Paediatric and Adult Immunizations

Developed by: Aric Rankin NP-PHC, MN

Module 7

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Outline

1. Principals of Immunity and Vaccination
2. Getting to know Vaccines
3. Immunization Procedures
4. Case Studies
5. Barriers to Vaccination
6. Consent and Documentation
7. Other Vaccines
8. Reporting Adverse Events
9. Needle Stick Injury Procedure
10. Cold Chain Procedure
11. Emergency Measures

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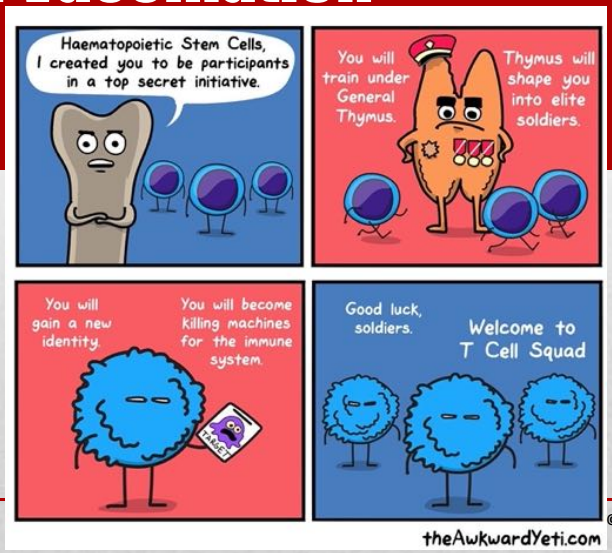
Principals of Immunity and Vaccination



PART 1

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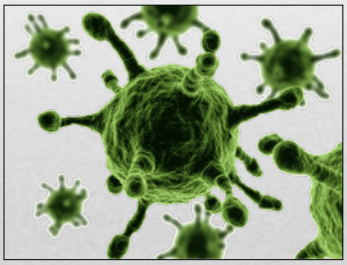
What is the purpose of immunity?

- Recognize self from non-self
- Recognize and eliminate infectious agents such as viruses and bacteria
- Prevent infection in the future



Principles: Immunity

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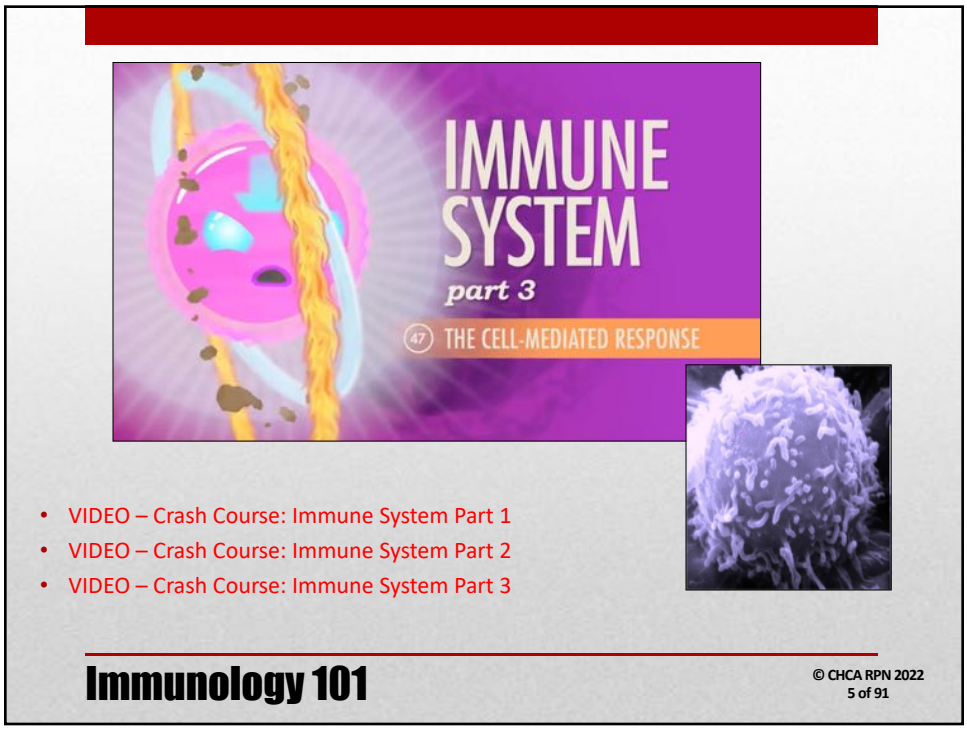
IMMUNE
SYSTEM
part 3
47 THE CELL-MEDIATED RESPONSE
• VIDEO – Crash Course: Immune System Part 1
• VIDEO – Crash Course: Immune System Part 2
• VIDEO – Crash Course: Immune System Part 3
Immunology 101
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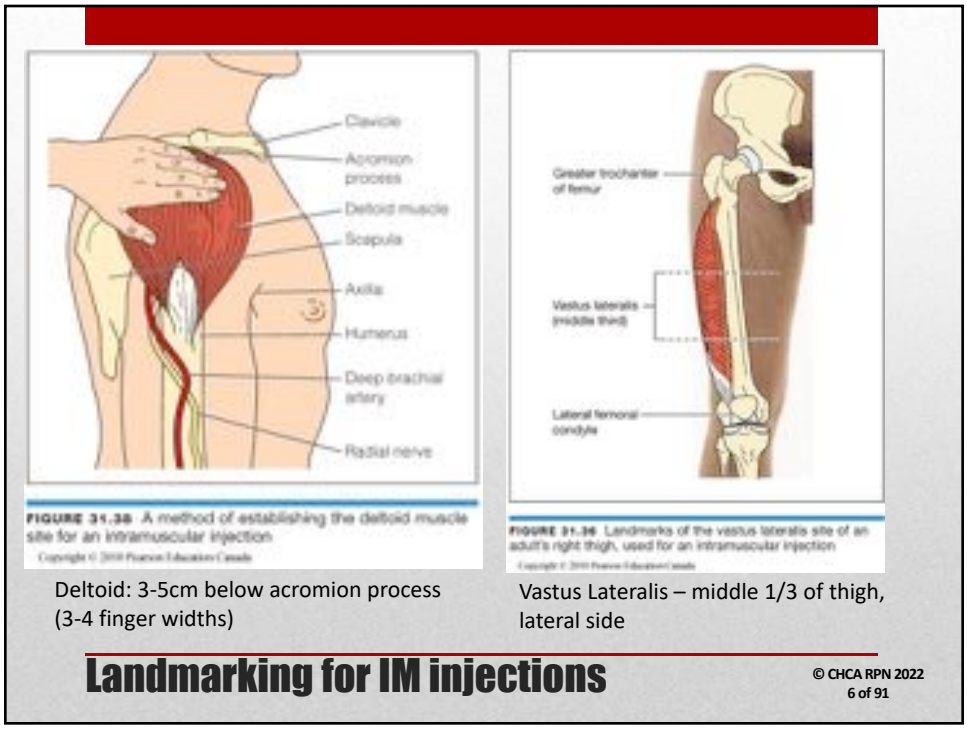
Clavicle
Acromion process
Deltoid muscle
Scapula
Axilla
Humerus
Deep brachial artery
Radial nerve
FIGURE 31.38 A method of establishing the deltoid muscle site for an intramuscular injection
Greater trochanter of femur
Vastus lateralis (middle third)
Lateral femoral condyle
FIGURE 31.36 Landmarks of the vastus lateralis site of an adult's right thigh, used for an intramuscular injection
Deltoid: 3-5cm below acromion process (3-4 finger widths)
Vastus Lateralis – middle 1/3 of thigh, lateral side
Landmarking for IM injections
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Getting to Know Vaccines

PART 2

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Live vs DEAD

- Vaccine strains are weakened so that infection is either not apparent or very mild *(attenuated)*
- Induce immunity by actively replicating within the host
- Most are delivered subcutaneously
- Mimics natural infection
- Leads to T and B cell activation
- Contraindicated in patient with immunodeficiency
- Together or 4 weeks apart

- Contain killed *(inactivated)* bacteria or virus
- Activate innate responses at their site of injection
- Needs to be injected into well vascularised muscle to be effective
- Most always require multiple doses
- May require periodic supplemental doses to increase (boost) antibody levels

Types of Immunizing Products

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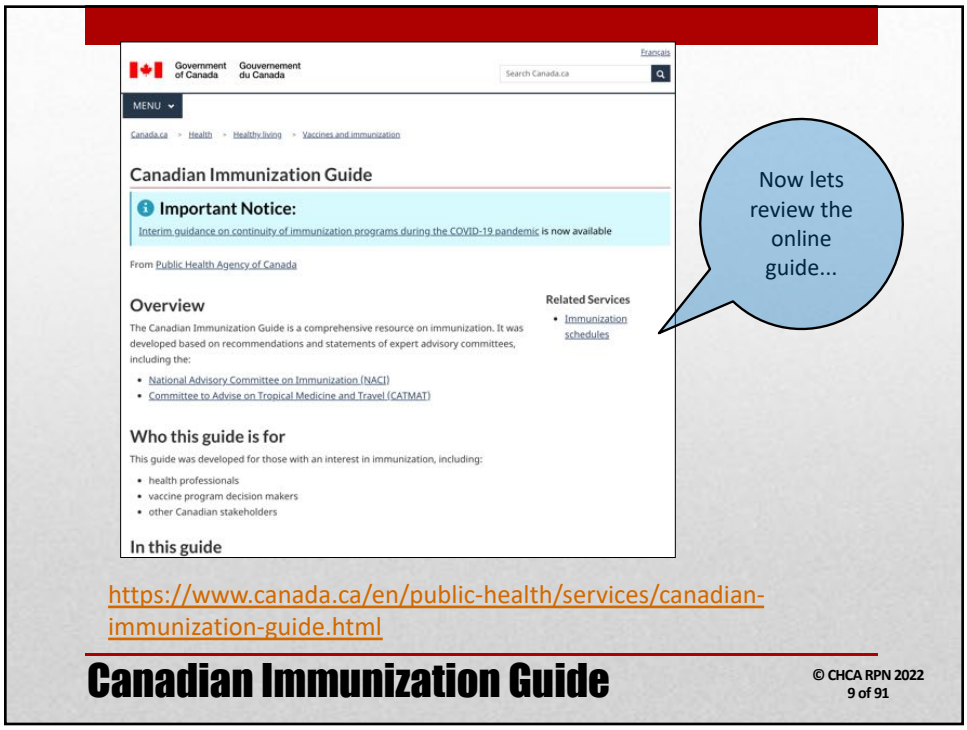

https://www.canada.ca/en/public-health/services/canadian-immunization-guide.html

Canadian Immunization Guide

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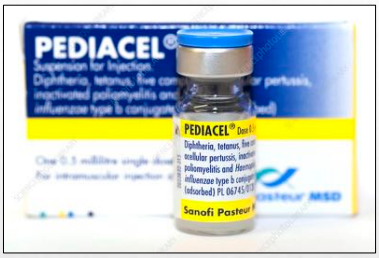
(T)Clostridium tetani
- Direct-contact
- 99% efficacy

(d)C. Diphtheriae
- Direct-contact & airborne-contact
- 97% efficacy

(ap)Bordetella pertussis
- Airborne-contact & direct-contact
- 80%-85% efficacy

(IPV)Poliovirus
- Faecal-oral contact
- 100% efficacy

Haemophilus influenzae Type B
- Airborne-contact & direct-contact
- 95%-100% efficacy



Schedule:
- **4 doses**
- **Given at 2, 4, 6 & 18 months.**
- **Series should start no earlier than 6 weeks of age.**
- **Intramuscular**

DTaP-IPV-Hib (Pediacel)

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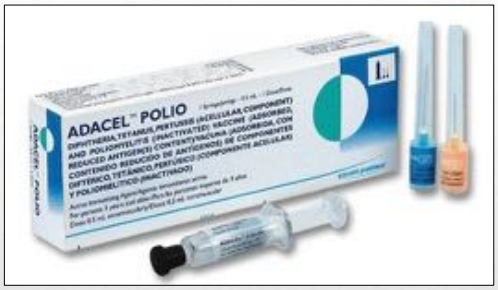
(T)Clostridium tetani
- Direct-contact
- 99% efficacy

(d)C. Diphtheriae
- Direct-contact & airborne-contact
- 97% efficacy

(ap)Bordetella pertussis
- Airborne-contact & direct-contact
- 80%-85% efficacy

(IPV)Poliovirus
- Faecal-oral contact
- 100% efficacy



Schedule:
- **1 dose**
- **Given between 4yr and 6yr of age**
- **Intramuscular**

Tdap-IPV
(Adacel-Polio)

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(T)Clostridium tetani
- Direct-contact
- 99% efficacy

(d)C. Diphtheriae
- Direct-contact & airborne contact
- 97% efficacy

(ap)Bordetella pertussis
- Airborne-contact & direct-contact
- 80%-85% efficacy

Schedule:
- **1 dose**
- **Given between 14y -16 y**
- **(i.e. 10yrs after the 4-6y booster)**
- **Intramuscular**

Tdap
(Adacel)

12

(T)Clostridium tetani
- Direct-contact
- 99% efficacy

(d)C. Diphtheriae
- Direct contact & airborne contact
- 97% efficacy

Schedule:
- **1 dose every 10yrs in adulthood**
- **Booster given during pregnancy**
- **Intramuscular**

Td
(Td Adsorbed)

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Streptococcus pneumoniae
- Airborne-contact & direct-contact
- 89%-97% efficacy

Side Effects: redness, swelling, soreness

Schedule:
- **3 doses**
- **Given at 2, 4 months and 12 months of age for all low risk children < 2 years of age.**
- **1 doses for High Risk Patients ≥50 years of age**
- **Intramuscular**

Pneumococcal Conjugate
(Prevnar)

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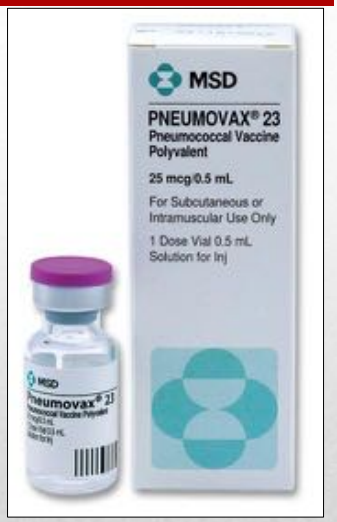
Polysaccharide format:
Streptococcus pneumoniae
- Airborne-contact & direct-contact
- 50%-80% efficacy among elderly and specific groups

