Evaluating Patients for Smallpox:
Acute, Generalized Vesicular or Pustular Rash Illness Protocol

Clinical case definition of smallpox: an illness with acute onset of fever >101°F followed by a rash characterized by firm, deep-seated vesicles or pustules in the same stage of development without another apparent cause.

Risk of Smallpox

High Risk of Smallpox → Report Immediately
1. No febrile prodrome OR
2. Classic smallpox lesions (defined below) AND
3. Lesions in same stage of development (defined below)

Moderate Risk of Smallpox → Urgent Evaluation
1. Febrile prodrome (defined below) AND
2. One or more MAJOR smallpox criterion (defined below) OR
3. Moderate Risk of Smallpox criteria (defined below)

Low Risk of Smallpox → Manage as Clinically Indicated
1. No febrile prodrome
2. Febrile prodrome + < MINOR smallpox criteria (defined below)

Common Conditions That Might Be Confused with Smallpox

<table>
<thead>
<tr>
<th>Condition</th>
<th>Clinical Class</th>
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<tbody>
<tr>
<td>Varicella (primary infection with varicella-zoster virus)</td>
<td>Most common in children; &lt;10 years; children usually do not have a viral prodrome</td>
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<tr>
<td>Disseminated herpes zoster</td>
<td>Immunosuppressed or elderly persons; rash looks like varicella, usually begins in dermatomal distribution</td>
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<tr>
<td>Impetigo (Staphylococcus aureus)</td>
<td>Honey-colored crusted plaques with bullae; classic but may begin as vesicle; regional and disseminated patients generally not ill</td>
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<tr>
<td>Erythema multiforme (incl. Stevens-Johnson Syndrome)</td>
<td>Exposure to medications; contact with possible allergens</td>
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<td>Stevens-Johnson syndrome</td>
<td>Targeted lesions on hands and feet (including palms and soles)</td>
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<td>Hand, foot, and mouth disease (Enterovirus)</td>
<td>Major form involves mucous membranes and conjunctivae</td>
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For questions about this protocol or inquiries about smallpox you may call the Centers for Disease Control and Prevention:

Centers for Disease Control and Prevention

Images of Smallpox

Images of Chickenpox (Varicella)

Differentiating Varicella from Smallpox

Varicella is a common condition that is most likely to be confused with smallpox. How varicella (chickenpox) differs from smallpox:

- No or mild prodrome
- Lesions are superficial vesicles: “dewdrop on a rose petal” (see photo, above right)
- Lesions appear in crops; on any one part of the body there are lesions in different stages (papules, vesicles, crusts)
- Centripetal distribution: greatest concentration of lesions on the trunk, fewer lesions on distal extremities; may involve the face/nose; occasionally entire body equally affected
- First lesions appear on the face or trunk
- Patients rarely toxic or moribund
- Rapid evolution: lesions evolve from macules to papules to pustules quickly (<24 hours)
- Mucous membranes and conjunctivae involvement rare
- History of varicella or varicella vaccination
- 50-80% recall an exposure to chickenpox or shingles 30-21 days before rash onset

MINOR Smallpox Criteria

- Centripetal distribution: greatest concentration of lesions on face and distal extremities
- First lesions on the ear, mucus membranes, face, and extremities
- Patient appears toxic or moribund
- Slow evolution: lesions evolve from macules to papules to pustules over days (each stage lasts 1-2 days)
- Lesions on the palms and soles

Minor form involves mucous membranes and conjunctivae

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Images of Smallpox