Recommended Immunization Schedules for Individuals NOT Previously Immunized

The following schedules do not address all possible scenarios. Catch-up schedules for partially immunized individuals must be created in accordance with the current Canadian Immunization Guide (www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php) and the vaccines offered free of charge (Eligibility Criteria for Publicly-Funded Vaccines) (www.manitoba.ca/health/publichealth/cdc/vaccineeligibility.html). Review of relevant product monographs is strongly recommended.

Children less than 7 years of age NOT previously immunized as infants

Vaccine	1st visit	Time after 1st visit					6 - 12 mos. after last dose	4 - 6 years of age
		4 weeks	6 weeks	8 weeks	4 mos.	6 mos.		
DTaP-IPV-Hib*	◆			◆	◆		◆	
Tdap-IPV*								(◆)
IPV*	(◆)			(◆)			(◆)	
Pneu-C-15	(◆)			(◆)	(◆)			
Men-C-ACYW†	◆							
Inf	◆	(◆)						
MMR	◆	Generally at 4-6 years ◆						
Var	(◆)	Generally at 4-6 years (◆)						
		OR						
MMRV	(◆)	Generally at 4-6 years (◆)						

() Brackets indicate that these doses may not be required

* **Note for polio:** Individuals lacking adequate documentation of IPV immunization should be considered unimmunized and started on an immunization schedule appropriate for their age and risk factors. Individuals who have received only OPV vaccine after April 1, 2016 without following receipt of at least two doses of IPV, should receive IPV-containing vaccine.

Diphtheria - tetanus - acellular pertussis - inactivated polio - *Haemophilus influenzae* type b (DTaP-IPV-Hib): Four doses required of a DTaP-IPV-containing vaccine. With no DTaP-IPV vaccine available in Canada, DTaP-IPV-Hib is to be used for all four doses to complete the primary series for tetanus, diphtheria and pertussis up to age seven.

Tetanus - reduced diphtheria - reduced acellular pertussis - inactivated polio (Tdap-IPV): The dose at 4-6 years of age is not required if the fourth dose of DTaP-IPV-Hib vaccine was given after the fourth birthday.

Inactivated Polio Vaccine (IPV): If the child does not require the additional antigens in the combination vaccines (i.e., up to date for diphtheria, tetanus, pertussis and Hib but not for polio), IPV only would be appropriate to complete the series.

Pneumococcal conjugate 15-valent vaccine (Pneu-C-15): Check the Pneumococcal vaccine chapter in the Canadian Immunization Guide for the recommended schedule based on age and vaccination history (Pneumococcal vaccines: Canadian Immunization Guide - Canada.ca).

Meningococcal conjugate quadrivalent vaccine (Men-C-ACYW): One dose at or after 12 months of age.

† Note for Meningococcal Vaccine Men-C-ACYW: Nimenrix® is the recommended product if the pneumococcal vaccine is also being administered as Nimenrix® does not decrease the immune response to the pneumococcal vaccine (Pneu-C-15).

Manitoba

Recommended Immunization Schedules for Individuals NOT Previously Immunized

Measles, Mumps, Rubella (**MMR**): Individuals born during or **after 1985** - 2 doses, at least 4 weeks apart.

Varicella (Var): If susceptible to varicella - Two doses at least three months apart. First dose is given at or after 12 months of age and second dose generally given between four to six years of age. If rapid protection is required, a minimum interval of four weeks may be used. Susceptibility of varicella should be evaluated prior to vaccination (see below for susceptibility considerations).

Susceptibility and Immunity to Varicella

(www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-4-active-vaccines/page-24-varicella-chickenpox-vaccine.html)

Individuals who have ANY of the following are considered immune to varicella:

- Documented evidence of immunization with 2 doses of a varicella-containing vaccine
- Laboratory evidence of immunity

If varicella occurred before 2004, a self-reported history or health-care provider diagnosis is considered a reliable correlate of immunity for healthy individuals, including pregnant women without significant exposure to varicella, and health-care workers (HCW) who are currently or have previously been employed in a Canadian health-care setting. In general, healthy adults 50 years of age and older, are presumed to be immune to varicella, even if the person does not remember having had chickenpox or herpes zoster.

