of age for third dose).					
2018 (March)	Tdap vaccine offered in every pregnancy, irrespective of previous Tdap immunization history.					
2017 -2018 (school	HPV vaccine school-based program expanded to include males born 2005 and later.					
year)	HPV vaccine program enhanced from Gardasil 4 to Gardasil 9 vaccine.					
2017 (June)	<ul> <li>Introduction of Rotavirus vaccine into routine childhood immunization schedule at 2 and 4 months of age for infants who meet the age requirements (under 15 weeks of age for 1st dose and under 8 months of age for second dose).</li> </ul>					
2017 (April)	The dosage of Recombivax HB® for infants (of HB-negative mothers) to children less than 11 years of age has been changed from 0.25mL to 0.5mL.					
	The following vaccines were added to the "Vaccine Eligibility Criteria for High-Risk Individuals":					
2017 (March)	Meningococcal B for high-risk groups with immune-suppressing conditions.					
	<ul> <li>Hepatitis A for splenic disorders (requiring multiple transfusions), bleeding disorders, MSM and for all illicit drug use (no longer specific to only those participating the methadone treaTMent program).</li> </ul>					
2015-2016 influenza season	Seasonal influenza- Quadrivalent influenza vaccine replaced trivalent influenza vaccine for high-risk groups.					
2015-2016 (school year)	<ul> <li>Introduction of varicella catch-up program (eight years) targeting individed born 2000-2008 and provided through the school immunization program. For the school year 2015/16, students in grades 9 &amp; 10 who were born 2000 &amp; 2001 were eligible to receive a second dose of varicella vaccine the school years 2016/17 to 2022/23, the vaccine will be given in grade eligible students.</li> </ul>					
	HPV immunization program (Gardasil) changed from 3 dose schedule to a 2-dose schedule					
2015 (October – December)	• In response to a pertussis outbreak in the Moncton area, Tdap vaccination was offered to pregnant women (26 weeks gestation or greater) irrespective of their immunization history. Other strategies included ensuring that everyone was up to date with immunizations, especially those in close contacts with infants and children					

	<del>,</del>						
2015	Hep B vaccine provided to target high risk group, i.e., "men having sex with men" (MSM).						
2015	<ul> <li>Meningococcal B vaccine provided to individuals greater than or equal to 2 months of age that have been in close contact with a case of invasive Meningococcal disease caused by serogroup B Neisseria meningitides.</li> </ul>						
2015	<ul> <li>Rabies pre-exposure vaccine provided to individuals hired to retrieve abnormally acting wildlife as part of rabies surveillance activities for 2015 only.</li> </ul>						
	<ul> <li>Note - wildlife surveillance is a part of the program to distribute vaccine to wildlife population.</li> </ul>						
2015	On November 25, 2015, Victorian Order of Nurses (VON) ceased operations in New Brunswick resulting in the termination of the contract for influenza and pneumococcal immunization services.						
2014-2015 (influenza season)	Pharmacists' role expanded to include influenza vaccine administration to the following groups: pregnant women, Aboriginal and people who are capable of transmitting influenza to those at high risk. Also, the requirement that the recipient of the vaccine "be known" to the pharmacist was removed.						
2014 (June)	<ul> <li>Expansion of Prevnar 13 to include the following groups who have not previously received Pneu-C-13 vaccine: children and adolescents (5-17 years of age) at high risk of IPD, children up to 18 years of age with asthma, adults with human immunodeficiency virus (HIV) or immunosuppressive conditions (eligible for 1 dose), and hematopoietic stem cell (HSCT) recipients (eligible to receive 3 doses).</li> </ul>						
2012-2013 (school year)	<ul> <li>As a response to the New Brunswick pertussis outbreak, Tdap vaccine was provided to:</li> <li>Students in grade 8 &amp; 9 in the other areas of the province that were not captured in the 2011-2012 pertussis school immunization campaign;</li> </ul>						
	<ul> <li>Tdap was re-introduced into the NB Routine Immunization Schedule for students in grade 7 as part of the school-based immunization program.</li> </ul>						
2012 (May)	Adacel®-Polio vaccine (Tdap-IPV) replaced Quadracel® vaccine (DTaP-IPV) for the pre-school booster dose (5th dose only) for immunization against diphtheria, tetanus, pertussis and polio.						

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	As a response to the New Brunswick pertussis outbreak, a Tdap vaccine was provided to:					
	<ul> <li>Students in grades 6, 7 &amp; 8 in the two most affected areas (Moncton and Saint John);</li> </ul>					
2011-2012 (school year)	<ul> <li>School aged children and adolescents &lt; 18yrs of age in close contact with infants &lt; 1 year of age and have not received a pertussis containing vaccine in the last five years.</li> </ul>					
	<ul> <li>Adults &gt; 18yrs of age in close contact with infants &lt; 1 yr of age and have not received a pertussis containing vaccine in the adulthood.</li> </ul>					
	<ul> <li>Pregnant women in the third trimester may be offered Tdap (optional and left to the discretion of the MOH in the affected areas).</li> </ul>					
2011-12 (school year)	<ul> <li>MMR Grade 12 catch-up program was completed a year sooner than planned (2012/2013) because of a measles outbreak in Quebec that began in January 2011 and an increase in the number of cases occurring throughout Canada, the US and Europe.</li> </ul>					
2011 (June-August)	PH clinics were held to provide a second dose of MMR to those students who would have normally received the vaccine as a part of the six year MMR catch- up campaign in the upcoming two school years. This was done because of a measles outbreak in Quebec that began in January 2011 and an increase in the number of cases occurring throughout Canada, United States and Europe.					
2011 (August)	• Expansion of Prevnar ®13 to include all those children through five years of age who have not already completed a series Pneu-C-7 or Pneu-C-10.					
2011 (May)	MMRV, Priorix-Tetra®, introduced for use in the NB Routine Immunization Schedule for children.					
2011 (April)	<ul> <li>Tdap added to the NB Routine Immunization Schedule for adults to replace one of the Td doses given every ten years.</li> </ul>					
2011 (January)	• 2nd dose of varicella added to the NB Routine Immunization Schedule for children at 18 months for all those born in 2009 and later.					
	Tdap offered to:					
2011 (January)	<ul> <li>all parents of infants born on or after January 1, 2011, as part of a cocoon strategy to protect against pertussis.</li> </ul>					
	<ul> <li>Health care providers working in acute care settings with vulnerable infants were offered Tdap at the same time.</li> </ul>					
	Expansion of the seasonal influenza vaccine eligibility criteria to include:					
	<ul> <li>Children aged five years to 18 years.</li> </ul>					
2010-2011	<ul> <li>Household contacts of children 24 to 59 months.</li> </ul>					
	<ul> <li>Members of a household expecting a newborn during the influenza season.</li> </ul>					

	<ul> <li>Pharmacists engaged through NBPDP to administer seasonal influenza vaccine to:</li> </ul>			
2010-2011	<ul> <li>Healthy children aged five to 18 years of age;</li> </ul>			
	<ul> <li>Individuals aged five years and older with chronic health conditions;</li> <li>and</li> </ul>			
	<ul> <li>Individuals 65 and older.</li> </ul>			
	<ul> <li>Update of Eligibility Criteria for release of Publicly Funded Vaccines noting:</li> </ul>			
2010 (September)	<ul> <li>Products required to meet third party requests including, but not limited to travel, education and occupational purposes are not provided through the publicly funded program and;</li> </ul>			
	<ul> <li>Consultation with the RMOH is required prior to release of PPD (tuberculin skin test) to or for institutional settings including nursing homes and correctional facilities.</li> </ul>			
	<ul> <li>Prevnar® was replaced by Prevnar®13 in the NB Routine Immunization Schedule for children:</li> </ul>			
2010 (July 1st)	<ul> <li>A six-month transition and catch-up schedule were completed March 2011, followed by a routine 2+1 schedule;</li> </ul>			
	<ul> <li>The vaccine was provided to high-risk children up to the age of 59 months in a 2+1 schedule or as a single catch-up dose if a previous series of Pneu-C-7 or Pneu-C-10 has been completed.</li> </ul>			
2000-2010				
2009-2010	<ul> <li>Pandemic vaccine (pHINI) was available for those age six months and older: Arepanrix®, GSK unadjunvanted vaccine and Panvax® were used.</li> </ul>			
	<ul> <li>The Public Health Act 2009-136 and accompanying regulation were proclaimed and included:</li> </ul>			
	<ul> <li>Enhanced immunization requirements for children entering school for the first time;</li> </ul>			
2009 (November)	<ul> <li>New immunization requirements for children attending day cares;</li> </ul>			
	<ul> <li>Reporting requirements for all those who administer publicly funded vaccine;</li> </ul>			
	<ul> <li>Ongoing requirement of those who administer a vaccine to provide a record of the vaccine to the recipient;</li> </ul>			
	<ul> <li>Reporting requirements for adverse events following immunization.</li> </ul>			
2009 (September)	Rabies vaccine for pre-exposure removed from the Eligibility Criteria for Publicly Funded Vaccines.			
2008-2009 (school year)	<ul> <li>Human Papillomavirus vaccine (Gardasil®) introduced into the NB Routine Immunization Schedule for girls born in 1995 and later. To be given routinely in grade seven as part of school-based programs. Also given in grade eight as a one year catch-up in the 2008/2009 school year.</li> </ul>			

