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## PEDIATRIC INTEGUMENTARY ASSESSMENT

Nurses with Remote Practice Certified Practice designation (RN(C)s<sup>1</sup>) are able to treat children with the following skin conditions:

- Impetigo in children **6 months of age and older**
- Cellulitis in children **2 years of age and older**
- Bites in children **1 year of age and older**

The following assessment must be completed and documented.

### ASSESSMENT

#### History of Present Illness and Review of Systems

##### General

The following characteristics of each symptom should be elicited and explored:

- Onset (sudden or gradual)
- Location and spread
- Duration, chronology
- Characteristics /quality/severity of symptoms
- Associated symptoms
- Precipitating and aggravating factors including environmental factors such as skin and hair products
- Relieving factors
- Timing and frequency
- Current situation (improving or deteriorating)
- Previous diagnosis of similar episodes
- Previous treatments and efficacy
- Effects on daily activities

#### Cardinal Signs and Symptoms

In addition to the general characteristics outlined above, other characteristics of specific symptoms should be elicited, as follows:

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<sup>1</sup> RN(C) is an [authorized title](#) recommended by BCCNP that refers to BCCNP-certified RNs, and is used throughout this Decision Support Tool (DST).

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BCCNP monitors and revises the BCCNP certified practice decision support tools (DSTs) every two years and as necessary based on best practices. The information provided in the DSTs is considered current as of the date of publication. BCCNP-certified nurses (RN(C)s) are responsible for ensuring they refer to the most current DSTs.

The DSTs are not intended to replace the RN(C)'s professional responsibility to exercise independent clinical judgment and use evidence to support competent, ethical care. The RN(C) must consult with or refer to a physician or nurse practitioner as appropriate, or whenever a course of action deviates from the DST.

**General**

- Fever
- Malaise
- Arthralgia

**Skin**

- Changes in texture or colour
- Unusual dryness or moisture
- Itching, burning, pain or numbness
- Rash
- Bruises, petechiae
- Changes in pigmentation
- Lesions, blisters or crust
- Changes in moles or birthmarks

**Hair**

- Changes in amount, texture, distribution

**Nails**

- Changes in texture, structure

**Medical History (specific to the Integumentary System)**

- Allergies – medication, environmental, food
- Allergic manifestation (e.g., photosensitivity, asthma, hay fever, urticaria, Stevens-Johnson Syndrome)
- Medication (over the counter and prescriptions e.g., tetracycline, sulphonamides, steroids, oral contraceptives, antibiotics, anticoagulants, acetylsalicylic acid (ASA))
- Herbal preparations and complimentary therapies
- Immunization status (particularly tetanus and shingles)
- Communicable diseases: measles, chickenpox (varicella), herpes simplex
- Current skin complaint; detailed history
  
- Diseases:
  - Recent or current viral or bacterial illness
  - Known Methicillin Resistant Staphylococcus Aureus (MRSA) positive
  - Immunocompromised
  - Seborrheic dermatitis, contact dermatitis, psoriasis, eczema
  - Asthma
  - Diabetes rheumatoid arthritis, thyroid disorder, collagen or vascular disorder
- Skin cancerSun exposure, tanning beds
- Surgeries or recent collagen, Botox, microdermabrasion, chemical peel
- Keloid formation
- Birth and prenatal history, if age appropriate
- Feeding – breast or bottle fed

**Family History Specific to Integumentary System**

- Allergies (e.g., seasonal, food)

- Seborrheic dermatitis
- Psoriasis
- Skin cancer
- Atopy and asthma
- Autoimmune disorders

### **Personal and Social History Specific to Integumentary System**

- History of sensitive skin
- Obesity
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- Hot or humid environment, poor environmental sanitation
- Use of hot tubs, swimming pools
- Tattoos and piercings
- Stress or emotional disturbance (may precipitate flares of chronic skin problem such as psoriasis)
- Self harm behaviour
- Exposure to new substances (e.g., soaps, foods, pets, plants)
- Recent travel
- Others at home with similar symptoms (e.g., rash)
- Recent insect bite/sting (e.g., bee, tick, mosquito)

## **PHYSICAL ASSESSMENT OF THE INTEGUMENTARY SYSTEM**

### **Vitals**

- Temperature
- Pulse
- Respiration
- SpO<sub>2</sub>
- Blood pressure (BP)
- Weight for all children under 12 yrs for medication calculations

### **General**

- Apparent state of health
- Appearance of comfort or distress
- Colour
- Nutritional status
- State of hydration
- Hygiene
- Match between appearance and stated age
- Character of cry (in infants less than 6 months old)
- Activity level
- Mental status
- Degree of cooperation, consolability
- Emotional reaction to caregiver and examiner
- Difficulty with gait or balance

## Inspection and Palpation of the Skin

- General skin examination
  - Colour
  - Temperature, texture, turgor, tenderness
  - Dryness or moisture
  - Scaling
  - Pigmentation
  - Vascularity, bruises, petechiae
  - Edema
  - Induration
  - Skin folds
  - Hair, nails, mucous membranes
- Individual lesions
  - Colour
  - Type
  - Texture
  - General pattern of distribution
  - Shape of single lesions, including the character of lesion edge, i.e. whether raised or flat
  - Joint involvement

