This assessment is effective as of October 2014. For more information or to provide feedback on this or any other decision support tool, e-mail certifiedpractice@crnbc.ca

**PEDIATRIC INTEGUMENTARY ASSESSMENT**

Nurses with Remote Practice Certified Practice designation (RN(C)s) 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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1 RN(C) is an authorized title recommended by CRNBC that refers to CRNBC-certified RNs, and is used throughout this Decision Support Tool (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 traditional therapies
- Immunization status (particularly tetanus)
- Communicable diseases: measles, chickenpox (varicella), herpes simplex
- Diseases:
  - Recent or current viral or bacterial illness
  - Known Methicillin Resistant Staphylococcus Aureus (MRSA) positive
  - Immunosuppressed (e.g. Acquired Immune Deficiency Syndrome (AIDS))
  - Seborrheic dermatitis, contact dermatitis, psoriasis, eczema
  - Asthma
  - Diabetes mellitus, 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

Family History Specific to Integumentary System
- Allergies (e.g., seasonal, food)
- Seborrheic dermatitis
- Psoriasis
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Pediatric Decision Support Tools: INTEGUMENTARY ASSESSMENT

- Skin cancer
- Atopy and asthma

**Personal and Social History Specific to Integumentary System**
- History of sensitive skin
- Obesity
- Poor hygiene
- 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)
- 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
- \( \text{SpO}_2 \)
- 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**
- Colour
- Temperature, texture, turgor, tenderness
- Dryness or moisture
- Scaling
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- Pigmentation
- Vascularity, bruises, petechiae
- Edema
- Induration
- Individual lesions
- Hair
- Nails
- Mucous membranes
- Skin folds
- Joint involvement

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

<table>
<thead>
<tr>
<th>Type of Lesion</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Lesions</td>
<td>Physical changes caused directly by the disease process</td>
</tr>
<tr>
<td>Atrophy (may be secondary)</td>
<td>Skin thin and wrinkled</td>
</tr>
<tr>
<td>Excoriation</td>
<td>Superficial linear or hollowed-out crusted area, caused by scratching, rubbing or picking</td>
</tr>
<tr>
<td>Macule and patches</td>
<td>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.</td>
</tr>
<tr>
<td>Nodule</td>
<td>Palpable, solid lesion that may or may not be elevated (e.g., keratinous cyst, small lipoma, fibroma). Usually greater than 1 cm.</td>
</tr>
<tr>
<td>Papule</td>
<td>Solid elevated lesion (e.g., wart, psoriasis, syphilitic lesion, pigmented mole). Less than 1 cm in diameter</td>
</tr>
<tr>
<td>Petechiae, ecchymosis and purpura</td>
<td>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.</td>
</tr>
<tr>
<td>Plaque</td>
<td>Well-defined plateau-like elevation compared to its height above the skin. For example eczema, psoriasis.</td>
</tr>
<tr>
<td>Pustule</td>
<td>Superficial elevated lesion containing pus (e.g., impetigo, acne, furuncle, carbuncle)</td>
</tr>
<tr>
<td>Telangiectasia</td>
<td>Fine, often irregular red line produced by dilatation of a normally invisible capillary. Blanch with pressure</td>
</tr>
<tr>
<td>Lesion Type</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ulcer (may be secondary)</td>
<td>Loss of epidermis and at least part of the dermis</td>
</tr>
<tr>
<td>Vesicle and bulla</td>
<td>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)</td>
</tr>
<tr>
<td>Wheal</td>
<td>Transient, irregularly shaped, elevated, indurated, changeable lesion caused by local edema (e.g., allergic reaction to a drug, a bite, sunlight)</td>
</tr>
<tr>
<td>Secondary Lesions</td>
<td>May evolve from primary lesions, or be caused by external sources such as trauma, infection and scratching</td>
</tr>
<tr>
<td>Erosion</td>
<td>Loss of part or all of the epidermis</td>
</tr>
<tr>
<td>Exudative: Dry (crust or scab)</td>
<td>Dried serum, blood or pus</td>
</tr>
<tr>
<td>Exudative: Wet (weeping)</td>
<td>Draining serum, blood or pus</td>
</tr>
<tr>
<td>Lichenification</td>
<td>Skin thickened, skin markings accentuated (e.g., atopic dermatitis)</td>
</tr>
<tr>
<td>Scales</td>
<td>Heaping-up of the horny epithelium (e.g., psoriasis, seborrheic dermatitis, fungal infection, chronic dermatitis)</td>
</tr>
<tr>
<td>Scar</td>
<td>Various skin manifestations of healed process. (e.g., keloid or acne cicatrisation)</td>
</tr>
</tbody>
</table>


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

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

Sources: Estes (2014)
Health Canada, First Nations and Inuit Health Branch (2009)
Leblond, DeGowin, and Brown (2009)
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

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

For help obtaining any of the items on this list, please contact CRNBC Helen Randal Library at circdesk@crnbc.ca

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.