2008-2009 (school year)	Measles, mumps and rubella (MMR II ®) introduced into the NB Routine Immunization Schedule targeting grade 12 students						
2007/2008 (school year)	<ul> <li>Monovalent conjugate C vaccine was replaced by Quadrivalent conjugate ACYW-135 vaccine (Menactra®) in the grade nine school program.</li> </ul>						
	<ul> <li>A six-year MMR catch-up (one dose) for individuals who were not immune, who have never been immunized, or who have not already received two doses of MMR AND who are in one of the following groups:</li> </ul>						
2007-2008	<ul> <li>Students in grade 12 as part of a school-based program. Although originally scheduled for completion in the 2012/2013 school year, was completed in the 2011/2012 school year because of an increase in cases of measles occurring outside of New Brunswick.</li> </ul>						
	<ul> <li>Individuals who are 24 years of age and younger</li> </ul>						
	<ul> <li>Individuals born in 1970 or later who attend a post-secondary institution, or who are living in an institutional setting.</li> </ul>						
2007-2008	Expansion of the seasonal influenza eligibility criteria to include all pregnant women						
2007 (December)	The pediatric (DTaP-IPV-Hib) vaccine PentaceITM was replaced by Pediacel®, a ready-to-use, fully liquid version of PentaceITM						
2007 (January)	<ul> <li>Meningococcal quadrivalent conjugate ACYW-135 vaccine (Menactra®) provided for all those at increased risk of functional or anatomic asplenia, complement, properdin or factor D deficiency.</li> </ul>						
2006-2007 (school year)	<ul> <li>A three-year Tdap catch-up for students in grade six given as part of a school-based program and ending in the 2008/2009 school year. At the end of the three years, all individuals entering middle school would have received five doses of acellular pertussis.</li> </ul>						
2006-2007	Expansion of the seasonal influenza vaccine eligibility to include all children aged six to 23 months.						
2005	<ul> <li>Meningococcal conjugate C vaccine provided for individuals of all ages who have high risk medical conditions (functional or anatomic asplenia, complement, properdin or factor D deficiency).</li> </ul>						
2005-2006 (school year)	<ul> <li>Meningococcal conjugate C vaccine offered to all high school students (grade nine to 12) who have not had the disease, or the vaccine provided by PHNs as part of a school-based program.</li> </ul>						
2005-2006 (school year)	<ul> <li>Adolescent Tdap booster moved from grade II to grade nine, provided by PHNs as part of a school-based program.</li> </ul>						
2005 (May/June)	<ul> <li>Meningococcal conjugate C (Neis Vac-C®) mass immunization campaign in WesTMorland, Kent and Albert counties for grade five to age 19 years. More than 16,000 individuals were immunized.</li> </ul>						
2005 (March/April)	Pneumococcal conjugate vaccine (Prevnar®) introduced into the NB Routine Immunization Schedule at age two, four, six, and 18 months for children born in 2005 and later.						

2005 (June)	<ul> <li>Hepatitis B grade four catch-up school program, delivered by the Victorian Order of Nurses (VON) was completed in 2004-05 school year.</li> </ul>					
2005	Rabies PEP initiated in ERs and completed by PHN; vaccine and immune globulin no longer released to community practices.					
2004-2005 (school year)	<ul> <li>Meningococcal conjugate C immunization catch-up for grade nine students, provided by PHNs as part of a school-based program.</li> </ul>					
2004-2005 (school year)	<ul> <li>Tetanus-diphtheria-acellular pertussis (Adacel®) vaccine replaced the Td booster at age 16 (grades nine to 11 inclusive) immunized in 2004- 05 provided by PHNs as part of a school-based program; subsequent Tdap boosters to be administered to grade nine students.</li> </ul>					
2004 (December)	Distribution of Mumpsvax® a live attenuated monovalent mumps vaccine ceased in Canada.					
2004 (August)	<ul> <li>Hepatitis B infant schedule changed from birth, two and 12 months to birth, two, and six months.</li> </ul>					
2004 (September)	Varicella immunization catch-up for four-year-old children presenting for their pre-school booster.					
2004 (September)	<ul> <li>Varicella vaccine introduced into the NB Routine Immunization Schedule for children at the I2-month-old visit for children born in 2003 or later.</li> </ul>					
2004 (September)	<ul> <li>Meningococcal conjugate C vaccine introduced into the NB Routine Immunization Schedule for children born in 2003 and later to be given at the I2-month-old visit.</li> </ul>					
2003 (November)	Pneumococcal conjugate vaccine (Prevnar®) provided for children five years of age who have high risk medical conditions.					
2003 (November)	<ul> <li>Meningococcal conjugate C vaccine provided to adults and children</li> <li>&lt; two years of age who have functional/ anatomic asplenia or complement, properdin or factor D deficiency.</li> </ul>					
2002	Public Health travel clinic services transferred to the private sector					
2002	Expansion of the seasonal influenza vaccine eligibility to include NB citizens aged 65 years and older.					
2001 (May)	<ul> <li>Rabies pre-exposure vaccine provided to persons at high risk of exposure and staff and volunteers of not-for profit animal organizations is offered at a reduced cost through PH offices.</li> </ul>					
2000	<ul> <li>Meningococcal conjugate C vaccine provided to adults and children ≥ two years of who have functional/ anatomic asplenia or complement, properdin or factor D deficiency.</li> </ul>					
2000	<ul> <li>Haemophilus influenzae type b vaccine: Provision of publicly funded vaccine to previously unimmunized children ≥ five years of age and adults with anatomic or functional asplenia and to previously unimmunized children ≥ five years of age and adults with disorders of the humoral immune system, both primary and secondary, on the recommendation of an appropriate medical specialist.</li> </ul>					

1990-2000							
1999	<ul> <li>Implementation of an automated immunization database, CSDS (Client Service Delivery System) for Public Health use. The first immunization recorded in CSDS was on July 2, 1999.</li> </ul>						
1999 (November)	Hepatitis A and B vaccines: Provision of publicly funded vaccine to individuals seropositive for hepatitis C.						
1998	<ul> <li>Acellular pertussis vaccine: implementation of an acellular pertussis vaccine combined with diphtheria, tetanus, haemophilus influenzae type B (Hib) and polio (Pentacel®) or combined with diphtheria, tetanus, and polio (Quadracel®).</li> </ul>						
1997 (April)	<ul> <li>Measles, mumps, rubella vaccine (MMR): implementation of routine, second dose targeting all infants aged 18 months and children born after October 1st, 1995.</li> </ul>						
	MMR vaccine two dose (12 & 18 months).						
1995-1996 (school year)	<ul> <li>A ten-year Hepatitis B vaccine catch up campaign for all grade four students provided by the VON through school-based clinics. Records of these vaccines are available in CSDS.</li> </ul>						
1995	<ul> <li>Hepatitis B immunization was introduced into the NB Routine Immunization Schedule for children targeting all infants born after May I, 1995 and to be given at birth, two and twelve months of age.</li> </ul>						
1995	<ul> <li>Hepatitis B vaccine: mass immunization (ages two months to 40 years) in Brantville- Rivière-du-Portage.</li> </ul>						
1994	<ul> <li>Oral polio vaccine replaced injectable vaccine in a combination vaccine- diphtheria, pertussis, tetanus, polio and haemophilus influenza type b (Pentacel®).</li> </ul>						
1993	Meningococcal mass immunization campaign in WesTMorland and Albert counties; 51,292 individuals between the ages of two and 29 were immunized Menomune® (ten dose vials).						
1992	<ul> <li>Haemophilus influenzae type b - PRP-T: implementation of a combined product containing haemophilus influenzae type b, diphtheria, pertussis and tetanus for infants aged two, four, six and 18 months.</li> </ul>						
1990	• Implementation of an automated immunization database (HNIC) for Public Health use.						
1980-1990							
1989	Polio (oral) vaccine: elimination of the six-month dose.						
1988	Haemophilus influenzae type b vaccine: universal implementation of						
1788	<ul> <li>haemophilus influenzae type b vaccine for children 18 months of age.</li> </ul>						
1987	Haemophilus influenzae type b vaccine: offered to children aged two to five years.						
1984	<ul> <li>Pneumococcal polysaccharide 23 valent vaccine replaces 14 valent vaccine.</li> </ul>						

1982	Legislation enacted making measles, mumps, rubella (one dose) and					
1702	polio vaccine mandatory for school entry (three doses).					
1970-1980						
	• Influenza bivalent vaccine (A/Victoria B/Hong Kong) available for high-risk groups, especially those in nursing homes and institutions including:					
	■ Those 65 and older					
1977	<ul> <li>Those between the ages of 20 and 65 who are chronically ill with one of the following conditions: heart disease of any "etiology", chronic</li> <li>broncho-pulmonary disease, chronic renal disease and metabolic disease such as diabetes mellitus.</li> </ul>					
	The vaccine was not recommended for children.					
1977	Measles, rubella vaccine no longer available, switched to MMR vaccine,					
(SD Memo)	one dose.					
1976	Routine mass tuberculosis testing of school children discontinued.					
1972	• Universal implementation of a combined product containing rubella an measles vaccine.					
1970	<ul> <li>Rubella mass immunization campaign of all school children in grades one to four (85 percent acceptance rate).</li> </ul>					
1960-1970						
1967	Measles vaccine (live attenuated Schwarz strain) offered to one- and two- year-old children and grade one students.					
1965	OPV (oral polio vaccine)- province-wide immunization offered to all one-to 30-year-old (83 percent acceptance rate).					
Prior to 1960, but n	ot specific to New Brunswick					
1949	BCG-Routine use for nursing students began; discontinued in the 1970s.					

