Northwest Territories Health and Social Services

NWT Clinical Practice Information Notice

Upon receipt, please file this notice in
Section C, Clinical Practice Information Binder for future reference.

The following clinical practice has been approved for use in the Northwest Territories Health and Social Services system, and has been distributed to:

X	Hospitals	X	Community Health Centers		Homecare		LTCF	X	Pharmacists
X	Doctors' Offices		Social Services Offices	X	Public Health Units				

The information contained in this document is a Departmental:									
	Policy	X	Standard		Protocol		Procedure		Guideline

Title: Bacille Calmette-Guerin (BCG) Vaccine
Effective Date: July 2011

Statement of approved Clinical Practice:

The NWT Advisory Committee on Immunization continues to recommend all infants up to the age of two years in the Northwest Territories be offered BCG vaccine.

The formulary of this vaccine can pose risk to both the infant (the recipient) and the vaccinator due to the nature of the route of administration and contents of a live attenuated *Mycobacterium bovis* vaccine.

All vaccinators (usually registered nurses) must have completed the NWT Immunization Competency Exam, accessible through the Department of Health and Social Services website, as well as completing their preceptorship in the administration of BCG vaccine.

Please note the BCG vaccine is only distributed to the three major birthing centres and four public health units in the NWT. Qualified vaccinators are employed at the three hospitals with birthing services, Stanton Territorial Hospital, Fort Smith Community Health Center and Inuvik Regional Hospital.

In the event that an infant is not administered the BCG vaccine at birth (usually within 72 hours), then the options for BCG administration in communities without birthing centres are:

- Arrange to have infant vaccinated by certified staff in one of the major birthing centre communities by arranging an appointment with the public health unit***. Please note there is no medical travel coverage for infant and caregiver*** ;or
- Have vaccine administered when a certified vaccinator is in the community; or
- Discussing other options with your regional manager of community health services.

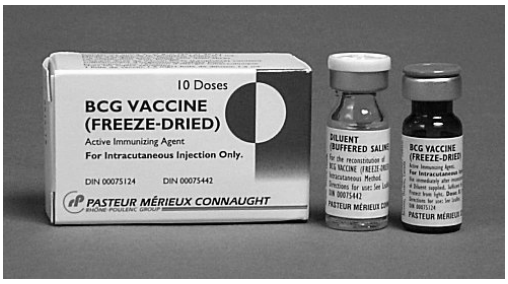
Approval for supply in the other communities can be requested by the Office of the Chief Public Health Officer.

Attachment:
NWT Tuberculosis Manual Section 9, BCG Vaccination

This clinical practice is approved. _____ (signature)

Assistant Deputy Minister ☐ Chief Medical Health Officer ☒ Director, Child & Family Services ☐ Director, Adoptions ☐

BCG Vaccination



Bacille Calmette-Guerin vaccine (BCG) is a suspension of a live attenuated strain of *Mycobacterium bovis*, which has the capacity to induce cross reactivity to *Mycobacterium tuberculosis*. Successful vaccination affords protection against the lymphohematogenous spread of the tubercle bacillus, during a subsequent natural infection, and therefore reduces the incidence of tuberculous meningitis and disseminated (miliary) TB in immunized infants.

1. Indications

Infants under 6 weeks of age should not be tuberculin tested before receiving BCG, since reactivity does not develop before that age. In general, tuberculin testing is recommended prior to BCG administration when infants do not receive BCG at birth, and are older than 6 weeks of age.

- All infants in the NWT can be offered BCG. The vaccine should be given, with informed consent, soon after birth and ideally prior to hospital discharge. BCG may be given up to 24 months of age, when it is recognized that BCG was not given at birth. BCG is most important for infants at high risk, which includes infants from:
    - aboriginal communities
    - families in which there is a strong history of tuberculosis
    - communities or groups of persons in which high rates of new infection are demonstrated.
- NWT has been routinely immunizing newborns at high risk, which are primarily **aboriginal and immigrant children** living in families or communities with a history or risk of exposure to tuberculosis

- Selected health care workers and other occupational groups who are at considerable risk of exposure especially to strains of mycobacteria resistant to several drugs, and when other protective measures against infection are known to be ineffective or not feasible.