**Note: examination of patients with darker skin colour requires awareness that pigmentation influences the colour of the lesion and how certain lesions manifest clinically.**

### Other Aspects

- Examine lymph nodes
- Examine area distal to enlarged lymph nodes

### Major Types

- The major types and characteristics of skin lesions are given in Table 1 and 2.
- Petechiae or purpura suggest a coagulation problem

**Table 1: Major Types of Skin Lesions**

Type of Lesion	Characteristics
<b>Primary Lesions</b>	Physical changes caused directly by the disease process
Atrophy (may be secondary)	Skin thin and wrinkled
Macule and patches	Flat, circumscribed, discoloured spot; size and shape variable (e.g., freckle, mole, port-wine stain). Macules less than 1 cm, patches greater than 1 cm.
Nodule	Palpable, solid lesion that may or may not be elevated (e.g., keratinous cyst, small lipoma, fibroma). Usually greater than 1 cm.

Papule	Solid elevated lesion (e.g., wart, psoriasis, syphilitic lesion, pigmented mole). Less than 1 cm in diameter
Petechiae, ecchymosis and purpura	Extravasation of blood into skin causing non-blanching red macules and patches. Petechiae less than 2 mm. Ecchymosis more than 2 mm. Purpura are groups of petechiae and or ecchymosis that may be confluent, macular or raised..
Plaque	Well-defined plateau-like elevation compared to its height above the skin. For example eczema, psoriasis.
Pustule	Superficial elevated lesion containing pus (e.g., impetigo, acne, furuncle, carbuncle)
Telangiectasia	Fine, often irregular red line produced by dilatation of a normally invisible capillary. Blanch with pressure
Ulcer (may be secondary)	Loss of epidermis and at least part of the dermis
Vesicle and bulla	Circumscribed, elevated lesion < 5 mm in diameter containing clear fluid; larger vesicles are classified as bullae or blisters (e.g., insect bite, allergic contact dermatitis, sunburn)
Wheal	Transient, irregularly shaped, elevated, indurated, changeable lesion caused by local edema (e.g., allergic reaction to a drug, a bite, sunlight)
<b>Secondary Lesions</b>	May evolve from primary lesions, or be caused by external sources such as trauma, infection and scratching
Crust	Dry exudate, e.g. a 'scab'
Erosion	Loss of part or all of the epidermis
Excoriation	Superficial linear or hollowed-out crusted area, caused by scratching, rubbing or picking
Exudative: Dry (crust or scab)	Dried serum, blood or pus
Exudative: Wet (weeping)	Draining serum, blood or pus
Lichenification	Skin thickened, skin markings accentuated (e.g., atopic dermatitis)
Pigmentation changes	Hyperpigmentation (increased skin pigment); hypopigmentation (decreased skin pigment); depigmentation (complete loss of skin pigment)
Scales	Heaping-up of the horny epithelium (e.g., psoriasis, seborrheic dermatitis, fungal infection, chronic dermatitis)
Scar	Various skin manifestations of healed process. (e.g., keloid or acne cicatrisation)

Source: Health Canada, First Nations and Inuit Health Branch (2009) and Leblond, Degowin, and Brown (2009)

**Table 2: Major Arrangements of Skin Lesions**

Arrangement of Lesions	Characteristics of lesions
Annular	Arranged in a circular pattern
Confluent	Merge and run together – e.g. exanthema
Discrete	Individual, separate and distinct – e.g. insect bites
Generalized	Scattered over the body – e.g. measles
Grouped	Clustered – e.g. herpes simples
Linear or serpiginous	Form a line or snakelike shape – e.g. poison ivy, dermatitis
Polycyclic	Concentric circles resembling a bull's-eye – e.g. drug reactions, urticaria
Zosteriform	Linear arrangement along a nerve root – e.g. shingles

Sources: Estes (2014)

Health Canada, First Nations and Inuit Health Branch (2009)

Leblond, DeGowin, and Brown (2009)

### SYMPTOMS REQUIRING REFERRAL OR CONSULTATION

The first step is to differentiate a major skin eruption, infection or event from a minor one that can be managed by nurses with certified practice designation.

The following require consultation and/or referral to a physician or nurse practitioner:

- Petechiae or widespread purpura
- Unusual bruising
- Palmer erythema
- Spider angioma
- Caput medusa
- Jaundice
- Butterfly Rash
- Skin presentation in the presence of systemic disease
- Facial, periorbital and orbital cellulitis are particularly worrisome, as they can lead to meningitis
- Known or suspected MRSA
- Any cellulitis covering or involving a joint
- Suspicious pigmented lesions

### Diagnostic Tests

The RN(C) may consider the following diagnostic tests to support clinical decision-making:

- Culture and sensitivity (C&S) of weeping lesions
- Blood glucose if poorly healing wounds

## REFERENCES

More recent editions of any of the items in the Reference List may have been published since this DST was published. If you have a newer version, please use it.

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