# **4.3.2 - Vaccine Timeline by Disease**

\*The blue text is general information that is not specific to New Brunswick. See also: http://www.cpha.ca/ en/programs/history/achievements/12-v/timeline.aspx

# **Diphtheria**

# 2018 (March)

• Tdap vaccine offered in every pregnancy, irrespective of previous Tdap immunization history.

# 2012-2013 (school year)

- Tdap vaccine provided to students in grade 8 & 9 in areas of the province that were not captured in the 2011/2012 pertussis school immunization campaign.
- Tdap re-introduced into the NB Routine Immunization Schedule for students in grade 7 as part of the school based immunization program.

# 2012 (May)

• Adacel®-Polio vaccine (Tdap-IPV) replaced Quadracel® vaccine (DTaP-IPV) for the preschool booster dose (5th dose only) for immunization against diphtheria, tetanus, pertussis and polio.

# 2011-2012 (school year)

- Due to pertussis outbreak; Tdap vaccine was provided to students in grades 6, 7 & 8 in the two most affected areas (Moncton and Saint John).
- School aged children and adolescents < 18yrs of age in close contact with infants < 1 yr of age and have not received a pertussis containing vaccine in the last five years were offered Tdap vaccine.
- Adults > 18yrs of age in close contact with infants < 1 yr of age and have not received a
  pertussis containing vaccine in the adulthood were offered Tdap vaccine.</li>
- Pregnant women in the third trimester may be offered Tdap (optional and left to the discretion of the MOH in the affected areas).

#### 2011

- Tdap added to the NB Routine Immunization Schedule for adults to replace one of the Td doses given every ten years (April 15,2011).
- Tetanus, diphtheria and acellular pertussis (Tdap) provided to all health care workers in the acute care setting who care for infants < 12 months of age as of January 1, 2011.
- Tetanus, diphtheria and acellular pertussis (Tdap) provided to parents of infants born on or after January 1, 2011 as part of a "cocoon program". Mothers immunized post-partum prior to discharge while fathers/partners immunized by Public Health.

#### 2009 (November)

• The Public Health Act and Regulation 2009-136 were proclaimed, requiring all children entering school for the first time or attending a licensed daycare to show proof of immunization for diphtheria (as described in the Policies- Required Immunization of School Children and Required Immunization of Children Attending Day Care.

#### 2007 (December)

• The pediatric (DTaP-IPV-Hib) vaccine PentacelTM was replaced by Pediacel®, a ready-to-use, fully liquid version of PentacelTM.

#### 2006-2007

• Tetanus, diphtheria and acellular pertussis (**Boostrix** ® or **Adacel**®) given to grade six students as part of a three-year catch-up program, ending in the 2008/2009 school year.

# 2005-2006 (school year)

Adolescent Tdap booster moved from grade 11 to grade nine, provided by PHNs as part
of a school-based program.

# 2004-2005 (school year)

- Tetanus-diphtheria-acellular pertussis (Adacel®) vaccine replaces the Td booster for the adolescent booster.
- Tdap catch-up for grades nine to 11 inclusive provided by PHNs as part of a schoolbased program.

## 1998

• Introduction of an acellular pertussis vaccine combined with diphtheria, tetanus, Haemophilus influenzae type B (Hib) and polio (PentacelTM) or combined with diphtheria, tetanus, and polio (QuadracelTM).

#### 1994

- Introduction of (**Penta**<sup>TM</sup>), a vaccine containing injectable polio vaccine, diphtheria, pertussis, tetanus and *Haemophilus influenzae* type b.
- Polio vaccine changed from oral to injectable polio vaccine: combined with diphtheria, pertussis, tetanus and *Haemophilus influenzae* type b.

## 1982

Legislation enacted making diphtheria vaccine mandatory for school entry (three doses).

#### 1949

• Tetanus toxoid: given alone or in combination with diphtheria and pertussis.

#### 1930s

Routine immunization against diphtheria in infancy and childhood widely practiced in Canada.

#### 1895

Diphtheria antitoxin was developed.

# Haemophilus influenzae type b

#### 2009 (November)

 The Public Health Act and Regulation 2009-136 were proclaimed, requiring all children attending a licensed daycare to show proof of immunization for Haemophilus influenzae type B disease (as described in the Policies- Required Immunization of Children Attending Day Care).

## 2007 (December)

• The pediatric (DTaP-IPV-Hib) vaccine PentaceITM was replaced by Pediacel®, a ready-to-use, fully liquid version of PentaceITM•.

#### 2000

Haemophilus influenzae type b vaccine provided to previously unimmunized children ≥ five
years of age and adults with anatomic or functional asplenia and to previously unimmunized
children ≥ five years of age and adults with disorders of the humoral immune system, both
primary and secondary, on the recommendation of an appropriate medical specialist.

#### 1998

 Introduction of an acellular pertussis vaccine combined with diphtheria, tetanus, Haemophilus influenzae type B (Hib) and polio (PentacelTM) or combined with diphtheria, tetanus, and polio.

## 1994

• Introduction of (PentaTM), a vaccine containing injectable polio vaccine, diphtheria, pertussis, tetanus and Haemophilus influenzae type b.

#### 1992

• Introduction of a combined product containing Haemophilus influenzae type b (PRP-T), diphtheria, pertussis and tetanus for infants aged two, four, six and 18 months.

#### 1988

 Haemophilus influenzae type b vaccine introduced into the NB Routine Immunization Schedule for children 18 months of age.

#### 1987

Haemophilus influenzae type b vaccine offered to children aged two to five years.

### **Hepatitis A**

## 2017 (March)

- Hepatitis A vaccine was added to the "Vaccine Eligibility Criteria for High Risk for the following Individuals":
  - for splenic disorders (requiring multiple transfusions), bleeding disorders, MSM;
  - for all illicit drug use (no longer specific to only those participating the methadone trea<sup>TM</sup>ent program.)

#### 1999

 Hepatitis A and B vaccines provided to individuals seropositive for hepatitis C (November 10, 1999).

#### 1996

Introduction of hepatitis A vaccine in Canada.

## **Hepatitis B**

#### 2017 (April)

• The dosage of Recombivax HB® for infants (of HB-negative mothers) to children less than 11 years of age has been changed from 0.25mL to 0.5mL.

# 2015 (August)

• Hep B vaccine provided to target high risk group, i.e., "men having sex with men" (MSM).

# 2005 (June)

Hepatitis B grade four catch-up school program completed.

# 2004 (August)

 Hepatitis B infant schedule changed from age zero, two and 12 months to age zero, two, and six months.

#### 2001

• Thimerosal free hepatitis B vaccine introduced for use in the NB Routine Immunization Schedule.

#### 1999

Hepatitis A and B vaccines provided to individuals seropositive for hepatitis C (November 10, 1999).

#### 1995

- Hepatitis B vaccine: mass immunization (ages two months to 40 years) in Brantville–Rivièredu- Portage.
- Hepatitis B vaccine (Recombivax HB®) introduced into the NB Routine Immunization Schedule targeting all infants born after May 1, 1995.

# 1995-1996 (school year)

• A ten-year Hepatitis B vaccine catch up campaign for all grade four students provided by the Victorian Order of Nurses (VON) through school-based clinics.

#### 1982

Hepatitis B vaccine becomes available.

# **Human Papillomavirus**

#### 2017-2018 (school year)

- HPV vaccine school-based program expanded to include males born 2005 and later.
- HPV vaccine program enhanced from Gardasil 4 to Gardasil 9 vaccine.

# 2015-2016 (school year)

• HPV immunization program (Gardasil) changed from 3 dose schedule to a 2-dose schedule.

# 2009-2010 (school year)

 HPV immunization program delayed in some areas of the province because of HINI immunization campaign. Where delays occurred, students were immunized in the 2010/2011 school year.

# 2008-2009 (school year)

• Human Papillomavirus vaccine (Gardasil®) introduced into the NB Routine Immunization Schedule for girls born in 1995 and later. Routinely in grade 7 as part of school-based programs by PHNs but also given in grade 8 as a one year catch-up in the 2008/2009 school year.