If varicella occurred after 2004, a self-reported history or health-care provider diagnosis cannot be considered a reliable correlate of immunity because one-dose immunization programs had a marked impact on the prevalence of wild-type varicella. A self-reported history or diagnosis of varicella or herpes zoster by a health-care provider is not considered to be acceptable evidence of immunity for:

- healthy pregnant women with significant exposure to varicella
- immunocompromised individuals, and
- HCW who are newly hired into the Canadian health-care system.

Recipients of a hematopoietic stem cell transplant (HSCT) should be considered susceptible in the post-transplantation period, regardless of a pre-transplant history of vaccination, positive serologic results, or varicella or herpes zoster disease. For the purposes of post-exposure prophylaxis, an immunosuppressed person with a negative antibody test should be considered susceptible.

Measles, Mumps, Rubella and Varicella (MMRV): Susceptibility to varicella should be evaluated prior to vaccination (see above). If still susceptible to varicella - two doses at least three months apart. If rapid protection is required, a minimum interval of four weeks may be used. First dose given at or after 12 months of age and second dose generally given between four to six years of age.

Influenza (Inf): Recommended 1 dose annually. Children 6 months to 8 years of age who have not previously been vaccinated against influenza should receive a second dose at least 4 weeks four weeks after the first dose.

Recommended Immunization Schedules for Individuals NOT Previously Immunized

Children 7 to 17 Years of Age NOT Immunized in Early Childhood

Vaccine	1st visit	Time after 1st visit					6 - 12 mos. after last dose	10 years after last dose
		4 weeks	6 weeks	8 weeks	3 mos.	6 mos.		
Tdap-IPV* or Tdap	◆			◆			◆	◆
IPV*	(◆)			(◆)			(◆)	
Men-C-ACYW	◆	(◆)						
HB	◆ 11-17 years old	(◆)				◆		
HPV	◆ 11-17 years old			(◆)		◆		
Inf	◆ (◆)							
MMR	◆	◆						
Var	(◆)				(◆)			
OR								
MMRV	(◆) 7-12 years old				(◆)			

() **Brackets indicate that these doses may not be required**

* **Note for polio:** Individuals lacking adequate documentation of IPV immunization should be considered unimmunized and started on an immunization schedule appropriate for their age and risk factors. Individuals who have received only OPV vaccine after April 1, 2016 without following receipt of at least two doses of IPV, should receive IPV-containing vaccine.

Tetanus, Diphtheria, acellular pertussis and inactivated polio (Tdap-IPV) **or Tetanus, diphtheria, and acellular pertussis** (Tdap): If no previous history of tetanus-containing or polio-containing vaccines, the first three doses of the series should be with Tdap-IPV vaccine and the booster dose with Tdap provided in the grade 8 or 9 school immunization program (13-15 years of age).

If the series is started after grade 8 or 9, the Tdap booster dose should be administered 10 years after the last Tdap-IPV dose. Tdap is also recommended for pregnant women in every pregnancy. Optimal timing is between 27 and 32 weeks gestation, although Tdap vaccine may be given at any time during pregnancy.

Inactivated Polio Vaccine (**IPV**): If the child does not require the additional antigens in the combination vaccine (i.e., up to date for diphtheria, tetanus, pertussis and Hib but not for polio), IPV would be appropriate to complete the series. They should receive two doses of IPV-containing vaccine, given 4 to 8 weeks apart, followed by a third dose administered 6 to 12 months after the second dose.

Meningococcal conjugate quadrivalent (**Men-C-ACYW**)**:** Individuals born before Dec 31, 2019 who are between 7 to 9 years of age are eligible for one dose IF they never received a dose of Men-C-C vaccine as part of the 12-month program. Individuals born on or after January 1, 2008, are eligible to receive a dose if they are 10 years of age and older, regardless of Men-C-C or Men-C-ACYW immunization history.

Hepatitis B (HB)**:** Those 11 to 17 years of age – two or three doses depending on age at immunization and product used. Those 11 to 16 years of age – two doses of Recombivax HB® 1.0mL at 0, four to six months **OR** Engerix®-B 1.0mL at zero, six months. Those 16 to less than 19 years of age – three doses of Recombivax HB® 0.5ml **OR** Engerix®-B 0.5ml at zero, one, six months.

Refer to Table 3: Recommended Dosages and Schedules for Hepatitis B-Containing Vaccines of the Canadian Immunization Guide for product-specific recommendations by age/medical condition.