Schedule:
- **1 dose at 65yrs of age**

High risk Criteria:
- **1 dose between 2 yrs and 64yrs of age**
- **Some may qualify for a second booster**

- **Intramuscular**



Pneumococcal Polysaccharide 23
(Pneumovax 23)

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Rotavirus
- Faecal - oral contact
- 85% - 98% efficacy
- 5-valent vaccine

Side Effects: loose stools, vomiting, low grade fever

Live

Schedule:
- **3 doses**
- **Given at 2, 4 and 6 months.**
- **Doses must be at least 4 weeks apart**
- **Do not initiate if infant is over 15 wks of age**
- **Completion of series before 8 months of age.**
- **Oral**

Rotavirus
(Rotateq)

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N. Meningitidis
- Airborne-contact & direct-contact
- 97% efficacy

Schedule:
- **Single Dose**
- **Given at 1 year of age**
- **Intramuscular**

Meningococcal Conjugate C
(Menjugate)

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N. Meningitidis
- Airborne-contact & direct-contact
- 80%-85% efficacy within 3-4 years of vaccination

Schedule:
- **Single Dose**
- **Students in grade 7 are eligible**

High Risk Criteria:
- **2-4 boosters**

- **Intramuscular**

Meningococcal Conjugate ACYW-135
(Menactra)

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Measles virus
- Airborne-contact
- 100% efficacy

Mumps virus
- Airborne-contact & direct-contact
- 76% - 95% efficacy

Rubella virus
- Airborne-contact
- 97% efficacy

Side Effects: redness, swelling, sore injection site

Outbreak of Mumps in SLZ in 2017

Schedule:
- **2 dose series**
- **First dose should be given after 1 year of age.**
- **Second dose should be given as MMRV at 4-6 years of age.**
- **Subcutaneous**

Live
Measles, Mumps, Rubella
(MMRII, Priorix)

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Varicella zoster
- Airborne-contact
- 94.4% - 98.3% efficacy

Side Effects: pain, swelling, redness at injection site, low-grade fever and varicella like rash (3% - 5% of vaccines)

Schedule:
- **2 dose series**
- **First dose at 15 months of age**
- **Second dose should be given as MMRV at 4 to 6 years of age.**
- **Subcutaneous**

Live
Varicella
(Varivax III, Varilrix)

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Measles virus
- Airborne - contact
- 100% efficacy

Mumps virus
- Airborne - contact & direct - contact
- 76%-95% efficacy

Rubella virus
- Airborne - contact
- 97% efficacy

Varicella zoster
- Airborne – contact
- 94.4% - 98.3% efficacy

Schedule:
- **Given at 4 to 6 years of age.**
- **Subcutaneous**

Live

Measles, Mumps, Rubella, Varicella
(ProQuad, Priorix-Tetra)

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Hepatitis B Virus
- *Direct* - contact
- 95% - 100% efficacy pre-exposure

Side Effects: irritability, headache, fatigue, pain/redness at injection site

High Risk Criteria
- Eligible from birth

Schedule:
- **2-dose series**
- **Given 4 to 6 months apart depending on the product used**
- **Grade 7 students eligible**
- **Intramuscular**

Hepatitis B
(Recombivax HB)

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1. Infants born to HBV-positive carrier mothers:
   - premature infants weighing <2,000 grams at birth (4 doses)
   - premature infants weighing ≥2,000 grams at birth and full/post term infants (3 doses)
2. Children <7 years old whose families have immigrated from countries of high prevalence for HBV and who may be exposed to HBV carriers through their extended families (3 doses)
3. Household and sexual contacts of chronic carriers and acute cases (3 doses)
4. History of a sexually transmitted disease (3 doses)
5. Intravenous drug use (3 doses)
6. Liver disease (chronic), including hepatitis B and C (3 doses)
7. Awaiting liver transplants (2nd and 3rd doses only)
8. Men who have sex with men (3 doses)
9. Multiple sex partners (3 doses)
10. Needle stick injuries in a non-health care setting (3 doses)
11. On renal dialysis or those with diseases requiring frequent receipt of blood products (e.g., haemophilia) (2nd and 3rd doses only)

Hepatitis B (High Risk Criteria)

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See the Ontario Publicly Funded Vaccine Schedule

Table 3: High Risk Vaccine Programs
High risk individuals should also be immunized according to the routine or applicable catch-up schedules (see pages 1 to 3)

Publicly Funded Vaccines	Publicly Funded Age Groups	# of Eligible Doses	Vaccine Intervals	High Risk Eligibility Criteria
Hib	≥5 years	1 or 3	For HSCT - See Table 9	• Asplenia (functional or anatomic) (1 dose) • Bone marrow or solid organ transplant recipients (1 dose) • Cochlear implant recipients (pre/post implant) (1 dose) • Hematopoietic stem cell transplant (HSCT) recipients (3 doses) • Immunocompromised individuals related to disease or therapy (1 dose) • Lung transplant recipients (1 dose) • Primary antibody deficiencies (1 dose) **Note:** High risk children 5 to 6 years of age who require DTaP-IPV and Hib may receive DTaP-IPV-Hib instead of Hib
DTaP-IPV-Hib	5-6 years			
HA	≥1 year	2	See Table 5	• Intravenous drug use • Liver disease (chronic), including hepatitis B and C • Men who have sex with men
HB	≥0 years	2 to 4 (+ boosters if required)	See Table 7	• Children <7 years old whose families have immigrated from countries of high prevalence for HBV and who may be exposed to HBV carriers through their extended families (3 doses) • Household and sexual contacts of chronic carriers and acute cases (3 doses) • History of a sexually transmitted disease (3 doses) • Infants born to HBS-positive carrier mothers: - premature infants weighing <2,000 grams at birth (4 doses) - premature infants weighing ≥2,000 grams at birth and full/post term infants (3 doses) • Intravenous drug use (3 doses) • Liver disease (chronic), including hepatitis C (3 doses) • Awaiting liver transplants (2nd and 3rd doses only) • Men who have sex with men (3 doses) • Multiple sex partners (3 doses) • Needle stick injuries in a non-health care setting (3 doses) • On renal dialysis or those with diseases requiring frequent receipt of blood products (e.g., haemophilia) (2nd and 3rd doses only)
HPV-4	Males 9 to 26 years	2 to 3	See Tables 10 and 11	• Men who have sex with men
4CMenB	2 months to 17 years	2 to 4	See Table 13	• Acquired complement deficiencies (e.g., receiving eculizumab) • Asplenia (functional or anatomic) • Cochlear implant recipients (pre/post implant) • Complement, properdin, factor D or primary antibody deficiencies • HIV
Men-C-ACYW	9 months to 55 years	2 to 4 + boosters	See Table 14	
Men-P-ACYW	≥56 years	1	See Table 14	
	6-11 months	1	See Table 15	• Infants who will be traveling to areas where disease is a concern **Note:** 2 additional doses are required at >1 year of age and at appropriate intervals

High Risk Vaccine Program

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Influenza A virus, Influenza B virus

- Airborne – contact
- 30% efficacy against influenza - like illness
- 80% efficacy against laboratory confirmed influenza

- Regular – quadrivalent
- High-Dose – tri-valent

Schedule:

- **Age 6m-9y: 2 doses. 4 weeks apart initially.**
- **Otherwise once annually**
- **High Dose for age 65+**

Influenza

(Fluzone High-Dose; FluLaval Tetra; Fluzone Quadrivalent; Flucelvax Quad)

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Herpes zoster

- Direct-contact with blister fluid
- 51% efficacy
- 65.5% preventing Post Herpetic Neuralgia

SE: pain, swelling, redness to injection site

Schedule:

- **2 dose series, 2 to 6 months apart.**
- **Publicly funded for ages 65y to 70y**
- **Self-Pay may have over age 50.**
- **Intramuscular**

Herpes Zoster (Shingles)

(Shingrix)

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Human papillomavirus
- Direct-contact
- Ontario has fully transitioned to the 9-valent preparations. (Quadrivalent is no longer available).

Eligibility:
- Students in grades 7

High Risk Criteria:
- Men who have sex with men (MSM) who are 26 years of age or younger who identify as gay, bisexual,
- Some individuals who identify as trans, and who have not started their HPV vaccine series before September 5, 2017.

Schedule:
- **Immunocompetent individuals 9 to 14 years old (inclusive): 2 doses, separated by at least 6 months.**
- **Individuals 15 years+ and immunocompromised (incl HIV+): 3 doses at 0, 2 and 6 months.**
- **Intramuscular**

Human papillomavirus
(Gardasil-9)

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SARS-CoV-II (COVID-19)
- Droplet Spread (??airborne?)
- NEW TECHNOLOGY: mRNA vaccine

VIDEO: mRNA Vaccines

Eligibility (Ontario):
- Anyone over the age of 5 years (Pfizer)
- Anyone over the age 18 years (Moderna)
- Two-dose series(3 months apart), with an additional booster 6 months after last dose for those 12 years +
- Unclear whether subsequent boosters will be needed
- Anyone between 5-11 yrs must have a minimum 2 week space between COVID vaccine and other vaccines.
- Over age 70 – full dose Moderna booster
- Under 70 – half dose Moderna booster

COVID-19 mRNA
(Pfizer-BioNTech; Moderna)

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Pfizer-BioNTech COVID-19 Vaccine

- Multidose vial: Up to 6 doses per vial
- Dosage: 0.3 mL
- Vaccine: Pfizer-BioNTech COVID-19 Vaccine and Diluent: 0.9% sodium chloride (normal saline, preservative-free)
- Vaccine MUST be mixed with diluent before administration.
- 2-dose series separated by 21 days)
- A series started with COVID-19 vaccine (Pfizer) should be completed with this product.
- Delivered IM into the deltoid

Moderna COVID-19 Vaccine

- Multidose vial: 10 doses per vial
- Dosage: 0.5 mL
- 2-dose series separated by 1 month (28 days)
- A series started with COVID-19 vaccine (Moderna) should be completed with this product.
- Delivered IM into the deltoid

Thawing Frozen Vaccine

- Vaccine may be thawed in the refrigerator or at room temperature.
- Do NOT refreeze thawed vaccine.
- Refrigerator: store Between 2ºC and 8ºC
- 25 to 195 vials may take 2 to 3 hours to thaw in the refrigerator. Fewer number of vials will take less time.
- Can be stored at Room temperature Up to 25ºC for between 30 minutes and 2 hours.
- Vials at room temperature must be mixed with diluent between 30 minutes and 2 hours or returned to the refrigerator.
- At room temperature, gently invert the vial 10 times. Do not shake the vial. If the vial is shaken, discard the vaccine.
- The vaccine is white to off-white in color and may contain opaque particles. Do not use if liquid is discolored.
- Administer within 6 hours.
- Discard any unused vaccine after 6 hours.
- Do not return to freezer storage.

COVID-19

Thawing multi-dose vials

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Immunization Procedures

PART 3

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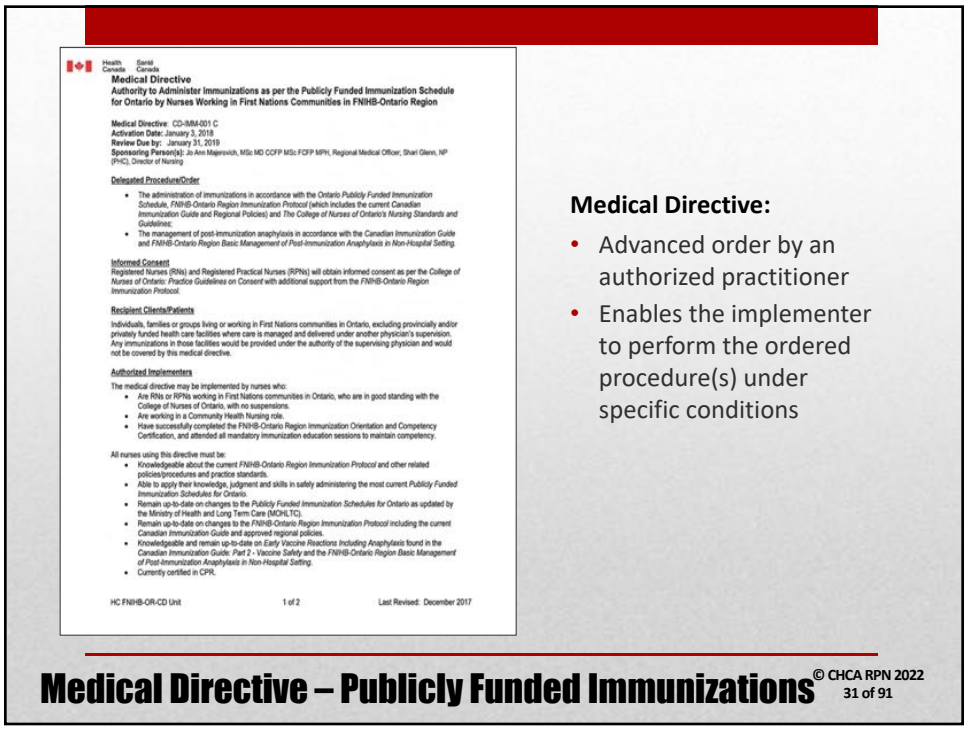

Medical Directive:

- Advanced order by an authorized practitioner
- Enables the implementer to perform the ordered procedure(s) under specific conditions