#### Influenza seasonal

#### 2023

• FluMist® quadrivalent influenza vaccine (live, attenuated) is available for children aged two to 17 who are afraid of injections and reluctant to be vaccinated.

#### 2021-2022 and 2022-2023

- A universal influenza vaccine program will continue to be publicly funded for all New Brunswick residents.
- Quadrivalent influenza vaccine will be offered to individuals aged 6 months and older including residents of long-term care facilities who are under the age of 65 years.
- An enhancement to the program includes offering Fluzone® High-Dose Quadrivalent vaccine to all those aged 65 years and older at no cost.
- Vaccines available: Flulaval® Tetra (GSK); Fluzone® Quadrivalent (Sanofi); Fluzone® High-Dose (Sanofi)

#### 2020-2021

- A universal influenza vaccine program will be publicly funded for all New Brunswick residents 6 months and older
- Fluzone® High-Dose vaccine will be offered to residents aged 65 years and older living in long term care facilities (licensed nursing homes)
- Vaccines available: Flulaval® Tetra; Fluzone® Quadrivalent (Sanofi); Fluzone® High-Dose (Sanofi)

#### 2019-2020

- Publicly Funded Seasonal Influenza Vaccine expanded to:
  - Those in direct contact with poultry infected with avian influenza during culling operations.
- Influenza vaccine is provided free of charge to health care workers by the employer who is responsible for the cost of vaccine and administration
- Vaccines available: Flulaval® Tetra; Fluzone®; Quadrivalent; Afluria® Tetra.

#### 2018-2019

Vaccines available: Flulaval® Tetra and Fluzone® Quadrivalent

#### 2016-2017

- Publicly Funded Seasonal Influenza Vaccine:
  - Adults and children with chronic health conditions
  - People of any age who are residents of nursing homes and other chronic care facilities.

- People ≥65 years of age.
- Healthy children 6 months to 18 years of age.
- Pregnant women.
- Aboriginal people
- People capable of transmitting influenza to those at high risk
- Vaccines available: Flulaval® Tetra and Fluzone® Quadrivalent are supplied in 10 dose vials. A small quantity of Fluzone® Quadrivalent single use pre-filled syringes will be available.

## 2015-2016

- Quadrivalent influenza vaccine replaced trivalent influenza vaccine for high-risk groups.
- On November 25, 2015, Victorian Order of Nurses (VON) ceased operations in New Brunswick resulting in the termination of the contract for influenza immunization services.

## 2014-2015

Pharmacists' role expanded to include influenza vaccine administration to the following groups:
 pregnant women, Aboriginal, and people who are capable of transmitting influenza to those at high risk.
 Also, the requirement that the recipient of the vaccine "be known" to the pharmacist was removed.

#### 2010

- Expansion of the seasonal influenza vaccine eligibility criteria to include children five to 18 years; household contacts of children 24 to 59 months and members of a household expecting a newborn during the influenza season.
- Pharmacists engaged through the New Brunswick Prescription Drug Program (NBPDP) to administer seasonal influenza vaccine to healthy children aged five years to 18 years of age, those five and older with chronic health conditions and to all those aged 65 and older.

# 2007-2008

Expansion of the seasonal influenza vaccine eligibility to include all pregnant women.

# 2006

Expansion of the seasonal influenza vaccine eligibility to include all children aged six to 23 months.

## 2002

Influenza vaccine provided to NB citizens aged 65 years and older.

#### 1977

- Influenza bivalent vaccine (A/Victoria B/Hong Kong) available for high-risk groups, especially those in nursing homes and institutions including:
  - Those 65 and older;
  - Those between the ages of 20 and 65 who are chronically ill with one of the following conditions: heart disease of any "etiology", chronic broncho-pulmonary disease, chronic renal disease and metabolic disease such as diabetes meillitus.
- The vaccine was not recommended for children.

#### 1945

First influenza vaccine used.

## Influenza: H1N1 and swine flu

#### 2009

- Pandemic pHINI vaccine available for all New Brunswicker's age six months and older:
  - Arepanrix® (GSK), GSK unadjuvanted vaccine and Panvax® (Crucel) were used.

#### 1976

 Swine-flu vaccination campaign began and discontinued mid campaign due to cases of Guillain Barre Syndrome.

#### Measles

#### 2011-2012 (school year)

MMR grade 12 catch- up program was completed a year sooner than planned (2012/2013) because of a
measles outbreak in Quebec that began in January 2011 and an increase in the number of cases
occurring throughout Canada, the US and Europe.

## 2011 (June- August)

• PH clinics were held to provide a second dose of MMR to those students who would have normally received the vaccine as a part of the six-year MMR catch-up campaign in the upcoming two school years. This was done because of a measles outbreak in Quebec that began in January 2011 and an increase in the number of cases occurring throughout Canada, the US and Europe.

## 2011 (May)

• MMRV (Priorix-Tetra®) introduced to replace MMR and varicella vaccines given as part of the NB Routine Immunization Schedule.

## 2009 (November)

• The Public Health Act and Regulation 2009-136 were proclaimed, requiring all children entering school for the first time or attending a licensed daycare to show proof of immunization for measles (as described in the Policies- Required Immunization of School Children and Required Immunization of Children Attending Day Care).

# 2008-2009 (school year)

 Measles, mumps and rubella (MMR II ®) introduced into the Routine Immunization Schedule targeting grade 12 students.

## 2007-2008

- A six-year (2007/2008-2012/2013) measles, mumps, rubella- second dose catch-up targeting:
  - Grade 12 students eligible to receive one dose of MMR vaccine unless they have proof of two doses;
  - Post-secondary students born in 1970 or later eligible to receive one dose of MMR vaccine unless they have proof of two doses;
  - Individuals who are 24 years of age or younger eligible to receive one dose of MMR vaccine unless they have proof of two doses.

## 2007

 Measles, mumps, rubella (MMR) immunization campaign for health care workers completed by March 31, 2007.

# 1997 (April)

 A second dose of measles, mumps, rubella vaccine (MMR) introduced into the NB Routine Immunization Schedule targeting all infants aged 18 months and children born after October 1st, 1995; no catch-up.

#### 1982

Legislation passed making measles vaccine mandatory for school entry (one dose).

### 1979

 Universal introduction of a combined product containing mumps, measles and rubella vaccines (MMR).

# 1977

Measles, rubella vaccine no longer available from Central Serum Depot, MMR vaccine introduced.

# 1967

• (Live attenuated Schwarz strain) offered to one- and two-year-old children and grade one students.

# 1972

Universal introduction of a combined product containing rubella and measles vaccine.

### 1964

Killed measles vaccine approved for use in Canada.

# 1963

Live measles vaccine approved for use in Canada.

## Meningococcal

# 2017 (March)

 Meningococcal B vaccine was added to the "Vaccine Eligibility Criteria for High Risk for individuals with immune-suppressing conditions.

#### 2015

Meningococcal B vaccine provided to individuals greater than or equal to 2 months of age that
have been in close contact with a case of invasive meningococcal disease (IMD) caused by
serogroup B Neisseria meningitides.

## 2009 (November)

• The Public Health Act and Regulation 2009-136 were proclaimed, requiring all children entering school for the first time or attending a licensed daycare to show proof of immunization for meningococcal as described in the Policies- Required Immunization of School Children and Required Immunization of Children Attending Day Care.

# 2007-2008 (school year)

• Meningococcal immunization for grade nine students was enhanced by replacing a monovalent conjugate C vaccine with a quadrivalent conjugate ACYW-I35 vaccine (Menactra®).

# **2007 (January)**

 Meningococcal quadrivalent conjugate ACYW-135 vaccine (Menactra®) provided for all those at increased risk of functional or anatomic asplenia, complement, properdin or factor D deficiency.

# 2005-2006 (school year)

Meningococcal conjugate C vaccine offered to all high school students (grade nine to 12)
who have not had the disease or the vaccine.

# 2005

- Meningococcal conjugate C vaccine available for individuals of all ages who have high risk medical conditions (functional or anatomic asplenia; complement, properdin or factor D deficiency).
- Meningococcal vaccine (ACYW-135): mass immunization in Wes<sup>™</sup>orland, Kent and Albert counties; 16,000 individuals between grade five and to age 19 years using Neis Vac<sup>®</sup> (May and June).

## 2004-2005 (school year)

 Meningococcal conjugate C immunization catch-up for grade nine students, administered by Public Health nurses in the school setting.

# 2004 (September)

• Meningococcal conjugate C vaccine: Introduced into the NB Routine Immunization Schedule at the 12-month-old visit for children born in 2003 and later.

# 2003 (November)

• Meningococcal conjugate C vaccine provided to adults and children < two years of age who have functional/ anatomic asplenia or complement, properdin or factor D deficiency.

#### 2000

• Meningococcal conjugate C vaccine provided to adults and children ≥ two years of who have functional/ anatomic asplenia or complement, properdin or factor D deficiency.

