

## DST-702 Integumentary Assessment: Pediatric

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:

##### 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

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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).

- 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 cancer, Sun 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
- 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>	<b>Physical changes caused directly by the disease process</b>
Atrophy (may be secondary)	<ul style="list-style-type: none"> <li>● Skin thin and wrinkled</li> </ul>
Macule and patches	<ul style="list-style-type: none"> <li>● 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.</li> </ul>
Nodule	<ul style="list-style-type: none"> <li>● Palpable, solid lesion that may or may not be elevated (e.g., keratinous cyst, small lipoma, fibroma). Usually greater than 1 cm.</li> </ul>
Papule	<ul style="list-style-type: none"> <li>● Solid elevated lesion (e.g., wart, psoriasis, syphilitic lesion, pigmented mole). Less than 1 cm in diameter</li> </ul>
Petechiae, ecchymosis and purpura	<ul style="list-style-type: none"> <li>● Extravasation of blood into skin causing non-blanching red macules and patches.</li> <li>● 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.</li> </ul>
Plaque	<ul style="list-style-type: none"> <li>● Well-defined plateau-like elevation compared to its height above the skin. For example eczema, psoriasis.</li> </ul>
Pustule	<ul style="list-style-type: none"> <li>● Superficial elevated lesion containing pus (e.g., impetigo, acne, furuncle, carbuncle)</li> </ul>
Telangiectasia	<ul style="list-style-type: none"> <li>● Fine, often irregular red line produced by dilatation of a normally invisible capillary. Blanch with pressure</li> </ul>
Ulcer (may be secondary)	<ul style="list-style-type: none"> <li>● Loss of epidermis and at least part of the dermis</li> </ul>
Vesicle and bulla	<ul style="list-style-type: none"> <li>● Circumscribed, elevated lesion &lt; 5 mm in diameter containing clear fluid; larger vesicles are classified as bullae or blisters (e.g., insect bite, allergic contact dermatitis, sunburn)</li> </ul>
Wheal	<ul style="list-style-type: none"> <li>● Transient, irregularly shaped, elevated, indurated, changeable lesion caused by local edema (e.g., allergic reaction to a drug, a bite, sunlight)</li> </ul>
<b>Secondary Lesions</b>	<b>May evolve from primary lesions, or be caused by external sources such as trauma, infection and scratching</b>

Crust	<ul style="list-style-type: none"> <li>• Dry exudate, e.g. a 'scab'</li> </ul>
Erosion	<ul style="list-style-type: none"> <li>• Loss of part or all of the epidermis</li> </ul>
Excoriation	<ul style="list-style-type: none"> <li>• Superficial linear or hollowed-out crusted area, caused by scratching, rubbing or picking</li> </ul>
Exudative: Dry (crust or scab)	<ul style="list-style-type: none"> <li>• Dried serum, blood or pus</li> </ul>
Exudative: Wet (weeping)	<ul style="list-style-type: none"> <li>• Draining serum, blood or pus</li> </ul>
Lichenification	<ul style="list-style-type: none"> <li>• Skin thickened, skin markings accentuated (e.g., atopic dermatitis)</li> </ul>
Pigmentation changes	<ul style="list-style-type: none"> <li>• Hyperpigmentation (increased skin pigment); hypopigmentation (decreased skin pigment); depigmentation (complete loss of skin pigment)</li> </ul>
Scales	<ul style="list-style-type: none"> <li>• Heaping-up of the horny epithelium (e.g., psoriasis, seborrheic dermatitis, fungal infection, chronic dermatitis)</li> </ul>
Scar	<ul style="list-style-type: none"> <li>• Various skin manifestations of healed process. (e.g., keloid or acne cicatrisation)</li> </ul>

**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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