Medical Directive – Publicly Funded Immunizations

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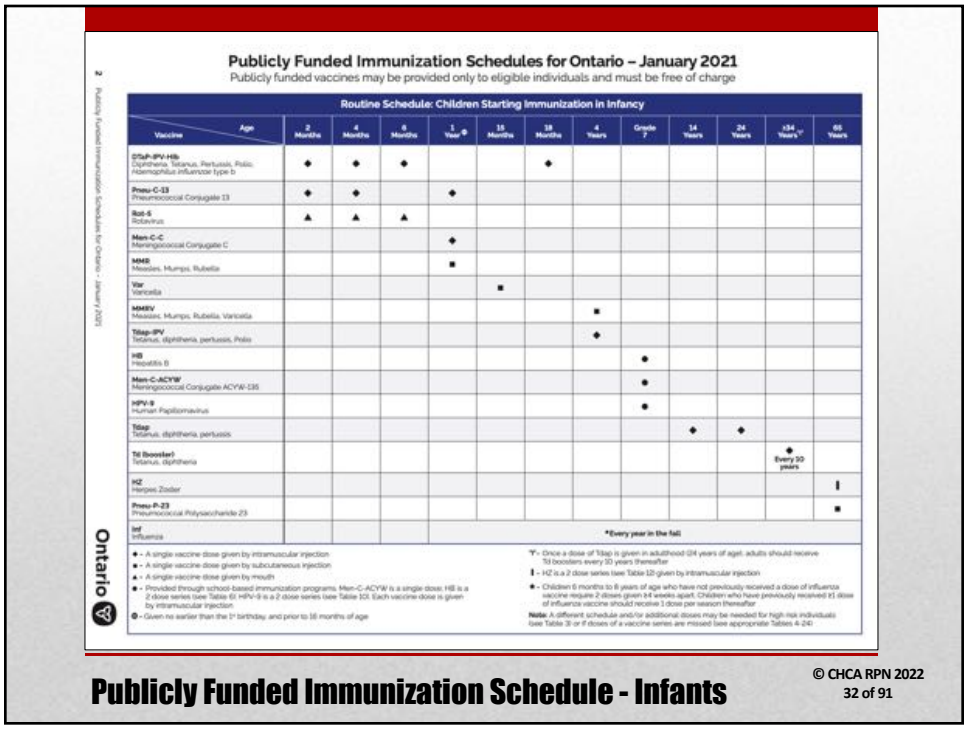

Publicly Funded Immunization Schedule - Infants

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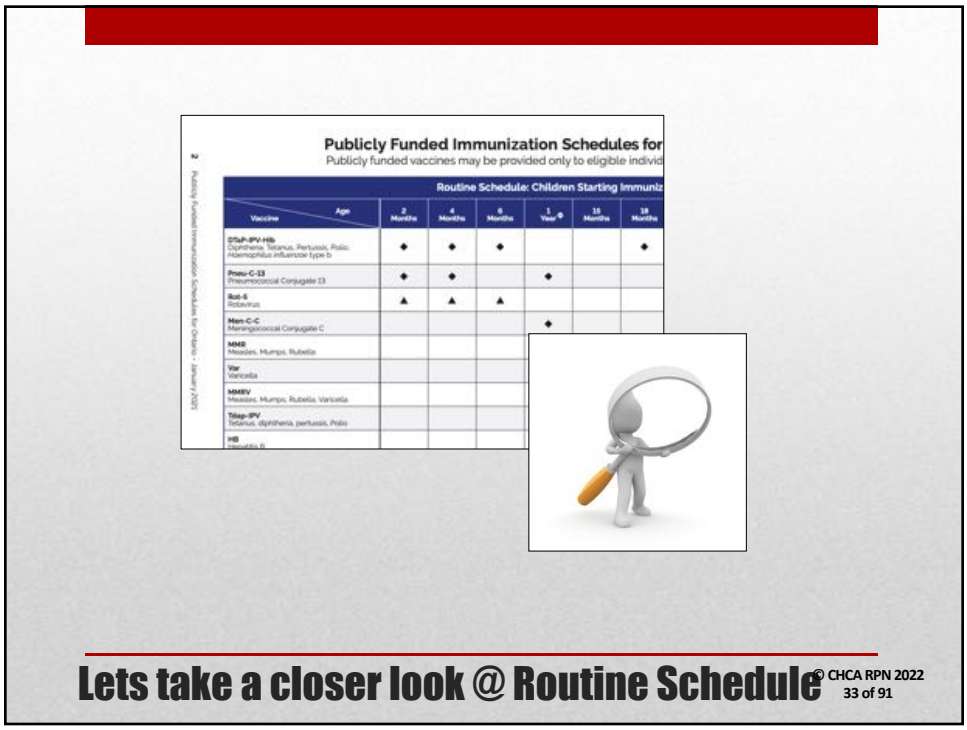
Publicly Funded Immunization Schedules for
Publicly funded vaccines may be provided only to eligible individ
Routine Schedule: Children Starting Immuniz
Lets take a closer look @ Routine Schedule
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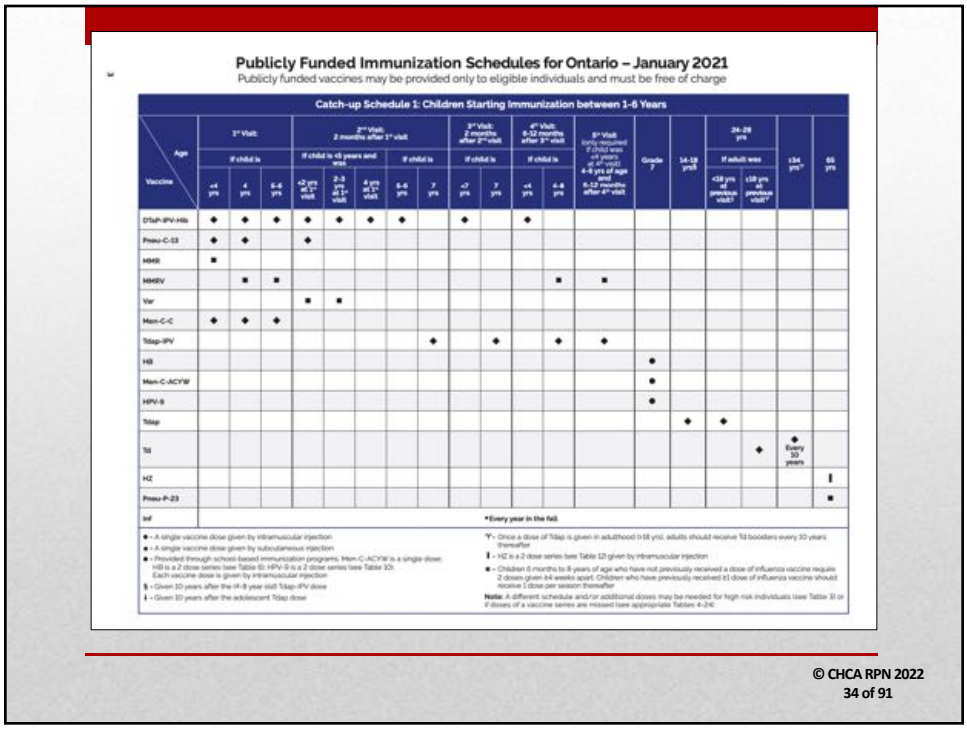
Publicly Funded Immunization Schedules for Ontario – January 2021
Publicly funded vaccines may be provided only to eligible individuals and must be free of charge
Catch-up Schedule 1: Children Starting Immunization between 1-6 Years
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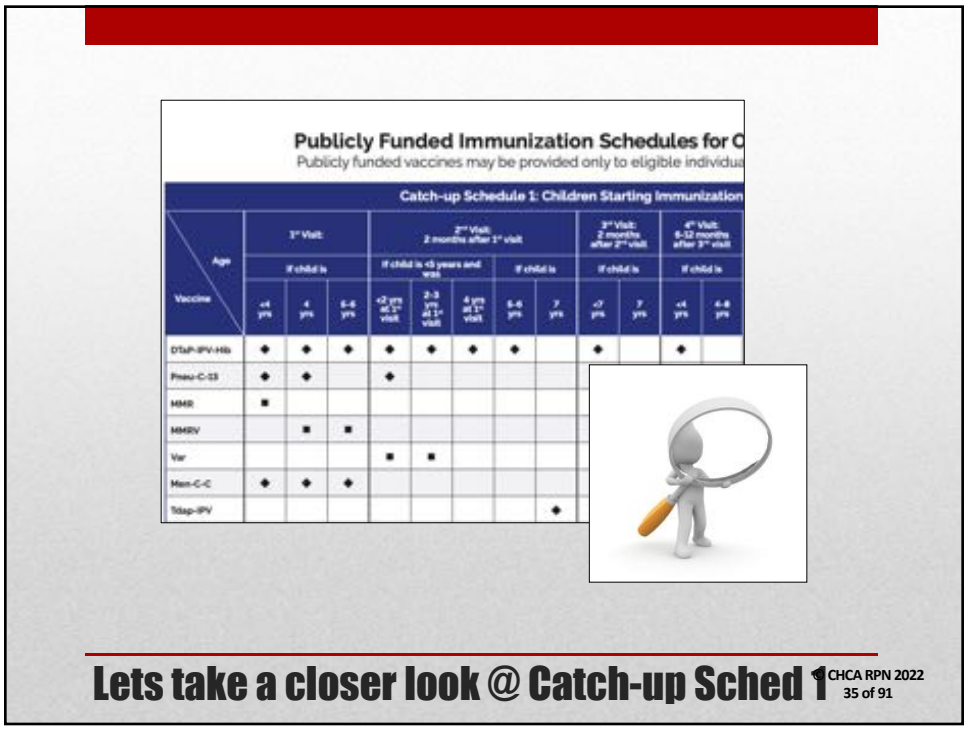
Publicly Funded Immunization Schedules for C
Publicly funded vaccines may be provided only to eligible individua
Catch-up Schedule 1: Children Starting Immunization
Lets take a closer look @ Catch-up Sched 1
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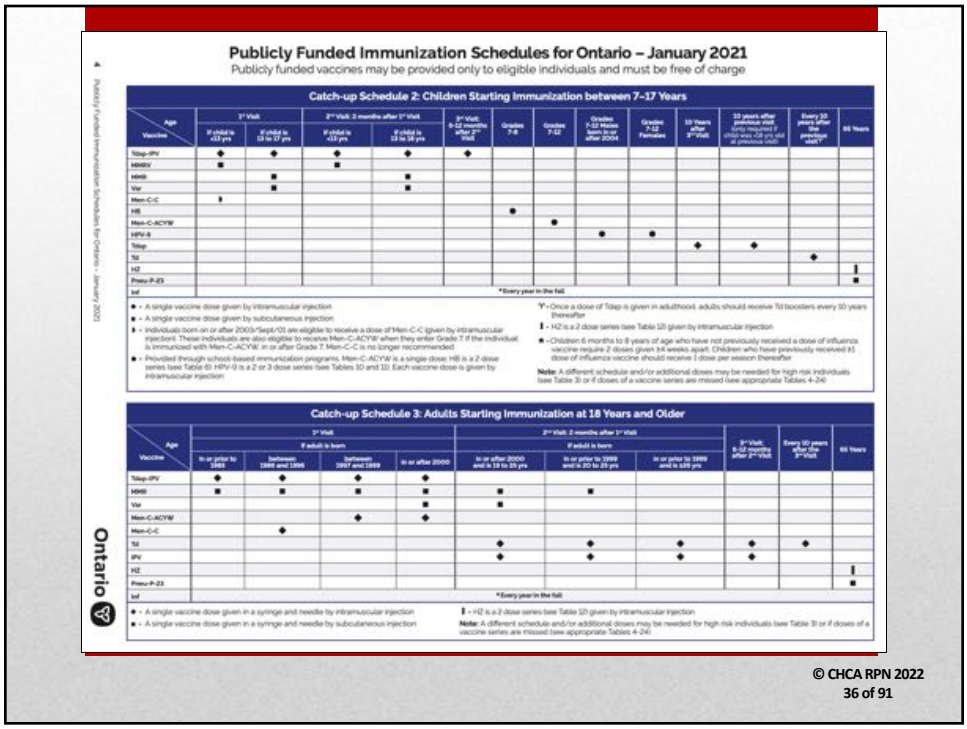
Publicly Funded Immunization Schedules for Ontario – January 2021
Publicly funded vaccines may be provided only to eligible individuals and must be free of charge
Catch-up Schedule 2: Children Starting Immunization between 7–17 Years
Catch-up Schedule 3: Adults Starting Immunization at 18 Years and Older
Ontario
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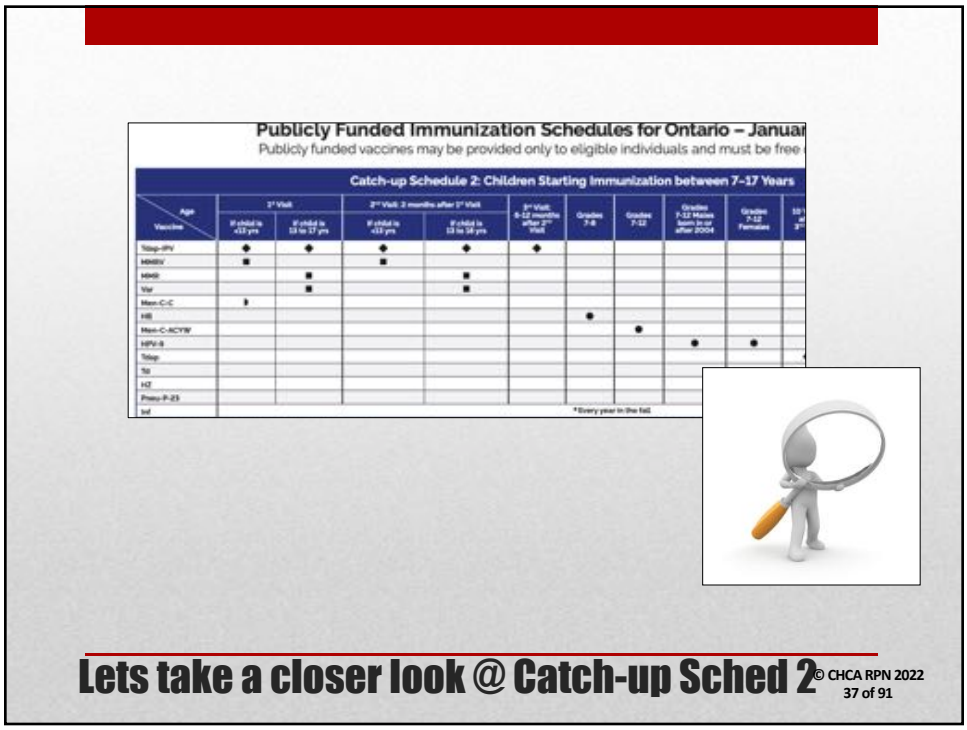
Publicly Funded Immunization Schedules for Ontario – Januar
Publicly funded vaccines may be provided only to eligible individuals and must be free
Catch-up Schedule 2: Children Starting Immunization between 7–17 Years
Lets take a closer look @ Catch-up Sched 2
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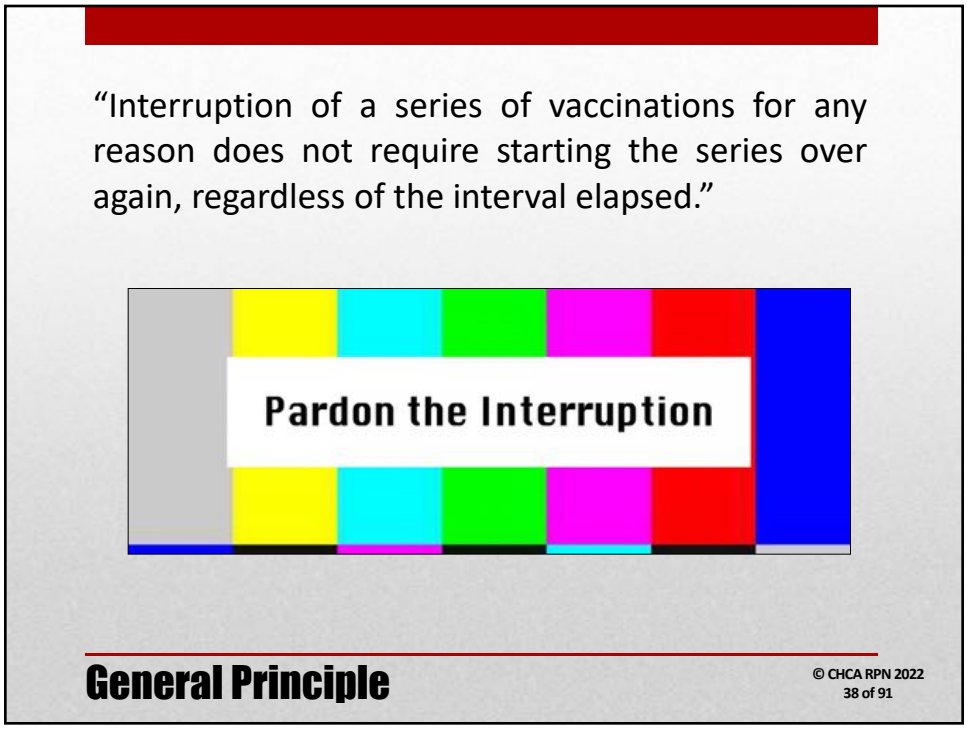
"Interruption of a series of vaccinations for any reason does not require starting the series over again, regardless of the interval elapsed."
Pardon the Interruption
General Principle
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Case Studies