#### 1993

Meningococcal vaccine (ACYW-135): mass immunization in Westmorland and Albert counties; 51,292 individuals between the ages of two and 29 were immunized using Menomune<sup>®</sup>.

# **Monkeypox (Orthopox Simian)**

#### 2022

- August 8th, 2022- first reported case in NB.
- November 3rd, 2022: Added to the Reporting and Diseases Regulation under the Public Health Act as a Part II Notifiable disease
- Imvamune vaccine offered to eligible New-Brunswickers:
  - Cisgender, transgender, or two-spirit individuals of any age who also self-identify as belonging to the gay, bisexual or men-who-have-sex-with-men community and who are or plan to become sexually active with more than one partner; Individuals who self-identify as sex workers; Staff or volunteers in sex-on-premises venues.
  - A second dose at a 28-day interval is recommended for a primary series.

# Mumps

## 2011-2012 (school year)

• MMR grade 12 catch- up program was completed a year sooner than planned (2012/2013) because of a measles outbreak in Quebec that began in January 2011 and an increase in the number of cases occurring throughout Canada, the US and Europe.

#### 2011 (June- August)

• PH clinics were held to provide a second dose of MMR to those students who would have normally received the vaccine as a part of the six-year MMR catch-up campaign in the upcoming two school years. This was done because of a measles outbreak in Quebec that began in January 2011 and an increase in the number of cases occurring throughout Canada, the US and Europe.

# 2011 (May)

• MMRV (**Priorix-Tetra**®) introduced to replace MMR and varicella vaccines given as part of the NB Routine Immunization Schedule.

### 2009 (November)

• The Public Health Act and Regulation 2009-136 were proclaimed, requiring all children entering school for the first time or attending a licensed daycare to show proof of immunization for mumps (as described in the Policies - Required Immunization of School Children and Required Immunization of Children Attending Day Care).

# 2008-2009 (school year)

 Measles, mumps and rubella (MMR II ®) introduced into the Routine Immunization Schedule targeting grade 12 students.

#### 2007-2008

- A six-year (2007/2008-2012-2013) measles, mumps, rubella- second dose catch-up targeting:
  - Grade 12 students eligible to receive one dose of MMR vaccine unless they have proof of two doses.
  - Post-secondary students born in 1970 or later eligible to receive one dose of MMR vaccine unless they have proof of two doses;
  - Individuals who are 24 years of age or younger eligible to receive one dose of MMR vaccine unless they have proof of two doses.

## 2007

 Measles, mumps, rubella (MMR) immunization campaign for health care worker completed by March 31, 2007.

# 2004 (December)

Distribution of Mumpsvax® a live attenuated monovalent mumps vaccine ceased in Canada.

# 1997 (April)

 A second dose of measles, mumps, rubella vaccine (MMR) introduced into the NB Routine Immunization Schedule targeting all infants aged 18 months and children born after October 1st 1995; no catch-up.

### 1982

• Legislation passed making mumps vaccine mandatory for school entry (one dose).

## 1979

 Universal introduction of a combined product containing mumps, measles and rubella vaccines (MMR).

# 1977

• Measles, rubella vaccine no longer available from Central Serum Depot, MMR vaccine introduced.

# 1969

• Mumpsvax® a live, attenuated monovalent mumps vaccine was approved for use in Canada.

### **Pertussis**

# 2018 (March)

• Tdap vaccine offered in every pregnancy, irrespective of previous Tdap immunization history.

# 2015 (October – December)

• In response to a pertussis outbreak in the Moncton area, Tdap vaccination was offered to pregnant women (26 weeks gestation or greater) irrespective of their immunization history. Other strategies included ensuring that everyone was up to date with immunizations, especially those in close contacts with infants and children.

# 2012-2013 (school year)

- Tdap vaccine was provided to Students in grade 8 & 9 in the areas of the province that were not captured in the 2011/2012 pertussis school immunization campaign.
- Tdap was re-introduced into the NB Routine Immunization Schedule for students in grade
   7 as part of the school-based immunization program.

### 2012 (May)

• Adacel®-Polio vaccine (Tdap-IPV) replaced Quadracel® vaccine (DTaP-IPV) for the pre-school booster dose (5th dose only) for immunization against diphtheria, tetanus, pertussis and polio.

# 2011-2012 (school year)

- Due to a pertussis outbreak, Tdap vaccine was provided to students in grades 6, 7 & 8 in the two most affected areas (Moncton and Saint John).
- School aged children and adolescents < 18yrs of age in close contact with infants < 1 yr of age and have not received a pertussis containing vaccine in the last five years were offered Tdap vaccine.
- Adults > 18yrs of age in close contact with infants < 1 yr of age and have not received a pertussis containing vaccine in the adulthood were offered Tdap vaccine.
- Pregnant women in the third trimester may be offered Tdap (optional and left to the discretion of the MOH in the affected areas).

#### 2011 (school year)

- Tdap added to the NB Routine Immunization Schedule for adults to replace one of the Td doses given every ten years (April 15, 2011).
- Tetanus, diphtheria and acellular pertussis (Tdap) provided to all health care workers in the acute care setting who care for infants under 12 months of age.
- Tetanus, diphtheria and acellular pertussis (Tdap) provided to parents of infants born on or after January 1, 2011, as part of a "cocoon program". Mothers immunized post-partum prior to discharge while fathers/partners will be immunized by Public Health .

#### 2009 (November)

• The Public Health Act and Regulation 2009-136 were proclaimed, requiring all children entering school for the first time or attending a licensed daycare to show proof of immunization for pertussis (as described in the Policies- Required Immunization of School Children and Required Immunization of Children Attending Day Care).

# 2007 (December)

The pediatric (DTaP-IPV-Hib) vaccine Pentacel<sup>™</sup> was replaced by Pediacel<sup>®</sup>, a ready-to-use, fully liquid version of Pentacel<sup>™</sup>.

#### 2006-2007

• Tetanus, diphtheria and acellular pertussis (**Boostrix**® or **Adacel**®) given to grade six students as part of a three-year catch-up program, ending in the 2008/2009 school year.

# 2005-2006 (school year)

Adolescent Tdap booster moved from grade 11 to grade nine, provided by PHNs as part
of a school-based program.

# 2004-2005 (school year)

- Tetanus-diphtheria-acellular pertussis (**Adacel**®) vaccine replaces the Td booster for the adolescent booster.
- Tdap catch-up for grades nine-11 inclusive provided by PHNs as part of a school-based program.

#### 1998

• Introduction of an acellular pertussis vaccine combined with diphtheria, tetanus, Haemophilus influenzae type B (Hib) and polio (**Pentacel**<sup>TM</sup>) or combined with diphtheria, tetanus, and polio (**Quadracel**®).

# 1997-1998

Acellular pertussis vaccine replaced whole cell vaccine.

#### 1994

• Introduction of (**Penta**<sup>TM</sup>), a vaccine containing injectable polio vaccine, diphtheria, pertussis, tetanus and *Haemophilus influenzae* type b.

#### 1980's

· Whole-cell pertussis vaccine replaced by adsorbed whole cell vaccine.

#### 1949

• Tetanus toxoid: given alone or in combination with diphtheria and pertussis.

#### 1945

Pertussis vaccine given alone or in combination with diphtheria toxoids introduced.

#### 1940's

Whole–cell pertussis vaccine was introduced in Canada.

# **Pneumococcal**

#### 2022

• Expansion of the distribution of publicly funded Pneumovax 23 vaccine to community pharmacies for individual 65 years and older

## 2015-16

 On November 25, 2015, Victorian Order of Nurses (VON) ceased operations in New Brunswick resulting in the termination of the contract for pneumococcal immunization services

# 2014 (June)

 Expansion of Prevnar 13 to include the following groups who have not previously received Pneu-C-13 vaccine: children and adolescents (5-17 years of age) at high risk of IPD, children up to 18 years of age with asthma, adults with human immunodeficiency virus (HIV) or immunosuppressive conditions (eligible for 1 dose), and hematopoietic stem cell (HSCT) recipients (eligible to receive 3 doses).

# 2011 (August)

• Expansion of **Prevnar**®13 to include all those children through five years of age who have not already completed a series Pneu-C-7 or Pneu-C-10.

#### 2010

- **Prevnar**® **13** replaced **Prevnar**® (7 valent) in the NB Routine Immunization Schedule on July 1, 2010 with the two primary doses given at two and four months, and a booster at 12 months. A catch-up dose was offered to children aged 12 to 23 months until the end March 31, 2011.
- Children through five years of age, with conditions which place them at risk of pneumococcal disease are eligible to receive a dose of **Prevnar®13** regardless of a previously completed Pneu-C-7 or Pneu-C-10 series.

# 2009 (November)

• The Public Health Act and Regulation 2009-136 was proclaimed requiring all children attending a licensed daycare shall show proof of immunization for pneumococcal disease (as described in the Policies- Required Immunization of Children Attending Day Care).