Human papillomavirus (HPV): Those 11 to 14 years of age: preferred two-dose schedule - months zero and six (first visit = month zero). Individuals 15 years of age and older, immunocompromised individuals, and those at increased risk: three doses (months zero, two and six).

Measles, Mumps, Rubella (**MMR**): MMR can be used if not immunizing against varicella (Note: MMRV is not authorized for use in those 13 years of age and older). Two doses are required at least four weeks apart.

Varicella (Var): Those seven to 12 years of age – two doses at least three months apart if they have not had any previous varicella immunization and are still susceptible. If rapid protection is required, a minimum interval of four weeks between doses may be used. Those aged 13 to 17 years – two doses six weeks apart. If rapid protection is required, a minimum interval of four weeks may be used. Susceptibility to varicella should be evaluated prior to vaccination (see below for susceptibility considerations).

Susceptibility and Immunity to Varicella

(www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-4-active-vaccines/page-24-varicella-chickenpox-vaccine.html)

Individuals who have ANY of the following are considered immune to varicella:

- documented evidence of immunization with 2 doses of a varicella-containing vaccine
- laboratory evidence of immunity

If varicella occurred before 2004, a self-reported history or health-care provider diagnosis is considered a reliable correlate of immunity for healthy individuals, including pregnant women without significant exposure to varicella, and health-care workers (HCW) who are currently or have previously been employed in a Canadian health-care setting. In general, healthy adults 50 years of age and older, are presumed to be immune to varicella, even if the person does not remember having had chickenpox or herpes zoster.

If varicella occurred after 2004, a self-reported history or health-care provider diagnosis cannot be considered a reliable correlate of immunity because one-dose immunization programs had a marked impact on the prevalence of wild-type varicella. A self-reported history or diagnosis of varicella or herpes zoster by a health-care provider is not considered to be acceptable evidence of immunity for:

- healthy pregnant women with significant exposure to varicella
- immunocompromised individuals, and
- HCW who are newly hired into the Canadian health-care system.

Recipients of a hematopoietic stem cell transplant (HSCT) should be considered susceptible in the post-transplantation period, regardless of a pre-transplant history of vaccination, positive serologic results or varicella or herpes zoster disease. For the purposes of post-exposure prophylaxis, an immunosuppressed person with a negative antibody test should be considered susceptible.

Measles, Mumps, Rubella and Varicella (MMRV): Those 7 to 12 years of age– two doses, at least three months apart. If 13 to 17 years of age, separate MMR and V vaccines are to be used as MMRV is only authorized for use in those under 13 years of age. Susceptibility to varicella should be evaluated prior to vaccination (see above for susceptibility considerations). If rapid protection is required, a minimum interval of four weeks between doses may be used.

Influenza (Inf): Recommended 1 dose annually. Children 6 months to 8 years of age who have not previously been vaccinated against influenza should receive a second dose at least 4 weeks later. Children 9 years and up - 1 dose regardless of previous flu vaccine history.

Recommended Immunization Schedules for Individuals NOT Previously Immunized

Adults 18 years of age and older, NOT previously immunized

Vaccine	1st visit	Time after 1st visit				6 - 12 mos. after last dose	Every 10 years after last dose
		4 weeks	6 weeks	8 weeks	6 mos.		
Tdap	◆						
Td				◆ (after Tdap dose)		◆	◆
HB	◆	◆			◆		
MMR	◆	(◆)					
Var	(◆)	(◆)					
Pneu-C-20	◆						
Men-C-ACYW	(◆)						
HPV	◆			◆	◆		
Inf				◆			

() **Brackets indicate that these doses may not be required**

Tetanus, Diphtheria and acellular pertussis (Tdap): If no previous history of any tetanus-containing vaccines, first dose of tetanus vaccine series should be completed with Tdap vaccine, followed by two doses of Td vaccine. If previous history of tetanus vaccines is available but no pertussis-containing vaccine in adulthood, Tdap can be given when the 10 year tetanus booster is due, if known. There is no minimum interval between Td and Tdap. Tdap is also recommended for pregnant women in every pregnancy. Optimal timing is between 27 and 32 weeks gestation, although Tdap vaccine may be given at any time during pregnancy.