PART 4

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- Niipin is 6 months old and attends the clinic for her well child visit with her mother.
- According to her chart she is up to date with her immunizations.
- Which immunizations would you provide at this visit?

- Which vaccines would you review with the family for her next visit?

Case Study #1 - Niipin

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- Ricky, 12 months, is brought in for his well child visit by his parents.
- You notice that he missed his 4 and 6 month well child visits and immunizations.
- What does Ricky require for his immunization catch-up?

- Which vaccines would you review with the family for his next visit?

Case Study #2 - Ricky

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- Ruby, 65 years of age attends the clinic today for a periodic health exam.
- She said she was watching an episode of Dr. Oz and he talked about vaccines for adults.
- She would like to know what she could receive.
- What immunizations would you discuss with her given her age?

What else would you want to ask her?

Case Study #3 - Ruby

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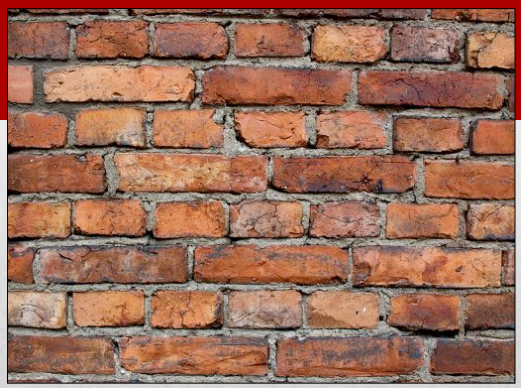
Barriers to Vaccination



PART 5

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- Immunization service should be responsive to the needs of vaccine recipient.
- When feasible, providers should schedule immunization appointments in conjunction with appointments for other health services.

VIDEO: Jimmy Kimmel

Barriers to Immunizatio

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Are vaccines safe?

- At least 10 years of research to be approved by Health Canada
- Vaccines used in Canada are safe and effective.
- Furthermore, vaccines are readily monitored

Will vaccines make me sick?

- No

What is found in vaccines?

- Dead or weakened viruses or bacteria
- Adjuvants which help the body's immune system respond better to the vaccine
- Additives (Gelatin) and preservatives which help to maintain the quality and effectiveness of the vaccine

Anti-vaccine movement

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Consent and Documentation

PART 6

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- To obtain informed consent for the administration of immunizations parent/guardian or individual must be given information about:
  - the disease related to the vaccine,
  - the component of the vaccine,
  - the immune process and
  - information about the immunization schedule for the vaccine.

Informed Consent

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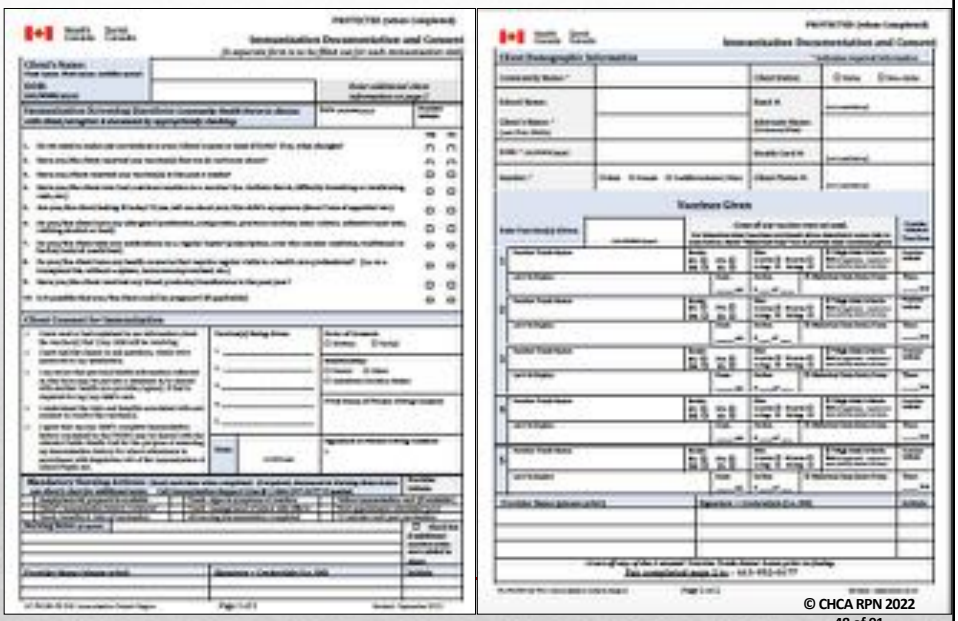

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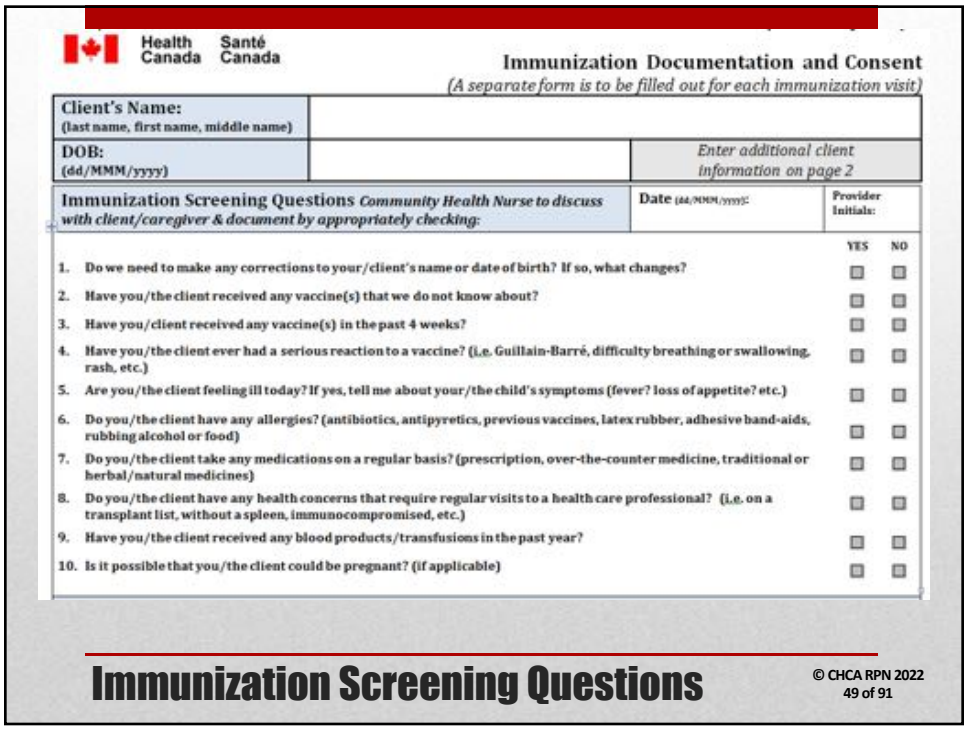

Health Canada / Santé Canada

Immunization Documentation and Consent

(A separate form is to be filled out for each immunization visit)

Client's Name: (last name, first name, middle name)		
DOB: (dd/MMM/yyyy)		*Enter additional client information on page 2*

Immunization Screening Questions *Community Health Nurse to discuss with client/caregiver & document by appropriately checking:*

Date (dd/MMM/yyyy): | Provider Initials:

	YES	NO
1. Do we need to make any corrections to your/client's name or date of birth? If so, what changes?	☐	☐
2. Have you/the client received any vaccine(s) that we do not know about?	☐	☐
3. Have you/client received any vaccine(s) in the past 4 weeks?	☐	☐
4. Have you/the client ever had a serious reaction to a vaccine? (i.e. Guillain-Barré, difficulty breathing or swallowing, rash, etc.)	☐	☐
5. Are you/the client feeling ill today? If yes, tell me about your/the child's symptoms (fever? loss of appetite? etc.)	☐	☐
6. Do you/the client have any allergies? (antibiotics, antipyretics, previous vaccines, latex rubber, adhesive band-aids, rubbing alcohol or food)	☐	☐
7. Do you/the client take any medications on a regular basis? (prescription, over-the-counter medicine, traditional or herbal/natural medicines)	☐	☐
8. Do you/the client have any health concerns that require regular visits to a health care professional? (i.e. on a transplant list, without a spleen, immunocompromised, etc.)	☐	☐
9. Have you/the client received any blood products/transfusions in the past year?	☐	☐
10. Is it possible that you/the client could be pregnant? (if applicable)	☐	☐

Immunization Screening Questions

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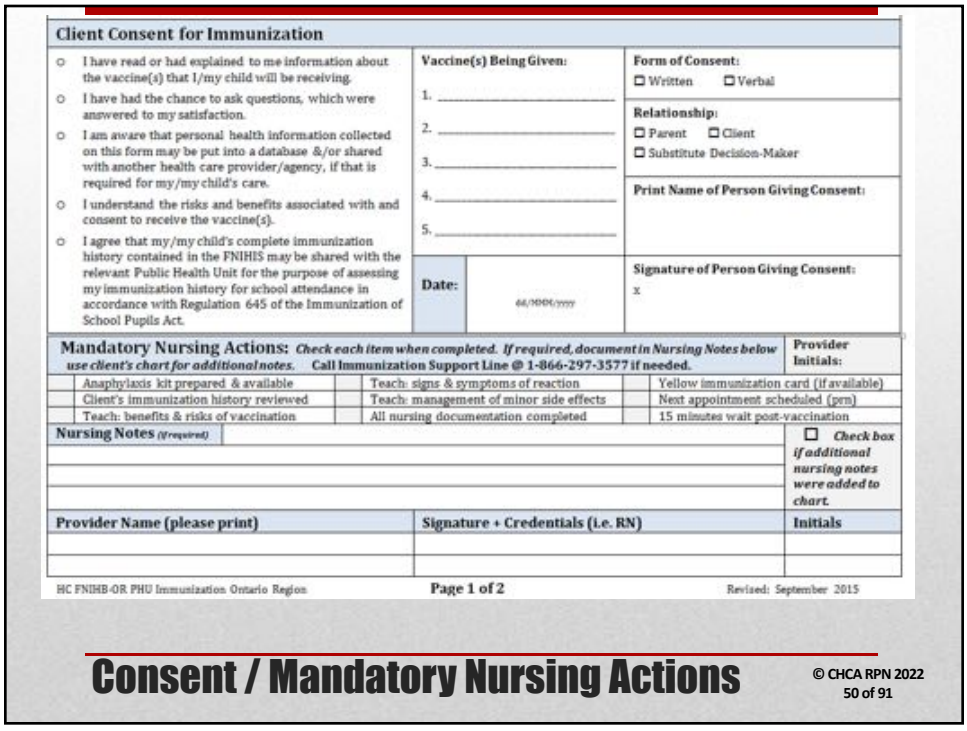

Client Consent for Immunization

- ○ I have read or had explained to me information about the vaccine(s) that I/my child will be receiving.
- ○ I have had the chance to ask questions, which were answered to my satisfaction.
- ○ I am aware that personal health information collected on this form may be put into a database &/or shared with another health care provider/agency, if that is required for my/my child's care.
- ○ I understand the risks and benefits associated with and consent to receive the vaccine(s).
- ○ I agree that my/my child's complete immunization history contained in the FNIHIS may be shared with the relevant Public Health Unit for the purpose of assessing my immunization history for school attendance in accordance with Regulation 645 of the Immunization of School Pupils Act.