#### 2005

• Pneumococcal conjugate vaccine (**Prevnar**®) introduced into the NB Routine Immunization Schedule at age two, four, six, and 18 months for children born in 2005 and later (March/April).

#### 2003

• Pneumococcal conjugate vaccine (**Prevnar**™) provided to children < five years of age who have high risk medical conditions.

#### 1984

Pneumococcal polysaccharide 23 valent vaccine replaces 14 valent vaccine.

# Polio vaccine (OPV/IPV)

#### 2012 (May)

• Adacel®-Polio vaccine (Tdap-IPV) replaced Quadracel® vaccine (DTaP-IPV) for the preschool booster dose (5th dose only) for immunization against diphtheria, tetanus, pertussis and polio.

## 2009 (November)

• The Public Health Act and Regulation 2009-136 were proclaimed, requiring all children entering school for the first time or attending a licensed daycare to show proof of immunization for polio (as described in the Policies- Required Immunization of School Children and Required Immunization of Children Attending Day Care.

# 2007 (December)

• The pediatric (DTaP-IPV-Hib) vaccine **Pentacel**<sup>TM</sup> was replaced by **Pediacel**®, a ready-to-use, fully liquid version of **Pentacel**<sup>TM</sup>.

#### 1994

• Polio vaccine changed from oral to injectable polio vaccine: combined with diphtheria, pertussis, tetanus and haemophilus influenzae type b (**Penta**<sup>TM</sup>).

### 1989

Polio (oral) vaccine: elimination of the six-month dose.

#### 1982

• Legislation enacted making polio vaccine mandatory for school entry (three doses).

#### 1965

• Oral vaccine: province-wide immunization offered to all one to 30 year old's (83% acceptance rate).

#### 1962

- Trivalent oral poliovirus vaccine (OPV) introduced in Canada.
- All provinces in Canada switched from IPV to OPV.

#### 1961

Monovalent oral polio licensed.

#### 1955

Introduction of inactive (IPV) in Canada.

#### Rabies

#### 2015

 Rabies pre-exposure vaccine provided to individuals hired to retrieve abnormally acting wildlife as part of rabies surveillance activities for 2015 only.

Note - wildlife surveillance is a part of the program to distribute vaccine to wildlife population.

## 2009 (September)

Rabies vaccine for pre-exposure removed from the Eligibility Criteria for Publicly Funded Vaccine.

#### 2005

 Rabies PEP initiated to ERs and completed by PH as a part of the NB Rabies Management Guidelines. Vaccine and immunoglobulin no longer released to community practices.

## 2001 (May)

 Rabies pre-exposure vaccine provided to persons at high risk of exposure and staff and volunteers of not-for profit animal organizations are offered at a reduced cost through PH offices.

### Rotavirus

# 2018 (May)

- RotaTeq® vaccine (Merck Canada Inc.) replaced ROTARIX® (GlaxoSmithKline Inc.) for the routine infant immunization program.
- This vaccine will be administered at 2 months, 4 months, and 6 months of age (the infant must be under 15 weeks of age for 1st dose and under 8 months of age for third dose).

# 2017 (June)

Introduction of Rotavirus vaccine into routine childhood immunization schedule at 2 and 4
months of age for infants who meet the age requirements (under 15 weeks of age for 1st dose
and under 8 months of age for second dose).

### Rubella

## 2011-2012 (school year)

• MMR grade 12 catch- up program was completed a year sooner than planned (2012/2013) because of a measles outbreak in Quebec that began in January 2011 and an increase in the number of cases occurring throughout Canada, the US and Europe.

# 2011 (June- August)

• PH clinics were held to provide a second dose of MMR to those students who would have normally received the vaccine as a part of the six-year MMR catch-up campaign in the upcoming two school years. This was done because of a measles outbreak in Quebec that began in January 2011 and an increase in the number of cases occurring throughout Canada, the US and Europe.

### 2011 (May)

• MMRV (**Priorix-Tetra**®) introduced to replace MMR and varicella vaccines given as part of the Routine Immunization Schedule for children.

## 2009 (November)

• The Public Health Act and Regulation 2009-136 were proclaimed, requiring all children entering school for the first time or attending a licensed daycare to show proof of immunization for rubella (as described in the Policies- Required Immunization of School Children and Required Immunization of Children Attending Day Care).

## 2008-2009 (school year)

• Measles, mumps and rubella (MMR II ®) introduced into the Routine Immunization Schedule targeting grade 12 students.

# 2007

 Measles, mumps, rubella (MMR) immunization campaign for health care worker completed by March 31, 2007.

#### 2007-2008

- A six-year (2007/2008-2012-2013) measles, mumps, rubella- second dose catch-up targeting:
  - Grade 12 students eligible to receive one dose of MMR vaccine unless they have proof of two;
  - Post-secondary students born in 1970 or later eligible to receive one dose of MMR vaccine unless they have proof of two;
  - Individuals who are 24 years of age or younger eligible to receive one dose of MMR vaccine unless they have proof of two doses.

### 1997 (April)

 A second dose of measles, mumps, rubella vaccine (MMR) introduced into the NB Routine Immunization Schedule targeting all infants aged 18 months and children born after October 1st 1995; no catch-up.

#### 1982

• Legislation passed making rubella vaccine mandatory for school entry (one dose).

#### 1979

 Universal introduction of a combined product containing mumps, measles and rubella vaccines (MMR).

#### 1977

• Measles, rubella vaccine no longer available from Central Serum Depot, MMR vaccine introduced.

#### 1972

Universal introduction of a combined product containing rubella and measles vaccine.

#### 1970

Province-wide mass immunization of all school children in grades one to four (85 percent acceptance rate).

### 1969

· Rubella vaccine introduced in Canada

#### SARS-CoV-2

#### 2020 (December) - 2023

- The World Health Organization declared the novel coronavirus (COVID-19) outbreak a global pandemic.
- The COVID-19 mRNA vaccine was the first vaccine successfully developed and administered to humans. See <u>sub-appendices 4.3.4</u> in this document for full vaccine eligibility details.

# Smallpox

#### 1980

• The World Health Assembly announced that the world was free of smallpox and recommended that all countries cease vaccination.

#### 1900

• Smallpox vaccine: vaccination process was referred to as an operation. The smallpox vaccine was the first vaccine successfully developed and administered to humans.

# **Tetanus**

# 2018 (March)

Tdap vaccine offered in every pregnancy, irrespective of previous Tdap immunization history.

## 2012-2013 (school year)

- Tdap vaccine provided to students in grade 8 & 9 in the areas of the province that were not captured in the 2011/2012 pertussis school immunization campaign.
- Tdap was re-introduced into the NB Routine Immunization Schedule for students in grade
   7 as part of the school-based immunization program.

# 2012 (May)

 Adacel®-Polio vaccine (Tdap-IPV) replaced Quadracel® vaccine (DTaP-IPV) for the pre-school booster dose (5th dose only) for immunization against diphtheria, tetanus, pertussis and polio.

## 2011-2012 (school year)

- Due to a pertussis outbreak, Tdap vaccine was provided to students in grades 6, 7 & 8 in the two most affected areas (Moncton and Saint John).
- School aged children and adolescents < 18yrs of age in close contact with infants < 1 yr of age and have not received a pertussis containing vaccine in the last five years were offered Tdap vaccine.
- Adults > 18yrs of age in close contact with infants < 1 yr of age and have not received a pertussis containing vaccine in the adulthood were offered Tdap vaccine.
- Pregnant women in the third trimester may be offered Tdap (optional and left to the discretion of the MOH in the affected areas).

# 2011 (school year)

- Tdap added to the NB Routine Immunization Schedule for adults to replace one of the Td doses given every ten years (April 15, 2011).
- Tetanus, diphtheria and acellular pertussis (Tdap) provided to all health care workers in the acute care setting who care for infants under 12 months of age.
- Tetanus, diphtheria and acellular pertussis (Tdap) provided to parents of infants born on or after January 1, 2011, as part of a "cocoon program". Mothers immunized post-partum prior to discharge while fathers/partners will be immunized by Public Health.

# 2009 (November)

• The Public Health Act and Regulation 2009-136 were proclaimed, requiring all children entering school for the first time or attending a licensed daycare to show proof of immunization for tetanus (as described in the Policies- Required Immunization of School Children and Required Immunization of Children Attending Day Care.

# 2007 (December)

The pediatric (DTaP-IPV-Hib) vaccine PentaceI<sup>™</sup> was replaced by PediaceI<sup>®</sup>, a ready-to-use, fully liquid version of PentaceI<sup>™</sup>.

#### 2006-2007

• Tetanus, diphtheria and acellular pertussis (**Boostrix**® or **Adacel**®) given to grade six students as part of a three-year catch-up program, ending in the 2008/2009 school year.

# 2005-2006 (school year)

Adolescent Tdap booster moved from grade 11 to grade nine, provided by PHNs as part
of a school-based program.

# 2004-2005 (school year)

- Tetanus-diphtheria-acellular pertussis (**Adacel**®) vaccine replaces the Td booster for the adolescent booster.
- Tdap catch-up for grades nine-11 inclusive provided by PHNs as part of a school-based program.