2. Contraindications

- Persons with a positive Mantoux (although Mantoux reactors who receive vaccination do not normally have adverse effects).

- Persons with impaired cell-mediated immune response (e.g. an HIV-infected individual and infants born to HIV infected mothers). **HIV screening is required of mothers or infants prior to giving BCG**. If in doubt always consult with the Chief Medical Health Officer (CMHO).

    - Persons with extensive active skin disease (e.g. eczema, psoriasis) or burns.

    - Persons who receive any live vaccines, such as MMR and Varicella, during the four previous weeks, since these are known to temporarily suppress the immune response.

    - Persons receiving antibiotics, (e.g., Cipro®) that can be used as antituberculous drugs, since these agents may be active against the vaccine strain.

3. Storage of BCG Vaccine

a) Freeze-dried BCG vaccine is supplied in multi-dose vials, together with bottles of sterile diluent.

b) The vials and diluent should be kept refrigerated at the recommended temperature of 2-8 degrees Celsius and should at no time be exposed to sunlight (direct or indirect). **Each vial should be used and discarded within 8 hours after reconstitution.**

4. Vaccination Procedure

a) Provide privacy and inform parent/guardian about the benefits, risks, procedure and expected reactions to the vaccine, using a translator if necessary.

b) Obtain informed consent.

c) Freeze-dried BCG vaccine (0.05cc for infants less than 12 months of age and 0.1cc for others) should be given, using a disposable syringe and a 26 or 27 gauge needle.

d) Cleanse the right deltoid area with an alcohol swab and let dry completely.

e) Holding the syringe parallel to the skin surface, insert the needle (bevel upward) into the intradermal layer of skin in the upper right deltoid area and slowly inject the solution.

f) Record the date given, dose, site and route of administration, as well as the lot number of the vaccine.

g) BCG should be given promptly after each vial is prepared because it can be inactivated by exposure to light. It should also be given within eight hours after reconstitution of the solution.

h) Advise the parent/guardian to contact clinic if there are any concerns about the reaction/site or patient's health. Provide information about the appropriate management of mild reactions, (see next page).

i) Observe site at subsequent visits until healing is complete.

NB** BCG may be given to premature infants if over 2000 g.

5. Adverse Reactions

Most adverse reactions are mild and occur in fewer than 2% of infants. Abscess formation and suppurative adenitis may be related to technique of administration, improper dilution or injecting too deeply.

a) Mild and Expected Reactions:

- Erythema
- Papule formation
- Superficial ulceration 3 to 6 weeks after BCG
- Scarring of site

b) Moderate Reactions:

- Skin ulceration lasting up to 3 months, with a tendency to local spread
- Regional lymphadenitis
- Lipoid (ulcerative) reactions and keloid (scar) formation
- Abscess formation

c) Moderately Severe Reactions:

- Suppurative adenitis (frequency 1:1000) (draining lymph nodes)

d) Severe Reactions:

- Disseminated BCG infection (frequency < 1:1,000,000) which may be fatal

6. Management of BCG Abscess

- <u>DO NOT INCISE AND DRAIN</u>

- Use warm water compresses over the injection site or suppurating lymph node(s) 4-5 times/day.

- Observe and document the progress of the lesion on the monthly TB Surveillance Report and on the client health record.

- Cover with dry (non-occlusive) dressing to keep clean. Swab for culture and sensitivity (C&S) if secondary infection is suspected.

- Antibiotic therapy (INH) is NOT routinely indicated. Consult the Chief Medical Health Officer or Pediatrician for management guidelines if drainage occurs.

7. Reporting

Moderate and severe reactions are reported by the nurse/physician on the "Report of a Vaccine Associated Adverse Event" form section 12.

Reference:

Health Canada and Canadian Lung Association (2000). Canadian Tuberculosis Standards (5th Ed.)