Vaccine(s) Being Given:
1. _____
2. _____
3. _____
4. _____
5. _____

Date: dd/MMM/yyyy

Form of Consent: ☐ Written ☐ Verbal

Relationship: ☐ Parent ☐ Client ☐ Substitute Decision-Maker

Print Name of Person Giving Consent:

Signature of Person Giving Consent: x

Mandatory Nursing Actions: *Check each item when completed. If required, document in Nursing Notes below use client's chart for additional notes.* Call Immunization Support Line @ 1-866-297-3577 if needed. | Provider Initials:

Anaphylaxis kit prepared & available	Teach: signs & symptoms of reaction	Yellow immunization card (if available)
Client's immunization history reviewed	Teach: management of minor side effects	Next appointment scheduled (prn)
Teach: benefits & risks of vaccination	All nursing documentation completed	15 minutes wait post-vaccination

Nursing Notes (If required) ☐ *Check box if additional nursing notes were added to chart.*

Provider Name (please print)	Signature + Credentials (i.e. RN)	Initials

HC FNIHB-OR PHU Immunization Ontario Region — Page 1 of 2 — Revised: September 2015

Consent / Mandatory Nursing Actions

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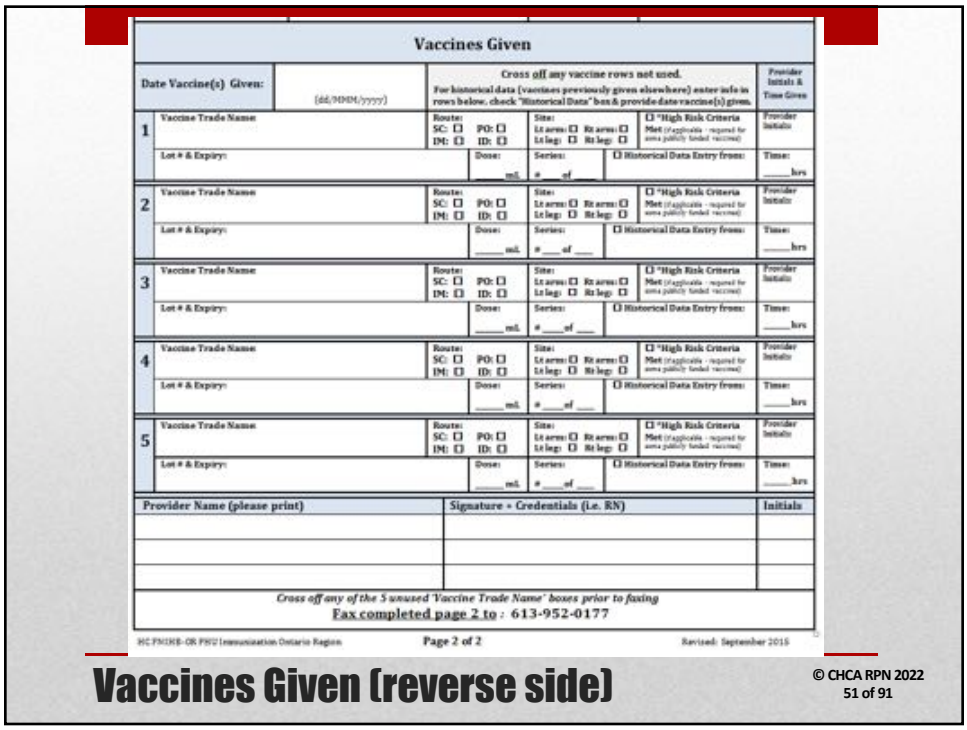

Vaccines Given

Date Vaccine(s) Given: (dd/MMM/yyyy)

Cross off any vaccine rows not used.
For historical data (vaccines previously given elsewhere) enter info in rows below, check "Historical Data" box & provide date vaccine(s) given.

Provider Initials & Time Given

	Vaccine Trade Name	Route	Site	*High Risk Criteria	Provider Initials
1		SC: ☐ PO: ☐ IM: ☐ ID: ☐	Lt arm: ☐ Rt arm: ☐ Lt leg: ☐ Rt leg: ☐	☐ Met (if applicable - required for some publicly funded vaccines)	
	Lot # & Expiry:	Dose: ____ mL	Series: # ___ of ___	☐ Historical Data Entry from:	Time: ____ hrs
2		SC: ☐ PO: ☐ IM: ☐ ID: ☐	Lt arm: ☐ Rt arm: ☐ Lt leg: ☐ Rt leg: ☐	☐ Met (if applicable - required for some publicly funded vaccines)	
	Lot # & Expiry:	Dose: ____ mL	Series: # ___ of ___	☐ Historical Data Entry from:	Time: ____ hrs
3		SC: ☐ PO: ☐ IM: ☐ ID: ☐	Lt arm: ☐ Rt arm: ☐ Lt leg: ☐ Rt leg: ☐	☐ Met (if applicable - required for some publicly funded vaccines)	
	Lot # & Expiry:	Dose: ____ mL	Series: # ___ of ___	☐ Historical Data Entry from:	Time: ____ hrs
4		SC: ☐ PO: ☐ IM: ☐ ID: ☐	Lt arm: ☐ Rt arm: ☐ Lt leg: ☐ Rt leg: ☐	☐ Met (if applicable - required for some publicly funded vaccines)	
	Lot # & Expiry:	Dose: ____ mL	Series: # ___ of ___	☐ Historical Data Entry from:	Time: ____ hrs
5		SC: ☐ PO: ☐ IM: ☐ ID: ☐	Lt arm: ☐ Rt arm: ☐ Lt leg: ☐ Rt leg: ☐	☐ Met (if applicable - required for some publicly funded vaccines)	
	Lot # & Expiry:	Dose: ____ mL	Series: # ___ of ___	☐ Historical Data Entry from:	Time: ____ hrs

Provider Name (please print)	Signature + Credentials (i.e. RN)	Initials

Cross off any of the 5 unused 'Vaccine Trade Name' boxes prior to faxing
Fax completed page 2 to : 613-952-0177

HC PHAB-OR PHU Immunization Ontario Region Page 2 of 2 Revised: September 2015

Vaccines Given (reverse side)

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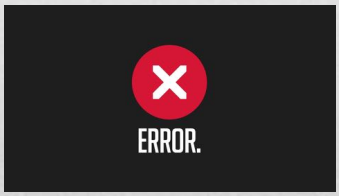
- Errors must be documented on a med error form and reported to your NIC and/or NPC
- Errors may also be found on documentation forms that are sent in for data entry. This must be reported to the immunizing nurse (for clarification) & if warranted, the NIC or zone NPC

This system is not meant to be punitive, rather, to see where more support can be offered to nurses in the field.



Immunization Errors

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Other Immunity Products

PART 7

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- Immune globulins are proteins extracted from blood serum
- It contains antibodies that recognize and attack specific antigens
- Non-specific immune globulins administered intramuscularly are used to prevent Measles and Hepatitis A or B
- Immune Globulins are short acting, therefore, vaccinations need to be given in addition for a long lasting effect
- Not kept in the community
- Consultation with Public Health needed
- Public Health will ship to community

Principles: Immune Globulins

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Clostridium Botulinum Antitoxin

- Anti-toxins are antibodies that have the ability to neutralize a specific toxin.
- They are produced by injecting animals with a specific toxin.

Examples: diphtheria, gas gangrene, botulism tetanus

Example: Arctic Canada - Igunaq (Inuktitut: ᐃᔾᓇᖅ)
- Fermented Walrus Meat
- If not prepared properly can cause Botulism
- Botulism Antitoxin kept on hand in Nunavut

Principles: Anti-Toxins

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- Respiratory Syncytial Virus (RSV) is the most common cause of bronchiolitis and pneumonia in infants and young children.
- Synagis: a monoclonal antibody used to prevent severe disease caused RSV infection.
- Testing for RSV done by NP swab, reportable disease in Nunavut.

- Recommended for high-risk infants because of prematurity or another medical problem such as congenital heart disease.
- Synagis provides passive immunity, thus missed doses leave patients unprotected. Ensure all doses are administered on time for maximum protection.
- Does not interfere with the immune response to vaccines and can be administered at the same time as childhood vaccines.

Schedule:
- **Supplied in 50 mg vials of sterile powder for reconstitution with sterile water**
- **Given once monthly, during RSV season: January 1 to May 31**
- **Max 5 doses.**
- **Intramuscular injection**

Synagis (Palivizumab)

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- *Bacillus Calmette–Guérin (BCG)* vaccine is a vaccine primarily used against tuberculosis.
- BCG is still given in some Northern Communities (Manitoba, Nunavut) at Birth
- Given in Right deltoid
- Can create an open sore for up to 6 weeks
- Dry dressing only. No topical antimicrobials

BCG

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Manitoba

- SCID testing for all Manitoba newborns as of Sept 2020
- Hospitals no longer be administering BCG immunizations
- All First Nation communities have the ability to provide BCG immunizations
- No TST is required for infants under 6 months of age.
- During prenatal visits, inform the client of changes and the importance of bringing baby to be immunized with BCG
- If timing allows, incorporate postpartum visit and newborn assessment

***However if infant is greater than 6 months of age a TST is required.**

If TST result is greater than 0mm would be considered positive and MOH consultation is required.

BCG Program Changes for Fall of 2020

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- Not recommended for routine use in any Canadian population
- BCG use in Canada has been limited to First Nations and Inuit Populations as part of the TB elimination strategy
- Recommended for use in infants living in high risk communities

Bacille Calmette-Guerin(BCG) vaccine

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BCG - Fitness to Immunize Assessment Tool

Indigenous Services Canada / Services aux Autochtones Canada

*Answering YES to any of these questions or being uncertain as to the answer would indicate the need to hold the BCG immunization and consult.

	YES	NO
This child is over 12 months of age		
Assess for immunodeficiency – This infant:		
a. Has a positive SCID (severe combined immunodeficiency) screening lab result	YES	NO
b. Has a history of repeated strange infections that have not been helped by antibiotics	YES	NO
c. Is taking any medication or treatment that can affect the immune system (steroids, chemotherapy, radiation)	YES	NO
d. Has been diagnosed with "failure to thrive" (for older infants only)	YES	NO
Assess for immunodeficiency – Risk of this infant being infected with HIV		
a. Positive maternal HIV test (during pregnancy or otherwise)	YES	NO
b. Maternal HIV status not tested during pregnancy	YES	NO
c. High risk activities by mother since HIV test (unprotected sex, IV drug use)	YES	NO
Assess for immunodeficiency – other		
Close family relative of this infant's parents (sibling, parent, cousin, uncle, aunt) have a history of:		
a. SCID (severe combined immunodeficiency)	YES	NO
b. Other types of immunodeficiencies (the body's own defense system which protects against infection is not working)	YES	NO
c. Unusual problems with serious infections	YES	NO
An infant or child under 2 years old in the families of the parents have a history of:		
a. Death before their second birthday from an unusual type of illness or infection	YES	NO
b. Diagnosis of "failure to thrive"	YES	NO
c. Repeated unusual infections that have not been helped by medications (antibiotics)	YES	NO
Assess for Tuberculosis		
5. This infant has been in contact with active TB disease	YES	NO
6. This infant is taking anti-tuberculosis medication (INH, Rifampin, PZA, Ethambutol)	YES	NO
Assess general health/fitness to immunize		
7. This infant has large areas of skin with a rash or sores	YES	NO
9. This infant has a severe acute illness today	YES	NO

If YES is the answer for *any* of the questions, **do not vaccinate** and **consult the Public Health Unit**

If NO is the answer to **all** of these questions, **vaccinate with BCG.**

Developed by First Nations & Inuit Health Branch, Alberta Region - adapted and used with permission in Manitoba Region - Revised September 2020

BCG- Fitness to Immunize Assessment Tool

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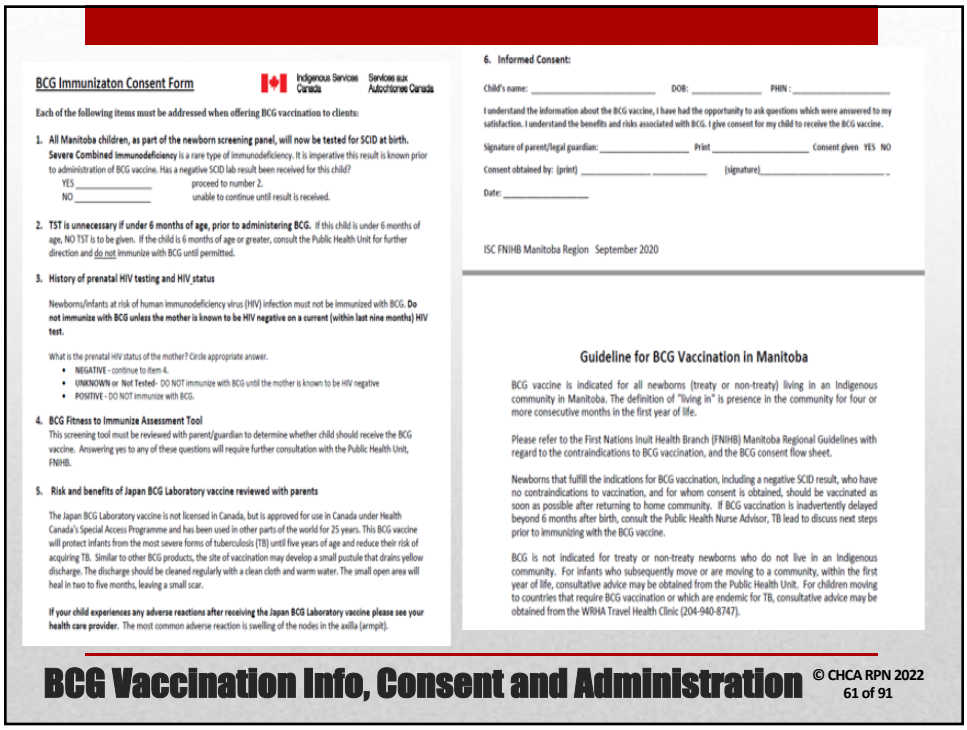

BCG Immunizaton Consent Form

Indigenous Services Canada / Services aux Autochtones Canada

Each of the following items must be addressed when offering BCG vaccination to clients:

1. **All Manitoba children, as part of the newborn screening panel, will now be tested for SCID at birth. Severe Combined Immunodeficiency** is a rare type of immunodeficiency. It is imperative this result is known prior to administration of BCG vaccine. Has a negative SCID lab result been received for this child?
   YES _____ proceed to number 2.
   NO _____ unable to continue until result is received.
2. **TST is unnecessary if under 6 months of age, prior to administering BCG.** If this child is under 6 months of age, NO TST is to be given. If the child is 6 months of age or greater, consult the Public Health Unit for further direction and do not immunize with BCG until permitted.
3. **History of prenatal HIV testing and HIV status**

   Newborns/infants at risk of human immunodeficiency virus (HIV) infection must not be immunized with BCG. **Do not immunize with BCG unless the mother is known to be HIV negative on a current (within last nine months) HIV test.**

   What is the prenatal HIV status of the mother? Circle appropriate answer.
   - **NEGATIVE** - continue to item 4.
   - **UNKNOWN** or **Not Tested**- DO NOT immunize with BCG until the mother is known to be HIV negative
   - **POSITIVE** - DO NOT immunize with BCG.
4. **BCG Fitness to Immunize Assessment Tool**
   This screening tool must be reviewed with parent/guardian to determine whether child should receive the BCG vaccine. Answering yes to any of these questions will require further consultation with the Public Health Unit, FNIHB.
5. **Risk and benefits of Japan BCG Laboratory vaccine reviewed with parents**

   The Japan BCG Laboratory vaccine is not licensed in Canada, but is approved for use in Canada under Health Canada's Special Access Programme and has been used in other parts of the world for 25 years. This BCG vaccine will protect infants from the most severe forms of tuberculosis (TB) until five years of age and reduce their risk of acquiring TB. Similar to other BCG products, the site of vaccination may develop a small pustule that drains yellow discharge. The discharge should be cleaned regularly with a clean cloth and warm water. The small open area will heal in two to five months, leaving a small scar.

