

<p>Newfoundland and Labrador Immunization Manual</p> <p><b>Section 2</b></p>	<p><b>Routine Immunization Schedules</b></p>
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## 2.1 Routine Immunization Schedules

### Background

The immunization schedules in Newfoundland and Labrador for infants, children and adults and those not immunized in early infancy are based on recommendations of the National Advisory Council on Immunization, as published in the *Canadian Immunization Guide (CIG)*.

### Policy on Routine Immunization Schedules

#### Policy

As a general policy, routine immunization of infants and immunization of children and adults who have not been immunized in early infancy is conducted as per the recommended schedules in the *Canadian Immunization Guide*. This Guide can be found @ <http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php>

The recommended schedules are adhered to even if there is an interruption in the visits. A person's immunization series does not need to be restarted following an interruption. An interruption may be defined as a length of time greater than the recommended time between doses.

Many of these vaccines can be given at different times and provinces vary for their schedule. In Newfoundland and Labrador the following is the schedule as of June 2018 and includes:

Vaccine	Age
DTaP-IPV-Hib	2, 4, 6 & 18 months
Rotavirus	2, 4, and 6 months
Pneu-C-13	2, 4, & 12 months, high risk children 2, 4, 6, & 12 months
MMRV	12 & 18 months
Men-C-C	12 months
Inf	All residents of NL $\geq$ 6 months of age (yearly)
DTaP-IPV or Tdap-IPV	4- 6 years
Men-C -ACYW135	Grade 4
Hepatitis B	Grade 6 (2 doses)
HPV	Grade 6 (2 doses)
Tdap	Grade 9 and all adults as a booster

## 2.2 Routine and Delayed Immunization Schedules for Infants and Children

Separate immunization schedules are provided for the following groups:

- Children Beginning Series in Early Infancy: Table 2.2-1
- As part of the School Health Program: Table 2.2-2
- Children < 7 years of age inclusive who have not received previous immunizations: Table 2.2-3
- Children  $\geq 7$  - 17 years who have not received previous immunizations: Table 2.2-4
- Adults  $\geq 18$  years who have not received previous immunizations: Table 2.2-5.

**Table 2.2-1: Newfoundland Labrador Immunization Schedule for Children Beginning Series in Early Infancy June 2018**

This schedule is for infants who are at least eight weeks or two months old at the time of their first immunization

Age	Vaccine
8 weeks or 2 months	DTaP-IPV-Hib & Pneumococcal conjugate Rot*
4 months	DTaP-IPV-Hib & Pneumococcal conjugate Rot*
6 months	DTaP-IPV-Hib** Rot*
6 months - older ***	Inf (Fall & Winter only )
12 months	MMRV Meningococcal conjugate Pneumococcal conjugate
18 months	DTaP-IPV-Hib MMRV
4-6 years	DTaP-IPV/Tdap-IPV

**DTaP-IPV-Hib** - protects against diphtheria, tetanus, pertussis, polio and Haemophilus influenza b

**MMRV**- protects against measles, mumps, rubella & varicella (chickenpox)

**DTaP-IPV**- protects against diphtheria, tetanus, pertussis, and polio, minimum of 6 months after 18 month dose

**Tdap-IPV**-protects against tetanus, diphtheria, pertussis and polio, minimum of 6 months after 18 month dose

**Pneu-C-13** - protects against 13 types of pneumococcal disease

**Men-C** - protects against type C meningococcal disease

**Inf**-protects against influenza

**Rot**: Oral vaccine protects from rotavirus

\*Do not give as injection. **This is an oral vaccine.**

\*\* Children at high risk for invasive pneumococcal disease should receive Pneu-C-13 as an additional dose at 6 months