#### 1998

• Introduction of an acellular pertussis vaccine combined with diphtheria, tetanus, haemophilus influenzae type B (Hib) and polio (**Pentacel**<sup>TM</sup>) or combined with diphtheria, tetanus, and polio (**Quadracel**®).

#### 1994

• Introduction of (Penta<sup>TM</sup>), a vaccine containing injectable polio vaccine, diphtheria, pertussis, tetanus and *Haemophilus influenzae* type b.

#### 1982

Legislation enacted making tetanus vaccine mandatory for school entry (three doses).

#### 1949

Given alone or in combination with diphtheria and pertussis.

# 1940

Introduction of tetanus toxoid.

# **Tuberculosis (BCG)**

#### 2011 (June)

 Eligibility criteria for publicly funded PPD clarified highlighting that third party occupational, educational and travel requests are not covered and that consultation with the RMOH is required prior to release of product to or for institutional settings including nursing homes and correctional facilities.  The use of the BCG vaccine in Canada https://www.canada.ca/en/publichealth/services/diseases/tuberculosis.h™l

#### 1970s

- Discontinued use in nursing students.
- Routine mass tuberculosis testing of school children discontinued (1976)

#### 1949

· Routine use for nursing students began.

BCG Usage in Canada- <u>Bacille Calmette-Guérin (BCG) vaccine: Canadian Immunization Guide - Canada.ca</u>

## Varicella

### 2015-2016 (school year)

Introduction of varicella catch-up program (eight years) targeting individuals born 2000-2008 and provided through the school immunization program. For the school year 2015/16, students in grades 9 & 10 who were born in 2000 & 2001 were eligible to receive a second dose of varicella vaccine. For the school years 2016/17 to 2022/23, the vaccine will be given in grade 9 to eligible students.

## 2011

- MMRV (**Priorix-Tetra**®) introduced to replace MMR and varicella vaccines given as part of the Routine Immunization Schedule for Children (May).
- Second dose introduced into the NB Routine Immunization Schedule at 18 months of age (January).

### 2009 (November)

• The Public Health Act and Regulation 2009-136 were proclaimed, requiring all children entering school for the first time or attending a licensed daycare to show proof of immunization for varicella (as described in the Policies- Required Immunization of School Children and Required Immunization of Children Attending Day Care).

#### 2004 (September)

- Single dose introduced into the NB Routine Immunization Schedule at the 12-month-old visit for children born in 2003 or later.
- Catch-up for four-year-old children presenting for their pre-school booster.

# 4.3.3 - School Program

Td/Tdap (routine and catch-up)

School Year											
	2003-2004 & earlier	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012	2012- 2013	
	Т						Tda				
	d						Р				
Grade 6				Χı	Χı	Χı			<b>X</b> <sup>2</sup>		
Grade 7									<b>X</b> <sup>2</sup>	Χ	Delivered in
Grade 8									<b>X</b> <sup>2</sup>	<b>X</b> <sup>3</sup>	subsequent years to grade
Grade 9		Χı	Χ	Χ	Χ	Χ				<b>X</b> 3	7 students as
Grade 10		Χı									part of the routine school immunization program
Grade II	Х	Χı									

<sup>1-</sup> Catch-up for students who were immunocompetent

<sup>2-</sup> Outbreak response: In school year 2011-2012, students in grade 6, 7, & 8 in Regions 1 & 2 received Tdap 3- Outbreak response: In school year 2012-2013, students in grade 8 & 9 in Regions 3, 4, 5, 6 & 7 received Tdap

Meningococcal (routine and catch-up)								
School Year								
	2004-2005	2005-2006	2006-2007	2007-2008				
		Men- C		Men-C-ACYW-135				
Grade 9	X	Χı	Х	Х	Delinendia ankaramatan			
Grade 10		Χı			Delivered in subsequent years to grade 9 students as part of the routine school immunization program			
Grade II		Χı						
Grade 12		Χı						

#### 1 - Catch-up for students who were immunocompetent

Note: In May/June 2005, students in grades 5 - 12 and individuals up to 19 years of age were offered Men-C vaccine as part of a mass immunization campaign (Greater Moncton area - Wes<sup>TM</sup>orland, Kent and Albert counties).

HPV 4 – girls (routine and catch-up)							
School Year							
	2008-2009	2009-2010 From school years 2011-2012 to 2016-2017, HPV 4 vacc					
Grade 7	Х	Х	was given to grade 7 girls as part of the routine school immunization program				
Grade 8	Χı						

#### 1 - Catch-up for grade 8 girls

Note: In some areas of the province, HPV was not delivered in the 2009/2010 school year because of the HINI pandemic immunization campaign. In those areas, HPV vaccine was offered to girls in both grades 7 & 8 (as a catch-up) in the 2010/2011 school year.

HPV 9 – boys and girls (routine)		
School Year		
2017- 2018	Delivered in subsequent years to grade 7 students as part of	

Grade 7	X	the routine school immunization program.
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MMR (catch-up)					
School Year					
	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012
Grade II					X*
Grade 12	X*	X*	X*	X*	X*

<sup>\*</sup> Catch-up

Hepatitis B (catch-up)		
School Year		
	1995-1996 to 2004-2005	
incl.		
Grade 4	X*	

<sup>\*</sup> Catch-up

Varicella (catch-up)								
	School Year							
	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Grade 9	X*	X*	X*	X*	X*	X*	X*	X*
Grade 10	X*							
* Catch-up	•		•	•	•		•	

	4.3.4 – COVID-19 Pandemic Vaccine Timeline
2023	
_	Pfizer Comirnaty Bivalent BA.4/BA.5 Booster vaccine for 5-11 (pediatric)  • Eligibility opened in pharmacies (previously opened in PH zones in December 2022)
January	<ul> <li>Novavax Nuvaxovid vaccine</li> <li>Eligibility opened as a first booster for those 18 and over in pharmacies</li> <li>Eligibility opened as primary series doses for those 12 and over (previously 18 and over) in pharmacies</li> </ul>

2022	
	New vaccine  Pfizer Comirnaty Bivalent BA.4/BA.5 Booster vaccine for 5-11 (pediatric)  Eligibility opened in Public Health zones over the holidays to:  All children aged between 5 and 11 who have not previously received a booster. No distinction between high risk and
December	healthy, if 5 months (minimum of 3 months accepted) since last COVID-19 primary series dose or infection.  Those who have already received a monovalent booster, with exception of the interval must be a minimum of 5 months (i.e. not accepting 3 months minimum).
	New vaccine - Pfizer Comirnaty Pediatric 6mo - under 5 (infant)
	<ul> <li>Eligibility opened for primary series doses to:</li> <li>6 months to under 5 years old</li> </ul>
November	<ul> <li>Novavax Nuvaxovid vaccine</li> <li>Approved as a first booster for those 18 and over (previously given with informed consent)</li> <li>Approved as primary series doses for those 12 and over (previously 18 and over)</li> </ul>
	Moderna Spikevax Bivalent BA.I booster vaccine
	<ul> <li>Eligibility opened for first bivalent boosters to:</li> <li>Long Term Care residents (with Influenza)</li> <li>All individuals 18 and over</li> </ul>
October	New vaccine - Pfizer Comirnaty Bivalent BA.4/BA.5 booster vaccine
	<ul> <li>Eligibility expanded for first bivalent boosters to:</li> <li>All those 12 and older</li> </ul>
	Pfizer Comirnaty original vaccine for 5-11 (pediatric)
	<ul> <li>Eligibility opened for first (monovalent) boosters to:</li> <li>Children aged 5-11</li> </ul>
	New vaccine - Moderna Spikevax Bivalent BA.I Booster vaccine
September	<ul> <li>Eligibility initially opened for a first bivalent booster to:</li> <li>Individuals 50 and older</li> <li>Individuals aged 12-17 who are immunocompromised or have a high-risk medical condition</li> </ul>
	<ul> <li>Individuals 18 and older who live in a First Nations community</li> </ul>

