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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)*. Immunization of adults is restricted to boosting of the routine immunizations of childhood, and some limited programs, as noted elsewhere in this manual. Adapted schedules are printed in Sections 2.2 and 2.3.

## 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*.

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.

Where there is a range of times for immunization schedules, the provincial schedule will be followed. As of January 1, 2012 the provincial immunization schedule includes:

DTaP-IPV-Hib	2, 4, 6 & 18 months
Pneu-C-13	2, 4, & 12 months, high risk children 2, 4, 6, & 12 months
MMRV	12 months
MMR	18 months
Men-C	12 months
Inf	6-23 months (fall & winter only)
DTaP-IPV	4-6 years
Men-C -ACWY-135	Grade 4
Hepatitis B	Grade 6 (2 doses) beginning school year 2012-13
HPV	Grade 6 (3 doses) females only
Tdap	Grade 9

## 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**

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

Age	Vaccine
2 months	DTaP-IPV-Hib & Pneumococcal conjugate
4 months	DTaP-IPV-Hib & Pneumococcal conjugate
6 months	DTaP-IPV-Hib *
6-23 months	Inf ( Fall & Winter only)
12 months	MMRV Meningococcal conjugate Pneumococcal conjugate
18 months	DTaP-IPV-Hib & MMR
4-6 years	DTaP-IPV

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

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

MMR-- protects against measles, mumps & rubella

DTaP-IPV- protects against diphtheria, pertussis, tetanus and polio

Pneumococcal conjugate - protects against 13 types of pneumococcal disease

Meningococcal conjugate - protects against type C meningococcal disease

Inf-protects against influenza

\*Children at high risk for disease should receive an additional Pneumococcal conjugate as an additional dose at 6 months

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

Grade 4	Men-C-ACYW-135
Grade 6	HPV (3 doses) females only HB (2 doses) begins 2012
Grade 9	Tdap

Men-C-ACYW<sub>135</sub> protects against type A,C,Y & W<sub>135</sub> meningococcal disease

Tdap - protects from tetanus, diphtheria and pertussis

HPV- protects from human papillomavirus

HB - protects from 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**

Age at Immunization	DTaP-IPV	Hib	MMRV	Pneu-C¶	MMR	Men-C¶¶
First Visit (s)*	X	X	X	X		X
2 months later	X	(X)		(X)	X	
2 months later	X			(X)		
6-12 months later	X	(X)				
4-6 years of age	X†					

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

\* 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 one month apart

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

( ) 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**

Age at Immunization	IPV	Tdap	MMRV $\phi$	Var $\phi\ddagger$	Men-C	HB	HPV¶¶
First Visit (s)*	X	X	X	(X)	X	X	X
1- 2 months later	X	X	X	(X)		(X)	X
6-12 months later	X	X				X	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.

$\phi$  Depending on age MMRV may be used for first visit replacing MMR and Var, then MMR 1-2 months later. There is no indication for MMRV for those children  $\geq 13$  years

$\ddagger$  Varicella is indicated for children  $\geq 7$  years who should have been immunized at school entry. For children over 13 years, two doses of Varicella vaccine are required to complete the series with a six week interval between doses.

¶¶ HPV vaccine implemented in September 2007 for grade 6 girls.

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

**Table 2.2-5: Newfoundland and Labrador Immunization Schedule for Adults (≥18 years of age) who have not received previous immunizations**

Age at Immunization	Tdap	Td	MMR	Influenza and	Pneu-P-23
First Visit (s)*	X		X	Annually: If high risk or 65 years and over, see section 5	Once in a lifetime: If high risk or 65 years and over, see section 5
1 - 2 months after 1 <sup>st</sup> visit		X	(X)		
6-12 months after 2 <sup>nd</sup> visit		X			
10 years later		X			

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

**Table 2.2-6 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:

[www.phac-aspc.gc.ca/im/is-cv/index-eng.php](http://www.phac-aspc.gc.ca/im/is-cv/index-eng.php)

This information is updated on a frequent basis.

## 2.3 Immunization Schedules Previously In Use In Newfoundland

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.
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. Presently given to all children in the province on or after the first birthday. 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.
Measles, Mumps, Rubella and Varicella (MMRV)	Introduced January 2012. Will replace MMR and Var as MMRV at the 12 month clinic visit.
DPT&Polio (QUAD)	This product was given from 1960 to 1984. Whole-cell pertussis component used.
DPT&Polio adsorbed	This vaccine replaced QUAD. It has been used from 1984 to 1992 for the 2, 4, 6, 18 month and 4-6 year immunizations. Whole-cell pertussis component used 1992 - 1997 used <u>only</u> for 4-6 year booster.
DPT&P/Hib (Pentavalent)	This vaccine was used 1992 to 1997 for 2, 4,6,18 month immunizations. Whole-cell pertussis component used
DTaP-IPV-Hib	September 1997 to present for 2, 4,6,18 month immunizations (Pentacel). Acellular pertussis component used. April 2008 Pediacel was introduced in NL.
DaPT-IPV (Quadracel)	September 1997 to present for 4-6 year booster
Tdap	September 1999 – October 2007 Adacel. October 2007 - Boostrix introduced.
Haemophilus influenzae b (Hib)	Hib-conjugate 18 months introduced June 1988 Hib-conjugate 2, 4, 6, & 18 months introduced June 1992
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 a decision was made to move the program to grade six beginning 2012
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, started for 2007-2008 school year 0, 2 and 6 months. 2008-2009 offered to Grade 9 females as a catch-up program. The grade nine catch up program ended 2010.
Men 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 nine catch up program was completed.
Men C-ACYW-135	This program replaced the grade four catch up program in 2009. This catch up program will end the school year 2012-2013. This vaccination is also used for control of outbreaks.
Men P-ACYW-135	This vaccine was introduced in 1994 for selected individuals at increased risk of infection and was used to control of outbreaks.
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 school year 2009-10. January 1, 2012 will be given as a combined vaccine MMRV at 12 months.
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.
Pneu-C-10	This program replaced Pneu-C -7 in 2009. It was administered at 2,4,6 & 18 months
Pneu-C-13	This program replaced Pneu-C- 10 in Oct 2010. June 1, 2011 and is administered at 2, 4, 6 & 18 months. As of January 2012 this vaccine will be 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.