\*\*\*All children 6 months & older are eligible for the influenza vaccine

**Table 2.2-2: As part of the School Health Program:**

Grade 4	Men-C-ACYW135
Grade 6	HPV (2 doses) HB (2 doses)
Grade 9	Tdap

**Men-C-ACYW135** - protects against group A, C, Y & W135 meningococcal disease

**Tdap** - protects against tetanus, diphtheria and pertussis

**HPV** - protects against human papillomavirus

**HB** - protects against hepatitis B virus

**Table 2.2-3: Newfoundland and Labrador Immunization Schedule for Children less than 7 years of age who have not received previous immunizations**

Time of Immunization	DTaP-IPV	Hib¶	MMRV**	Pneu-C¶	Men-C
First dose*	X	(X)	X	(X)	X
2 months after last dose	X	(X)	X	(X)	
2 months after last dose	X	(X)		(X)	
6-12 months after last dose	X	(X)			
4-6 years of age (must be at least 6 months from last dose)	X†‡				

\*While multiple injections may be given at one visit, discretion may be used when multiple injections above the routine number are due, ensuring that MMR and Var are live vaccines and must be given at the same visit or at least 4 weeks or 28 days apart.

¶ Vaccine requirement and type depends upon the age at which the schedule begins, see product monograph of vaccine.

\*\* Eligible for 2 doses of Varicella vaccine if born Jan 1, 2013 or after; or if born within the eligible cohort up to December 31, 2012 and is 13 years of age or older when received their first dose of Varicella vaccine. There should be at least 4 weeks between 2 doses of Varicella vaccine.

† Not necessary if previous dose given after 4 years of age.

‡ Minimum time required between 4<sup>th</sup> and 5<sup>th</sup> dose DTaP-IPV, Tdap-IPV is 6 months.

( ) Symbols with brackets imply that these doses may not be required depending upon age of the person.

**Table 2.2-4: Newfoundland and Labrador Immunization Schedule for Children  
≥ 7 - 17 years who have not received previous immunizations**

Time of Immunization	Tdap-IPV	Tdap	MMRV $\phi$ ‡	Men-C-C	Men-C-ACYW135	HB	HPV¶
First dose*	X		X	X Children up to end of grade 3	X Children in grade 4 or greater	X	X
1 month after last dose			X			(X)	
2 months after last dose	X						(X)
6 months after first dose						X	X
6-12 months after last dose	X						
10 years after last dose of Tdap		X					

\* While multiple injections may be given at one visit, discretion may be used when multiple injections above the routine number are due, ensuring that MMR and V are live vaccines and must be given at the same visit or at least 4 weeks or 28 days apart.

$\phi$  Depending on age MMRV may be used for first and second dose given at least 4 weeks apart.

‡ Eligible for 2 doses of Varicella vaccine if born Jan 1, 2013 or after; or if born within the eligible cohort up to December 31, 2012 and is 13 years of age or older when received their first dose of Varicella vaccine. A minimum 4 week interval is needed between doses.

¶ HPV vaccine implemented in September 2007 for grade 6 girls (only those born 1994 and after are eligible), changed to 2 doses in 2015, for ages older than 12 years please refer to the product monograph. Beginning September 2017 males and females in grade 6 are both eligible.

( ) Symbols with brackets imply that these doses may not be required depending upon age of the person

## 2.3 Recommended Immunizations for Adults

**Table 2.3-1: Newfoundland and Labrador Immunization Schedule for Adults (≥18 years of age) who have not received previous immunizations**

Time of Immunization	Tdap -IPV	Tdap (Td if available)	MMR	Inf	Pneu-C-13 and Pneu-P-23
First dose	X		X*	Yearly	All persons 65 years and older can receive one dose of Pneu-P-23 once in a lifetime.  If high risk give Pneu-C-13 on first visit and Pneu-P-23 8 weeks later. For details see Section 5
1 month after last dose			X*		
2 months after last dose of Tetanus and IPV containing vaccines	X				
6 -12 months after last dose of Tetanus and IPV containing vaccines	X				
10 years after last dose of tetanus containing vaccine		X			

\* Clients born in or after 1970 and all health care workers regardless of age should receive 2 doses of MMR. Those born before 1970 are considered immune.