	Pfizer Comirnaty and Moderna Spikevax mRNA vaccines (adult)
	<ul> <li>Eligibility for a second booster expanded to:</li> <li>Individuals 18 and over</li> </ul>
July	New vaccine - Moderna Spikevax vaccine for 6months to 5 years (infant)
	<ul> <li>Eligibility opened for primary series doses to:</li> <li>Children aged 6 months to five years and 11 months</li> </ul>
	Pfizer Comirnaty and Moderna Spikevax mRNA vaccines (adult)
April	<ul> <li>Eligibility opened for second booster doses to:         <ul> <li>Individuals 70 and over</li> <li>Long Term Care residents</li> <li>FN, Inuit and Metis including non-Indigenous household members aged 18 and over</li> <li>Individuals 50-69</li> </ul> </li> </ul>
	New vaccine - Novavax Nuvaxovid vaccine
	<ul> <li>Eligibility opened for primary series doses to:</li> <li>Individuals 18 and over</li> </ul>
	<ul> <li>New Vaccine - Moderna Spikevax mRNA (pediatric)</li> <li>On March 17, 2022, Health Canada authorized the use of the Moderna Spikevax (50 mcg) COVID-19 vaccine in children 6 to 11 years of age.</li> </ul>
March	<ul> <li>On March 24th, eligibility opened for first primary series doses:</li> <li>As an alternative to Pfizer-BioNTech Comirnaty (10 mcg dose).         The use of Pfizer-BioNTech Comirnaty is preferred to Moderna Spikevax (50 mcg dose) to start or continue the primary vaccine series due to rare risk of myocarditis/pericarditis.     </li> </ul>
	Preferred for immunocompromised individuals: NACl's indirect data from adult populations suggest Moderna's Spikevax induce slightly higher vaccine effectiveness and seroconversion rate compared to Pfizer-BioNTech Comirnaty. A 3-dose primary series may be considered for some immunocompromised individuals 6 to 11 years of age.
	SUPPLY UPDATE: Pfizer Comirnaty vaccine (adult)
February	<ul> <li>People 30 and older may now resume booking an appoin<sup>™</sup>ent to receive the Pfizer-BioNTech Comirnaty COVID-19 vaccine for their booster shot</li> </ul>
January	Pfizer Comirnaty and Moderna Spikevax mRNA vaccine (adult)

	_ <del>_</del>			
	<ul> <li>Eligibility for first booster doses expanded to:</li> <li>Individuals aged 18-49</li> </ul>			
	NATIONAL SUPPLY SHORTAGE: Pfizer Comirnaty Vaccine (adult)			
	<ul> <li>Limited national supply of Pfizer vaccine. NB vaccination clinics will exclusively offer the COVID-19 Moderna Spikevax (adult) vaccine to individuals over the age of 30. Current eligible groups will be offered the Moderna vaccine at booster clinics, regardless of which vaccine was administered for previous doses.</li> </ul>			
2021				
	New vaccine - Janssen (Johnson and Johnson) vaccine			
	<ul> <li>A limited amount of the Janssen COVID-19 vaccine is available for the one-dose primary series vaccine to:         <ul> <li>Individuals aged 18 years of age and older through special appointments only and informed consent</li> <li>Individuals living/frequenting shelters and those who are homeless</li> </ul> </li> </ul>			
December	<ul> <li>Pfizer Comirnaty and Moderna Spikevax mRNA vaccine (adult)</li> <li>Eligibility for first boosters expanded to:         <ul> <li>Individuals 50 and over</li> <li>Members of FN communities 12 and over</li> <li>Health Care Personnel including those working in LTC and immediate household members 18 and over</li> <li>School personnel and early childhood education including immediate household family members 18 and over</li> <li>Moderately to severely immunocompromised individuals 18 and over</li> </ul> </li> </ul>			
November	Pfizer Comirnaty and Moderna Spikevax mRNA vaccine (adult)  • Eligibility for first booster doses expanded to:  • Individuals 65 and over  • School personnel 18 and over  • Those having received one or two doses of the AstraZeneca vaccine  • International travelers with mixed first 2 doses and those who must travel outside North America for work, education or medical procedures  New vaccine  • Pfizer Comirnaty mRNA vaccine for 5-11yr (pediatric)  • Eligibility opened for first primary series doses to:			

	All children aged 5-11			
	Pfizer Comirnaty and Moderna Spikevax mRNA vaccine (adult)			
October	<ul> <li>First mRNA boosters started</li> <li>Eligibility for first boosters initially administered to:         <ul> <li>Early Oct: Residents in nursing homes, long-term care and ARFs</li> <li>Late Oct: Health Care Personnel including those working in LTC facilities and residents of FN communities</li> </ul> </li> </ul>			
	Pfizer Comirnaty and Moderna Spikevax mRNA vaccine (adult)			
September	<ul> <li>Eligibility opened for third primary series doses to:</li> <li>Moderately to severely immunocompromised individuals only (NACI recommends all moderately to severely immunocompromised individuals receive a 3-dose primary series)</li> </ul>			
	Pfizer Comirnaty mRNA vaccine (adult)			
	<ul> <li>Eligibility expanded for primary series doses to:</li> <li>Children "turning 12" in the coming year to help with return to school</li> </ul>			
August	Moderna Spikevax mRNA vaccine (adult)			
	Approved for 12 and over (previously 16 and over)			
	Pfizer Comirnaty and Moderna Spikevax mRNA vaccine (adult)			
lune	<ul> <li>Eligibility opened to the general public for second primary series doses to:</li> <li>Pfizer Comirnaty: Individuals 12 and over</li> <li>Moderna Spikevax: Individuals 16 and over</li> </ul>			
<b>,</b>	AstraZeneca/COVISHIELD			
	<ul> <li>Eligibility opened for second primary series doses to:</li> <li>Those 55 or older with informed consent</li> </ul>			
	AstraZeneca/COVISHIELD			
May	<ul> <li>When the vaccine is in ample supply: The use of AZ continues to be offered as an option to people who are over 55 with informed consent</li> <li>When the vaccine is in limited supply: Offered to those who are homebound with informed consent.</li> </ul>			
	Pfizer Comirnaty mRNA vaccine (adult)			
	Approved for I2 and over (previously I8 and over)			

	Pfizer Comirnaty and Moderna Spikevax mRNA vaccine (adult)
	<ul> <li>Eligibility for a first primary series dose gradually expanded to:         <ul> <li>Individuals 12-15 (Pfizer only) with complex medical conditions or two or more select complex medical conditions</li> <li>First Nations 12-15 (Pfizer only)</li> <li>Individuals 50 and older</li> <li>Individuals 40 and older</li> <li>Individuals 30 and older</li> <li>Individuals 18 and older</li> </ul> </li> <li>Late May: All Individuals over the ages of 12 (12- 17 Pfizer only).</li> </ul>
	Pfizer Comirnaty and Moderna Spikevax mRNA vaccine (adult)
	<ul> <li>The Province moved away from opening eligibility to priority groups. Now opening eligibility per age cohorts.</li> <li>Eligibility for first primary series doses expanded to:</li> </ul>
	<ul><li>Individuals 75 and over</li><li>Individuals 70 and older</li></ul>
April	<ul> <li>All pregnant women regardless of medical conditions.</li> </ul>
	<ul> <li>Individuals 65 and older</li> <li>Individuals 40 and over with 3 or more complex medical chronic</li> </ul>
	medical conditions
	<ul> <li>Additional groups: Homeless/shelter; provincial correctional inmates and staff; residents and staff of communal settings; residents who are housebound/unable to travel to a clinic (with primary care provider referral)</li> </ul>
	New vaccine - AstraZeneca/COVISHIELD
	<ul> <li>Eligibility for a first primary series dose initially briefly opened to:</li> <li>Individuals 18 and over</li> </ul>
	<ul> <li>Shortly after: Provincial government paused administering the vaccine to people under 55, following an NACI announcement. Eligibility reopened to:         <ul> <li>Individuals 55 and over.</li> </ul> </li> </ul>
March	Pfizer Comirnaty and Moderna Spikevax mRNA vaccine (adult)
	<ul> <li>Pharmacies began to offer first primary series doses of the COVID-19 vaccines on March 17<sup>th</sup></li> </ul>
	Eligibility for a first mRNA primary series dose expanded to:
	<ul> <li>Residents of First Nations communities aged 16 and over</li> <li>Individuals 85 and over</li> </ul>
	<ul> <li>Individuals 85 and over</li> <li>Individuals with 3 or more select complex medical conditions</li> </ul>
	<ul> <li>First responders (police and firefighters)</li> </ul>

	<ul> <li>Health-care workers who have not yet been vaccinated and other allied health professionals who have close contact with patients (including pharmacists and dentists)</li> <li>Individuals 80 and older</li> <li>High school teachers and staff.</li> <li>Rotational workers, regular cross-border commuters and truck drivers.</li> </ul>
February	Pfizer Comirnaty and Moderna Spikevax mRNA vaccine (adult)  Eligibility continued for same priority groups as January
	Pfizer Comirnaty and Moderna Spikevax mRNA vaccine (adult)
January	<ul> <li>Eligibility for a first mRNA primary series dose to identified priority groups:</li> <li>All Long-term Care staff and residents (continued)</li> <li>Health Care Workers with direct patient contact (continued)</li> <li>Left over clinic doses can be given to immunizers or frontline HCW that are available</li> </ul>
2020	
December	New and first COVID-19 vaccine - Pfizer-BioNTech mRNA vaccine  Approved initially for 18 and over  Eligibility opened for a first primary series dose to identified priority groups:  All Long-term Care staff and residents  Health Care Workers with direct patient contact  December 19th, 2020 - First mRNA primary series dose (Pfizer) in NB administered to a LTC resident.  New vaccine and second COVID-19 vaccine - Moderna mRNA vaccine  Approve initially for 16 and over  Eligibility opened for a first primary series dose to identified priority groups:  All Long-term Care staff and residents  Health Care Workers with direct patient contact