   If your child experiences any adverse reactions after receiving the Japan BCG Laboratory vaccine please see your health care provider. The most common adverse reaction is swelling of the nodes in the axilla (armpit).

6. **Informed Consent:**

Child's name: _____ DOB: _____ PHIN : _____

I understand the information about the BCG vaccine, I have had the opportunity to ask questions which were answered to my satisfaction. I understand the benefits and risks associated with BCG. I give consent for my child to receive the BCG vaccine.

Signature of parent/legal guardian: _____ Print _____ Consent given YES NO

Consent obtained by: (print) _____ _____ (signature)_____

Date: _____

ISC FNIHB Manitoba Region September 2020

Guideline for BCG Vaccination in Manitoba

BCG vaccine is indicated for all newborns (treaty or non-treaty) living in an Indigenous community in Manitoba. The definition of "living in" is presence in the community for four or more consecutive months in the first year of life.

Please refer to the First Nations Inuit Health Branch (FNIHB) Manitoba Regional Guidelines with regard to the contraindications to BCG vaccination, and the BCG consent flow sheet.

Newborns that fulfill the indications for BCG vaccination, including a negative SCID result, who have no contraindications to vaccination, and for whom consent is obtained, should be vaccinated as soon as possible after returning to home community. If BCG vaccination is inadvertently delayed beyond 6 months after birth, consult the Public Health Nurse Advisor, TB lead to discuss next steps prior to immunizing with the BCG vaccine.

BCG is not indicated for treaty or non-treaty newborns who do not live in an Indigenous community. For infants who subsequently move or are moving to a community, within the first year of life, consultative advice may be obtained from the Public Health Unit. For children moving to countries that require BCG vaccination or which are endemic for TB, consultative advice may be obtained from the WRHA Travel Health Clinic (204-940-8747).

BCG Vaccination Info, Consent and Administration

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- BCG and diluent– a file is required to open the BCG vial (comes as a heart shaped file with vaccines on shipment- **be careful not to discard**).
- BCG is a multi dose vial (10 doses)
- **Dosage: 0.1mL**
- **Route**: Intradermal, into the most superficial layers of the skin
- **Site:** Over deltoid area on the **LEFT** arm
- **Syringe and Needle**: 1.0m: Tuberculin Syringe, 26 or 27 gauge needle, bevel up
- **PPE:** gloves and protective eye wear when reconstituting and withdrawing dose—as it is a live vaccine
- Once reconstituted, vaccine is stable for 6 hours
  → *try to book a few infants on the same day to reduce wastage if possible, however don't delay giving immunization as to not waste though (if in clinic—immunize)*
- Discard reconstituted vaccine in a biohazardous waste container

Administration of BCG

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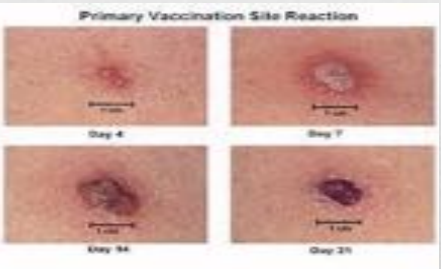
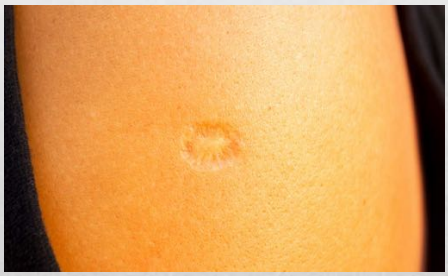
- Erythema in first few weeks
- Papule or ulceration at about 2-4weeks
- Pustule at about 4 weeks–pustule may drain purulent looking discharge and may contain bacilli
- 2-5 months-formation of scar by granulation
- Keloid formation is rare





Expected response to BCG immunization

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Reporting Adverse Events

PART 8

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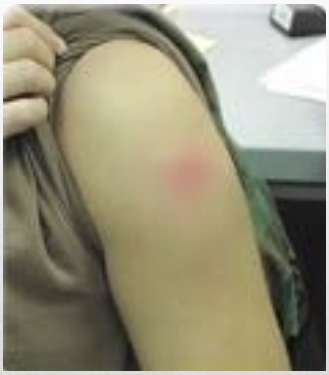
- Vaccines are safe and continue to be a positive contribution to overall population health, however, there is a slight risk of adverse reactions as a result of vaccination.
- Local reactions are the most common occurrence after a vaccination
- They normally present as indurations, pain or sensitivity, redness or heat at the injection site
- These are generally self limiting and require no treatment



Injection site reaction

Management of Adverse Events

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Adverse Events Following Immunization (AEFI)

are defined as:

- any untoward medical occurrence in a vaccine which follows immunization, and which does **not** necessarily have a causal relationship with the administration of the vaccine.
- adverse event may be any unfavourable and/or unintended sign, abnormal laboratory finding, symptom or disease.

Reportable Adverse Events

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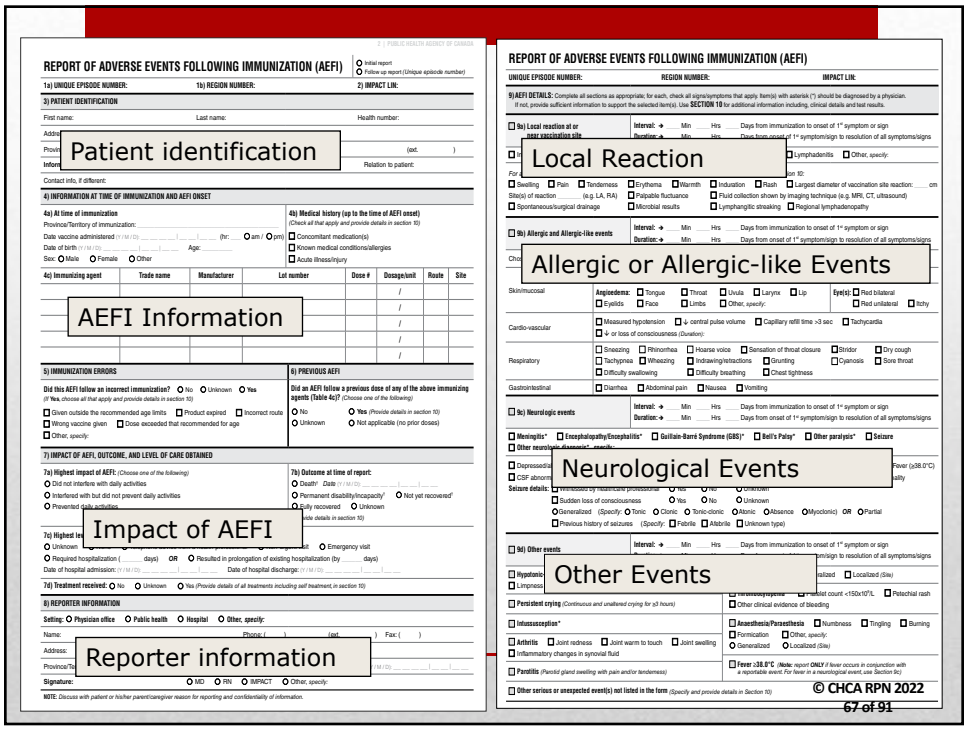

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- REPORT if the AE has a temporal association with immunization (i.e. the event follows immunization); and
- If the AE has no other clear cause when reporting
- A causal relationship does not need to be proven, and submitting a report does not imply causality.
- Expected AE found in the vaccine's product monograph DO NOT NEED TO BE REPORTED
- If there is any doubt as to whether or not an event should be reported, a conservative approach should be taken and the event should be reported.

What AEFI should be reported?

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- Stabilize the patient medically.
- Notify the Zone Communicable Disease Nurse by phone immediately, and fax the AEFI form (within 24hrs)
- Inform the patient AEFI will be reported to Public Health unit and Indigenous Services Canada. They will be contacted with recommendations for future immunization.
- Zone CD Nurse forwards copies to the Zone Medical Officer, Local PHU and the Regional Communicable Disease Coordinator
- Copy of the AEFI report with recommendations for future immunization is sent by the Zone CD Nurse
- CHN will review recommendations with patient

Procedure for reporting AEFI

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Needle Stick Injury Procedure

PART 9

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- Nurses should avoid needle stick injuries by the use of routine practices such as using the correct personal protective equipment and avoiding recapping needles.

Avoid recapping and reduce needle stick injury

Needle Stick Injuries

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Most needlestick injuries are low risk!

1. Inform the NIC of the injury.
2. Allow the wound to bleed freely, then vigorously wash with copious amount of soap and water
3. Fill out the "Unusual Occurrence form" and forward to the ZNO within 24 hours
4. Review client's bloodwork (HBsAg, Anti-HBs, HepC, HIV). If blood status is unknown, obtain consent from the client to draw bloodwork
5. Have your own Anti-HBs, Hepatitis C, HIV drawn as soon as possible, then repeat at 1mo, 3mo and 6mo post.
6. Consult physician regarding need for post-exposure prophylaxis (PEP) meds. (Available in Nursing Station).

Needle Stick Injury Procedure

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Cold Chain Procedure

PART 10

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Vaccine Supply in Ontario

Ministry of Health and (MOH)

(Fund vaccines)

Local Public Health Unit

(Stores and Dispense vaccines)

First Nation Community

(Provide vaccines)

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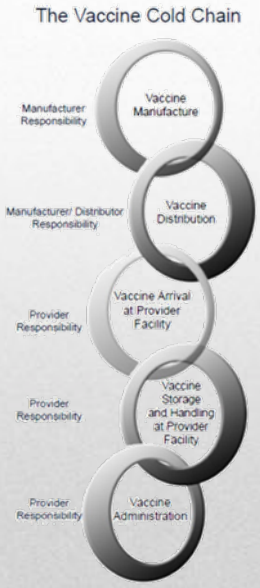
Three Elements to Cold Chain procedure:

- Personnel
  - Delegated primary staff member
- Equipment
  - Refrigerator, Koolatron, coolers, thermometers
- Storage and handling policy/procedures
  - Temperature - controlled supply chain
  - (+2ºC to +8ºC)
  - Begins with the manufacturer and ends with the administration of the vaccine



Cold Chain Procedure

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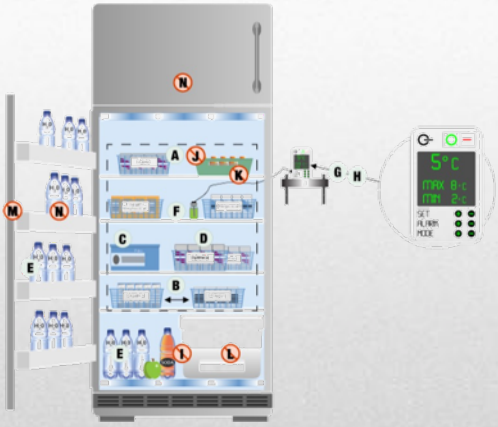
- Stored in a dedicated vaccine refrigerator
- Stored on the middle shelves, away from walls and cold air vents.
- No food, beverages or other biological products/ specimens in the vaccine refrigerator.
- Do not leave vaccines on site if refrigerator will not be monitored for an extended period of time (e.g. evacuation)