## 2.4 Routine Canadian Immunizations Schedules

### Provincial/Territorial Immunization Schedules

Publicly funded Immunization Programs in Canada-Routine Schedules for Infants and Children (including special programs and catch-up programs) see the website:

<http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php> This information is updated on a frequent basis.

## 2.5 Immunization Schedules Previously In Use In NL

VACCINE PROGRAM	DATES USED AND NOTES
Diphtheria and Tetanus	This program began in the late 1940s, and continues at present as Td.
Td-IPV	Grade nine booster 1978-1999
DT-IPV	1996 < 7 yrs. for those not receiving pertussis
Salk Polio	Given from 1955 to 1973, after which Sabin polio was used, until 1978.
Sabin Polio	This product was used in the province from 1962 until 1978.
Measles, plain (Lirugen)	Given to all 9 month old infants from February 1966 to September 1970. Given to all one year old children From September 1970 to October 1972. Killed virus vaccine was <b>not</b> used in this province.
Rubella (Miravax)	Introduced in the province in 1971, for adolescent females and rubella negative postnatal women. Given to all grade 5 girls from September 1972 to 1981. Plain rubella no longer used, now given as MMR. Females born 1962 and after were offered rubella vaccine.
Measles and Rubella (MR)	This vaccine replaced plain measles. It was given from October 1972 to December 1974 for all one year old children. May have been given before the first birthday.
Measles Mumps and Rubella (MMR)	This vaccine replaced MR. Program began in December 1974 and MMR may have been given to children less than one year of age, although the recommended age is one year. In 1996 a 2nd dose was added at 18 months. People born 1983 and after should have received 2 doses of MMR as a result of a school catch-up that started in 1999. The MMR vaccine was no longer used for childhood programs when MMRV started in 2012.
Measles, Mumps, Rubella and Varicella (MMRV)	Starting January 2012 MMRV replaced MMR and Var at the 12 month clinic visit. On July 1 <sup>st</sup> , 2014 MMRV replaced MMR at 18 month clinic visit. Children born 2013 and after receive MMRV at 12 and 18 mos.
DPT&Polio (QUAD)	This product was given from 1960 to 1984 for the 4-6 year booster. Whole-cell pertussis component used.
DPT&Polio adsorbed	This vaccine replaced QUAD. It was used from 1984 to 1992 for the 2, 4, 6, 18 month and 4-6 year immunizations. Whole-cell pertussis component used. From 1992 - 1997 used <u>only</u> for 4-6 year booster, for children born 1988 and after.
DPT&P/Hib (Pentavalent)	This vaccine was used 1992 to 1997 for 2, 4,6,18 month immunizations. This was the whole-cell pertussis component.
DTaP-IPV-Hib ( Pentacel or Pediacel)	Replaced DPT&P-Hib in September 1997 for children at 2, 4, 6 and 18 months. This acellular pertussis vaccine (Pediacel replaced Pentacel in April 2008)
DaPT-IPV (Quadracel)	September 1997 to January 2013 for 4-6 year booster. Children born between 1995 and 2011 were offered DaPT-IPV.
Tdap- IPV	January 2013 to present used for 4-6 year booster when DTaP-IPV is not available.
Tdap	Started in 1999 for the grade 9 booster. March 2013 HCWs new hires and HCWs. April 2014 an adult program was introduced replacing Td. Children born 1985 and after have been offered Tdap vaccine.
Haemophilus influenzae b (Hib)	Hib-conjugate 18 months introduced June 1988 until 1992. Hib-conjugate 2, 4, 6, & 18 months introduced June 1992 to present. Children born 1987 and after have been offered Hib vaccine.