Tetanus and Diphtheria (Td): If no previous history of any tetanus-containing vaccines, first dose of tetanus vaccine series should be Tdap. Two additional doses of tetanus-containing vaccine (Td) are required (two months after Tdap and then six to 12 months after the last dose). A dose is then given every 10 years after the primary series (three doses of tetanus-containing products) is completed.

Hepatitis B (HB): Those born on or after January 1, 1989, who missed the school immunization program: Three-dose schedule – months zero, one and six (first visit = month zero) with at least four weeks between the first and second doses, two months between the second and third doses, and four months between the first and third doses.

Refer to Table 3: Recommended Dosages and Schedules for Hepatitis B-Containing Vaccines of the Canadian Immunization Guide for product-specific recommendations by age/medical condition.

Measles, Mumps, Rubella (MMR): Individuals born during or **after 1985** - two doses, at least four weeks apart. Adults born between **1970 and 1984** – one dose. Exceptions: non-immune health-care workers and students – two doses, at least four weeks apart. Adults born ***before 1970*** can be assumed to have acquired natural immunity to measles and mumps and do not need MMR vaccination. Exceptions: non-immune health-care workers - two doses, at least four weeks apart; non-immune students – one dose. Rubella-susceptible adults, regardless of age – one dose.

Susceptibility and Immunity to Rubella

Individuals who have one or more of the following are considered immune to rubella. Individuals who do not have ANY of the following are considered susceptible to rubella:

- documented evidence of immunization with a rubella-containing vaccine on or after the first birthday
- a history of laboratory confirmed rubella infection
- laboratory evidence of immunity

Recommended Immunization Schedules for Individuals NOT Previously Immunized

Varicella (Var): Those born between January 1, 1995 and December 31, 2007, who have not had any previous varicella immunization and are susceptible – two doses at least four weeks apart. Susceptibility to varicella should be evaluated prior to vaccination.

Susceptibility and Immunity of Varicella

(www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-4-active-vaccines/page-24-varicella-chickenpox-vaccine.html)

Individuals who have ANY of the following are considered immune to varicella:

- documented evidence of immunization with 2 doses of a varicella-containing vaccine
- laboratory evidence of immunity

If varicella occurred before 2004, a self-reported history or health-care provider diagnosis is considered a reliable correlate of immunity for healthy individuals, including pregnant women without significant exposure to varicella, and health-care workers (HCW) who are currently or have previously been employed in a Canadian health-care setting. In general, healthy adults 50 years of age and older, are presumed to be immune to varicella, even if the person does not remember having had chickenpox or herpes zoster.

If varicella occurred after 2004, a self-reported history or health-care provider diagnosis cannot be considered a reliable correlate of immunity because one-dose immunization programs had a marked impact on the prevalence of wild-type varicella. A self-reported history or diagnosis of varicella or herpes zoster by a health-care provider is not considered to be acceptable evidence of immunity for:

- healthy pregnant women with significant exposure to varicella
- immunocompromised individuals, and
- HCW who are newly hired into the Canadian health-care system.

Recipients of a hematopoietic stem cell transplant (HSCT) should be considered susceptible in the post-transplantation period, regardless of a pre-transplant history of vaccination, positive serologic results or varicella or herpes zoster disease. For the purposes of post-exposure prophylaxis, an immunosuppressed person with a negative antibody test should be considered susceptible.

Pneumococcal Conjugate 20-valent (Pneu-C-20): Adults 65 years of age and older – 1 dose if not previously immunized with Pneu-P-23 since turning age 65. If they had received a dose of Pneu-P-23 before turning 65, Pneu-C-20 can be administered 5 years after that dose. (Note: There is currently no recommendation to administer a dose of Pneu-C-20 if someone has already received a dose of Pneu-C-20 before turning 65.)

Meningococcal conjugate quadrivalent (Men-C-ACYW): Individuals born between 1995 and 2007 are eligible to receive a dose if they have no previous history of receiving a Men-C-C vaccine.

Human papillomavirus (HPV): Females born on or after January 1, 1997 and males born on or after January 1, 2002 - 3 doses - months 0, 2 and 6 (first visit = month 0).

Influenza (Inf): Recommended for all adults– 1 dose annually. Adults aged 65 years and older are eligible for the high-dose influenza vaccine.