Vaccine Storage and Handling

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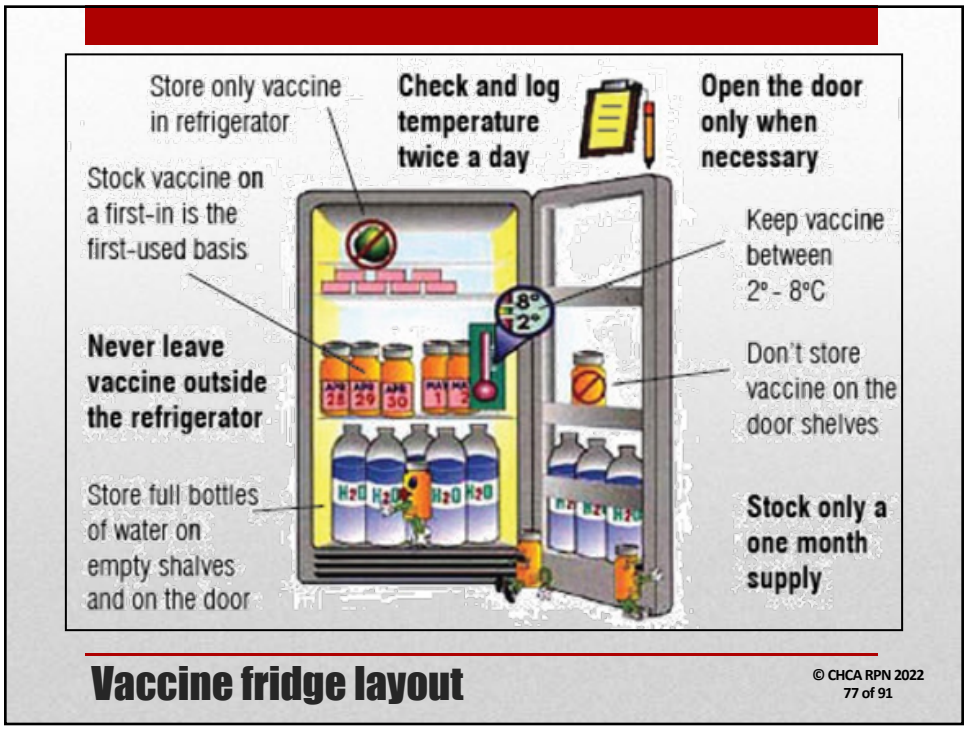
Store only vaccine in refrigerator
Check and log temperature twice a day
Open the door only when necessary
Stock vaccine on a first-in is the first-used basis
Keep vaccine between 2° - 8°C
Never leave vaccine outside the refrigerator
Don't store vaccine on the door shelves
Store full bottles of water on empty shalves and on the door
Stock only a one month supply
Vaccine fridge layout
© CHCA RPN 2022
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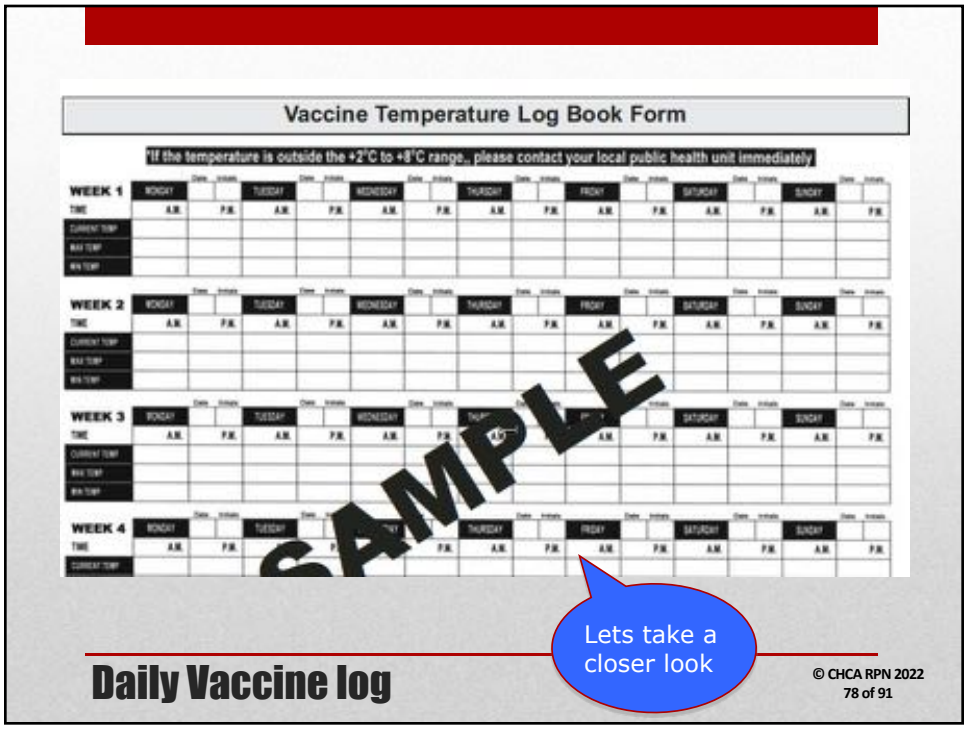
Vaccine Temperature Log Book Form
"If the temperature is outside the +2°C to +8°C range, please contact your local public health unit immediately"
WEEK 1
WEEK 2
WEEK 3
WEEK 4
SAMPLE
Lets take a closer look
Daily Vaccine log
© CHCA RPN 2022
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Month: January 2011 Office/Facility: ABC Pharmacy

Week 5	Mon	3	Tue	4
Time	8:30 AM	5:30 PM	8:30 AM	5:30 PM
Current	5.8	7.0	5.7	6.0
Max Temp	7.1	7.9	6.8	7.2
Min Temp	3.4	3.2	2.8	
Initials	AA	BJ	AA	

Daily Vaccine log

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1. **Notify** the vaccine manager immediately of any situation when the refrigerator temperature goes outside of the +2C to +8C range.
2. **Complete** the cold chain Failure/Exposure/Wastage Report form.
3. **Record the date and time** of discovery of the problem.
4. **Record the temperature** (current, minimum, maximum) at the time of discovery of the problem.
5. **Record the estimated duration** of exposure.

… continued

Cold Chain Break procedure

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6. **Record the date and time** of the last recorded temperature which was in the correct temperature range of +2C to +8C.
7. **Record the current inventory** of the vaccines inside the refrigerator. DO NOT open the door unnecessarily, this will cause further temperature fluctuations inside the refrigerator.
8. **Package the vaccine** and label as "DO NOT USE", transfer to a functioning refrigerated unit with the temperature monitor.
9. **Determine** whether the problem is related to the status of the equipment or an electrical problem.

Cold Chain Break procedure

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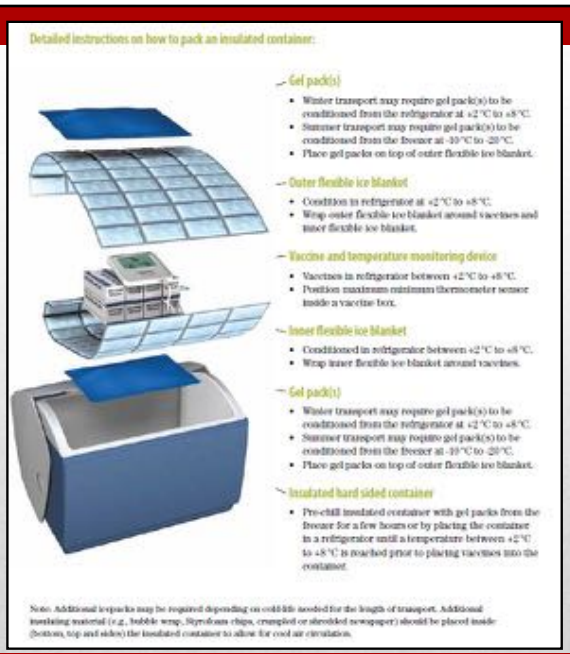

- 1 hour preparation time to acclimatize
- Check temperature prior to transferring vaccines

Offsite transportation, storage and handling

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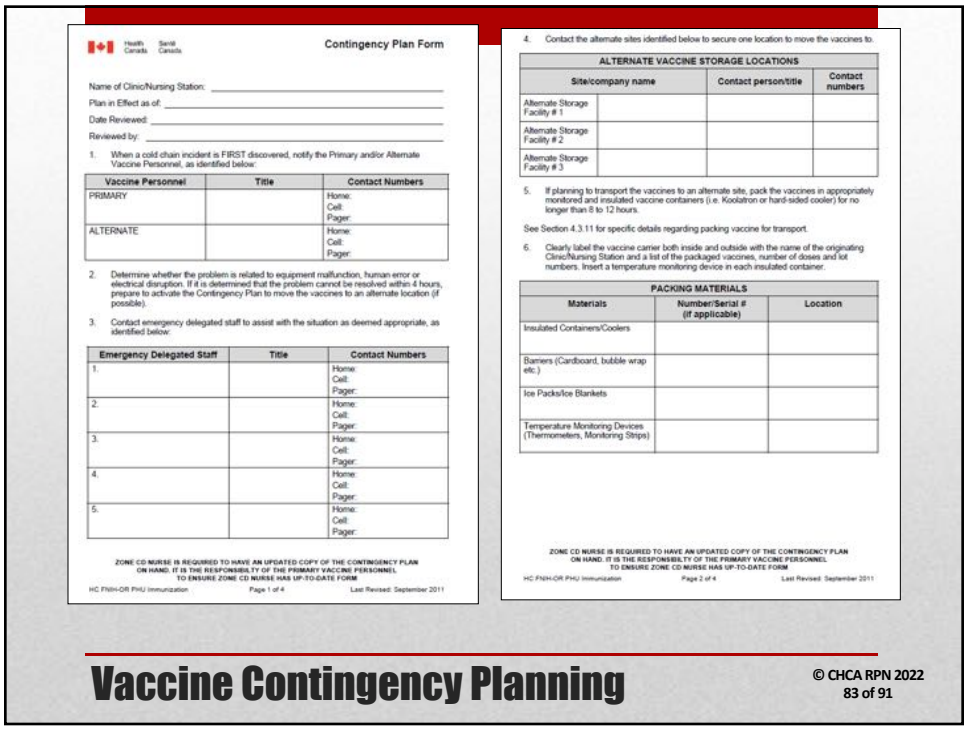
Contingency Plan Form
Name of Clinic/Nursing Station:
Plan in Effect as of:
Date Reviewed:
Reviewed by:
1. When a cold chain incident is FIRST discovered, notify the Primary and/or Alternate Vaccine Personnel, as identified below:
Vaccine Personnel
Title
Contact Numbers
PRIMARY
ALTERNATE
Home:
Cell:
Pager:
2. Determine whether the problem is related to equipment malfunction, human error or electrical disruption. If it is determined that the problem cannot be resolved within 4 hours, prepare to activate the Contingency Plan to move the vaccines to an alternate location (if possible).
3. Contact emergency delegated staff to assist with the situation as deemed appropriate, as identified below:
Emergency Delegated Staff
Title
Contact Numbers
1.
2.
3.
4.
5.
ZONE CD NURSE IS REQUIRED TO HAVE AN UPDATED COPY OF THE CONTINGENCY PLAN ON HAND. IT IS THE RESPONSIBILITY OF THE PRIMARY VACCINE PERSONNEL TO ENSURE ZONE CD NURSE HAS UP-TO-DATE FORM
HC FNIH-OR PHU Immunization
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Last Revised: September 2011
4. Contact the alternate sites identified below to secure one location to move the vaccines to.
ALTERNATE VACCINE STORAGE LOCATIONS
Site/company name
Contact person/title
Contact numbers
Alternate Storage Facility # 1
Alternate Storage Facility # 2
Alternate Storage Facility # 3
5. If planning to transport the vaccines to an alternate site, pack the vaccines in appropriately monitored and insulated vaccine containers (i.e. Koolatron or hard-sided cooler) for no longer than 8 to 12 hours.
See Section 4.3.11 for specific details regarding packing vaccine for transport.
6. Clearly label the vaccine carrier both inside and outside with the name of the originating Clinic/Nursing Station and a list of the packaged vaccines, number of doses and lot numbers. Insert a temperature monitoring device in each insulated container.
PACKING MATERIALS
Materials
Number/Serial # (if applicable)
Location
Insulated Containers/Coolers
Barriers (Cardboard, bubble wrap etc.)
Ice Packs/Ice Blankets
Temperature Monitoring Devices (Thermometers, Monitoring Strips)
ZONE CD NURSE IS REQUIRED TO HAVE AN UPDATED COPY OF THE CONTINGENCY PLAN ON HAND. IT IS THE RESPONSIBILITY OF THE PRIMARY VACCINE PERSONNEL TO ENSURE ZONE CD NURSE HAS UP-TO-DATE FORM
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Vaccine Contingency Planning
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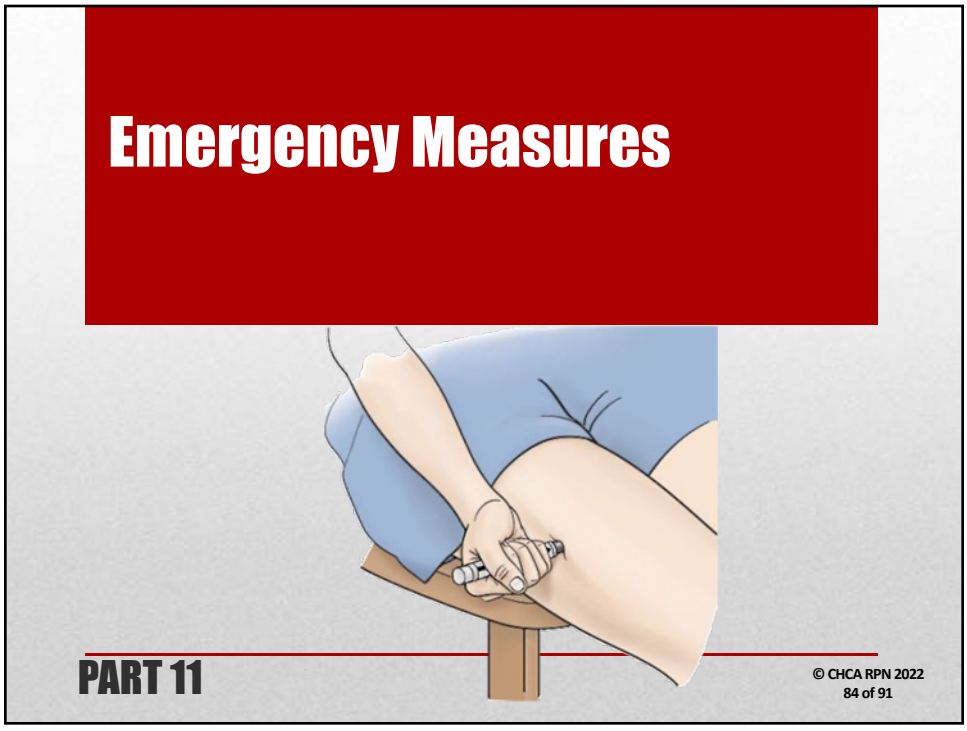
Emergency Measures
PART 11
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- Anaphylaxis is an acute hypersensitivity reaction with multi-organ system involvement that can rapidly progress to a severe life threatening reaction.
- Anaphylaxis following immunization is rare.
- Anaphylaxis generally begins a few minutes after injection and is usually evident within 30 minutes.
- Faster onset of symptoms may indicate a more serious reaction. Rapid intervention is of paramount importance.