Hepatitis B	A limited program was introduced in 1985, using a plasma-derived vaccine. In 1990 a recombinant non-plasma product was introduced. In September 1995 a universal grade 4 program was implemented. In 2010 (3 dose series) program moved to grade six beginning 2012 (2 dose series). All children born 1986 and after have been offered HBV vaccine
Smallpox	Used for limited population, program ending in mid 1970s.
BCG School Program	Also known as “scratches on the back” or intradermal, this program ran from 1951 to 1975 for most of the province. In the North and Labrador, the program ran from 1951 to 1978.
BCG Student nurses	This program was in effect from 1948 to 1975.
CUTI Testing	This “scratch test” was used from the 1940s until 1975.
TINE testing	This program ran from September 1975 to the end of 1981.
MANTOUX testing	“PPD testing” introduced in 1982, used at present.
Human Papilloma Virus (HPV)	Offered to grade 6 females starting in 2007 at 0, 2 and 6 months. In 2008 and 2009 offered to grade 9 females as a catch-up program. In 2015 changed to a 2 dose schedule at 0 and 6 months. Females born 1994 and after have been offered HPV vaccine. Boys and Girls in Grade 6 as of September 2017
Men C-C	This program began in January 2005 administered at 12 months, with a catch up program offered in grades 4 & 9. In 2009 the grade 9 catch up program was completed. Children born 1994 and after were offered Men-C-C vaccine.
Men C-ACYW135	This vaccine was introduced in 1994 for selected individuals at increased risk of infection and was used to control of outbreaks. This program replaced the grade 4 Men-C-C catch up program in 2009. Children born 2001 and after have been offered the Men-C-ACYW135 vaccine.
Varicella (Var)	This program began in January 2005 administered at 12 months, with a catch up program offered at 4-6 years. The catch up program ended in 2010. In January, 2012 this was given as a combined vaccine MMRV at 12 months. July 1 <sup>st</sup> 2014 given as combined vaccine MMR-Var at 18 months of age. Eligible for 2 doses of Varicella vaccine if born Jan 1, 2013 or after; or if born within the eligible cohort up to December 31, 2012 and is 13 years of age or older when received their first dose of Varicella vaccine. Children born 2000/2001 (depending on region) and after have been offered varicella vaccine.
Pneu-C-7	A limited program was introduced in 2003. In 2005 it became part of the provincial program and was administered at 2, 4, 6 & 18 months. Children born in 2003 to 2008 have been offered Pneu-C-7 vaccine.
Pneu-C-10	This program replaced Pneu-C -7 in 2009. It was administered at 2, 4, 6 & 18 months. Children born in 2008 and part of 2009 have been offered Pneu-C-10 vaccine.
Pneu-C-13	This program replaced Pneu-C- 10 in Oct 2010 and was administered at 2, 4, 6 & 18 months. In January 2012 this vaccine has been administered at 2,4, & 12 months, children considered at high risk for disease will continue to receive 4 doses at 2,4,6 & 12 months. Children born in October 2009 have been offered Pneu-C-13 vaccine

Influenza vaccine	<p>First offered in 1976 as bivalent whole cell vaccine to eligible cohorts as defined by risk factors (Fluviral and Vaxigrip).</p> <p>Influenza split cell replaced the bivalent whole cell influenza vaccine in the early 90's (Fluviral and Vaxigrip) for eligible cohorts as defined by risk.</p> <p>2009 H1N1 Pandemic adjuvanted Arepanrix</p> <p>2009 H1N1 Pandemic Panvax H1N1</p> <p>2013 Flumist was added to influenza vaccines for eligible cohorts as defined by risk.</p> <p>2014 All residents of NL became eligible for influenza vaccines.</p> <p>2015 Fluad, adjuvanted TIV for those 65 years of age and older who are residents of LTC and PCH and remaining population changed from TIV to QIV</p>
Rotavirus	<p>Program started September 2015.</p> <p>Children born July 1, 2015 and after have been offered Rotavirus vaccine.</p>