Table 1 Mueller's grading for systemic allergic reactions[12]

I	Generalised urticaria, periorbital oedema, itching, malaise, anxiety
II	Angioedema or two or more of the following: chest or throat tightness, nausea, vomiting, diarrhoea, abdominal pain, dizziness
III	Dyspnoea, wheezing, or stridor, or two or more of the following: dysphagia, dysarthria, hoarseness, weakness, confusion, feeling of impending disaster
IV	Hypotension, collapse, loss of consciousness, incontinence, cyanosis

Identification of Anaphylaxis

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Basic Management of Post-Immunization Anaphylaxis in Non-Hospital Setting

EARLY RECOGNITION AND TREATMENT IS VITAL

1. Directs someone to call a code, assess airway, breathing, circulation, mental status, skin, and body weight (mass). Secure an oral airway if necessary.
   - Airway: look specifically at lips, tongue and throat for swelling; if appropriate, ask individual to say his/her name to assess glottis/peri-glottic swelling
2. Place individual on his/her back (supine) and elevate lower extremities. The individual should remain in this position. Exceptions to the supine position:
   - If in respiratory distress, place in a position of comfort (elevate head and chest)
   - If vomiting or unconscious, place lying on his/her side
   - If pregnant, place lying on their left side
3. Inject epinephrine:
   - Dose:0.01mg/kgbodyweightof1:1000(1mg/mL)solution,MAX0.5mg/0.5mL (See Table 1 for dosage by weight)
4. Route: INTRAMUSCULAR (IM) in mid-anterolateral thigh (vastus lateralis muscle) Avoid administering epinephrine into the same site used to administer the vaccine If individual has already received immunizations to both legs, give epinephrine IM at least 1 inch away from injection site if possible

Treatment Protocol

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Basic Management of Post-Immunization Anaphylaxis in Non-Hospital Setting

EARLY RECOGNITION AND TREATMENT IS VITAL

5. Repeat every 5 minutes to max of 3 doses if symptoms persist (most patients improve in 1-2 doses) Record the time of each dose
6. Stabilize individual: perform cardiopulmonary resuscitation if necessary, give oxygen and establish intravenous access if available
7. Give supplemental oxygen (6 to 8 L/minute) by face mask or oropharyngeal airway (if available) to people with cyanosis, dyspnea or any other severe reaction requiring repeated doses of epinephrine
8. If hypotensive, consider giving IV normal saline, 20mL/kg if IV access established and if available
9. Monitor individual's blood pressure, cardiac rate and function, and respiratory status .
10. Transfer to hospital for observation. All individuals receiving emergency epinephrine must be transported to hospital immediately for evaluation and observation. The symptoms of an anaphylactic reaction can reoccur after the initial reaction.

Treatment Protocol

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Basic Management of Post-Immunization Anaphylaxis in Non-Hospital Setting

EARLY RECOGNITION AND TREATMENT IS VITAL

Anaphylaxis generally begins a few minutes after injection and is usually evident within 30 minutes. Faster onset of symptoms may indicate a more serious reaction.

Rapid intervention is of paramount importance. Steps 1, 2, 3 and 4 should be done promptly and simultaneously.

1. **Direct someone to call 911** (where available) **or emergency medical services**
2. **Assess** airway, breathing, circulation, mental status, skin, and body weight (mass). Secure an oral airway if necessary.
   - Airway: look specifically at lips, tongue and throat for swelling; if appropriate, ask individual to say his/her name to assess glottis/peri-glottic swelling
3. Place individual on his/her back (supine) and elevate lower extremities. The individual should remain in this position. Exceptions to the supine position:
   - If in respiratory distress, place in a position of comfort (elevate head and chest)
   - If vomiting or unconscious, place lying on his/her side
   - If pregnant, place lying on their left side
4. Inject epinephrine:
   - Dose: 0.01mg/kg body weight of 1:1000 (1mg/mL) solution, MAX 0.5mg/0.5mL (See Table 1 for dosage by weight)
   - Route: INTRAMUSCULAR (IM) in **mid-anterolateral thigh** (vastus lateralis muscle)
   - Avoid administering epinephrine into the same site used to administer the vaccine
   - If individual has already received immunizations to both legs, give epinephrine IM at least 1 inch away from injection site if possible
   - Repeat every 5 minutes to max of 3 doses if symptoms persist (most patients improve in 1-2 doses)
   - Record the time of each dose
5. Stabilize individual: perform cardiopulmonary resuscitation if necessary, give oxygen and establish intravenous access if available
   - Give supplemental oxygen (6 to 8 L/minute) by face mask or oropharyngeal airway (if available) to people with cyanosis, dyspnea or any other severe reaction requiring repeated doses of epinephrine
   - If hypotensive, consider giving IV normal saline, 20mL/kg if IV access established and if available
6. Monitor individual's blood pressure, cardiac rate and function, and respiratory status
7. Transfer to hospital for observation. All individuals receiving emergency epinephrine must be transported to hospital immediately for evaluation and observation. The symptoms of an anaphylactic reaction can reoccur after the initial reaction.

Table 1: Dose of Epinephrine (1:1000, 1 mg/mL solution), by weight or age

The Canadian Immunization Guide (2020) recommends injecting epinephrine intramuscularly in the mid-anterolateral aspect of the thigh.

The deltoid muscle of the shoulder is not as effective as the thigh in absorbing epinephrine. Avoid the limb used for vaccination.

Failure to administer epinephrine promptly may result in greater risk than using epinephrine improperly

The dosing regimens included in the tables below are based on most recent Canadian Immunization Guide recommendations for weight based dosing:

Use of Auto-injector: If 15- 30 kg, give Junior dose; if > 30 kgs, give Standard dose; *Do not use under 15kg

Weight (recommended at all times)	Age (if weight not known)	Dose (1:1000) IM (0.01mg/kg body weight)	Dose by Auto-injector
2-5 kg (4 - 11 lbs)	0 – 6 months	0.05 mL (or 0.1 mL)	Not applicable
5.5 – 10 kg (12 – 22 lbs)	7 months – 2 years	0.1 mL	Not applicable
10.5 – 15 kg (23 – 33 lbs)	2 years – 3 years	0.15 mL	*Junior Dose 0.15 mg after 15 kg
15.5 – 20 kg (34 – 44 lbs)	3 years – 5 years	0.2 mL	Junior Dose 0.15 mg
20.5 – 25 kg (45 – 55 lbs)	5 years – 7 years	0.25 mL	Standard Dose 0.30 mg
25.5 – 35 kg (56 – 77 lbs)	8 years – 10 years	0.3 mL	Standard Dose 0.30 mg
35.5 – 45 kg (78 – 99 lbs)	11 years – 12 years	0.4 mL	Standard Dose 0.30 mg
>45.5 kg (100 lbs and up)	13 years of age and up	0.5 mL (max. per dose)	Standard Dose 0.30 mg

Adapted from the Canadian Immunization Guide and Saskatchewan Immunization Manual

***Administration in infants weighing 2.0 - 14.9kg:**

It is recommended that epinephrine be administered via a syringe rather than via auto-injector. Needle lengths that are too long have a risk of intraosseous administration (due to the need to apply pressure in order to deploy the auto-injector). The depth of the needle is better controlled with the syringe administration rather than auto-injector.

Note: Antihistamines (first and second generation) have no role in preventing or treating respiratory or cardiovascular symptoms of anaphylaxis in a community setting and should never be used in place of epinephrine, or as adjunct therapy.

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Revised February 2021

Canada

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Use of Auto-injector: If 15- 30 kg, give Junior dose; if > 30 kgs, give Standard dose;
***Do not use under 15kg**

Weight (recommended at all times)	Age (if weight not known)	Dose (1:1000) IM (0.01mg/kg body weight)	Dose by Auto-injector
2-5 kg (4 - 11 lbs)	0 – 6 months	0.05 mL (or 0.1 mL)	Not applicable
5.5 – 10 kg (12 – 22 lbs)	7 months – 2 years	0.1 mL	Not applicable
10.5 – 15 kg (23 – 33 lbs)	2 years – 3 years	0.15 mL	*Junior Dose 0.15 mg after 15 kg
15.5 – 20 kg (34 – 44 lbs)	3 years – 5 years	0.2 mL	Junior Dose 0.15 mg
20.5 – 25 kg (45 – 55 lbs)	5 years – 7 years	0.25 mL	Standard Dose 0.30 mg
25.5 – 35 kg (56 – 77 lbs)	8 years – 10 years	0.3 mL	Standard Dose 0.30 mg
35.5 – 45 kg (78 – 99 lbs)	11 years – 12 years	0.4 mL	Standard Dose 0.30 mg
>45.5 kg (100 lbs and up)	13 years of age and up	0.5 mL (max. per dose)	Standard Dose 0.30 mg

Adapted from the Canadian Immunization Guide and Saskatchewan Immunization Manual

*Or Epi-Pen

Epinephrine Treatment Protocol

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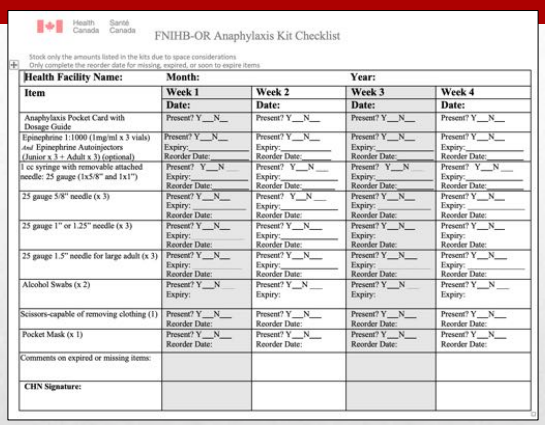

FNIHB-OR Anaphylaxis Kit Checklist

Stock only the amounts listed in the kits due to space considerations
Only complete the reorder date for missing, expired, or soon to expire items

Health Facility Name:	Month:		Year:	
Item	Week 1 Date:	Week 2 Date:	Week 3 Date:	Week 4 Date:
Anaphylaxis Pocket Card with Dosage Guide	Present? Y__N__	Present? Y__N__	Present? Y__N__	Present? Y__N__
Epinephrine 1:1000 (1mg/ml x 3 vials) And Epinephrine Autoinjectors (Junior x 3 + Adult x 3) (optional)	Present? Y__N__ Expiry:_____ Reorder Date:_____	Present? Y__N__ Expiry:_____ Reorder Date:_____	Present? Y__N__ Expiry:_____ Reorder Date:_____	Present? Y__N__ Expiry:_____ Reorder Date:_____
1 cc syringe with removable attached needle: 25 gauge (1x5/8" and 1x1")	Present? Y__N__ Expiry:_____ Reorder Date:_____	Present? Y__N__ Expiry:_____ Reorder Date:_____	Present? Y__N__ Expiry:_____ Reorder Date:_____	Present? Y__N__ Expiry:_____ Reorder Date:_____
25 gauge 5/8" needle (x 3)	Present? Y__N__ Expiry: Reorder Date:	Present? Y__N__ Expiry:_____ Reorder Date:	Present? Y__N__ Expiry: Reorder Date:	Present? Y__N__ Expiry: Reorder Date:
25 gauge 1" or 1.25" needle (x 3)	Present? Y__N__ Expiry: Reorder Date:	Present? Y__N__ Expiry:_____ Reorder Date:	Present? Y__N__ Expiry: Reorder Date:	Present? Y__N__ Expiry: Reorder Date:
25 gauge 1.5" needle for large adult (x 3)	Present? Y__N__ Expiry: Reorder Date:	Present? Y__N__ Expiry:_____ Reorder Date:	Present? Y__N__ Expiry: Reorder Date:	Present? Y__N__ Expiry: Reorder Date:
Alcohol Swabs (x 2)	Present? Y__N__ Expiry:	Present? Y__N__ Expiry:	Present? Y__N__ Expiry:	Present? Y__N__ Expiry:
Scissors-capable of removing clothing (1)	Present? Y__N__ Reorder Date:	Present? Y__N__ Reorder Date:	Present? Y__N__ Reorder Date:	Present? Y__N__ Reorder Date:
Pocket Mask (x 1)	Present? Y__N__ Reorder Date:	Present? Y__N__ Reorder Date:	Present? Y__N__ Reorder Date:	Present? Y__N__ Reorder Date:
Comments on expired or missing items:				
CHN Signature:				

- Ensure all supplies are stocked in Anaphylaxis Kits, as per recommendations (checklist on LMS)
- Maintain Anaphylaxis Kits, ensuring supplies are sufficient and expiry dates are not surpassed, check weekly.
- Ensure that reference material is current and up to date

Role of Community Health Nurse

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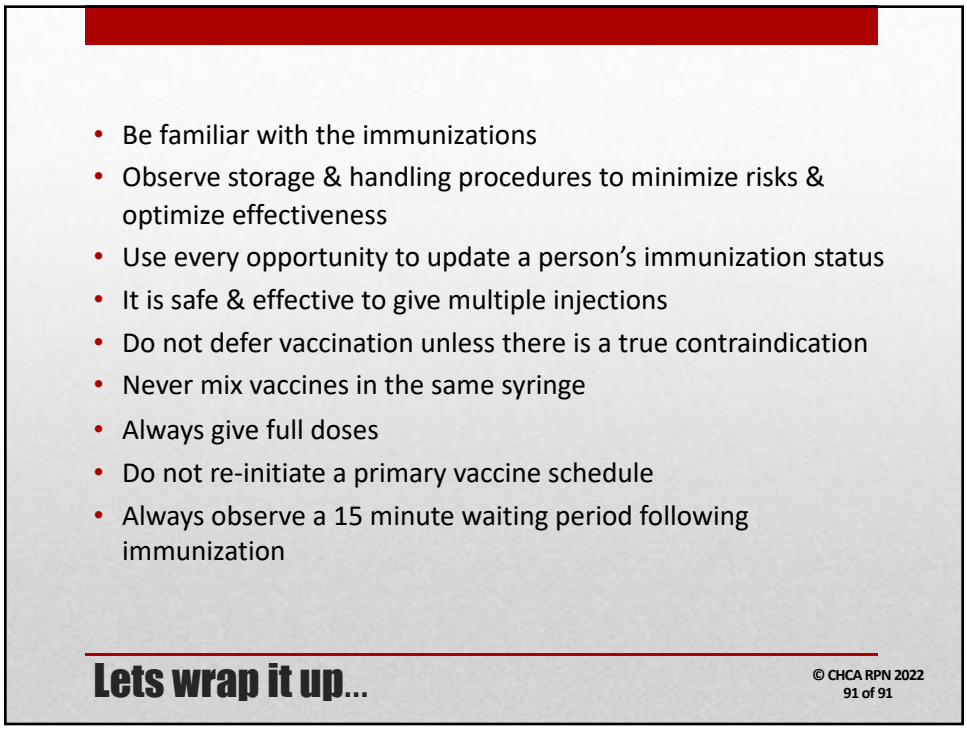
Be familiar with the immunizations
Observe storage & handling procedures to minimize risks & optimize effectiveness
Use every opportunity to update a person's immunization status
It is safe & effective to give multiple injections
Do not defer vaccination unless there is a true contraindication
Never mix vaccines in the same syringe
Always give full doses
Do not re-initiate a primary vaccine schedule
Always observe a 15 minute waiting period following immunization
Lets wrap it up...
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