



TITLE: MANAGEMENT OF THE SMALLPOX (SUSPECTED SMALLPOX) PATIENT

Purpose: To state procedures to be taken with any patient whose diagnosis is smallpox or rule out smallpox.

- Supportive Data:**
- A. Quarantine/Lockdown**
 1. Quarantine/Lockdown is defined as a process where all arrivals or departures of persons from the hospital are controlled.
 2. Only the Tennessee Department of Health in consultation with hospital administration can initiate a quarantine lockdown. This may last 4-12 hours until the Health Department personnel have arrived, assessed the situation and collected needed contact investigation information.
 - B. Negative Pressure Rooms:**
 1. Rooms 232, 332, ER T-1, PICU isolation rooms – preferred rooms are PICU and 332. For operation of neg. pressure room, see Infection Control Policy: AFB (TB) Isolation, XV-G
 2. All patient rooms (including ED, Clinic/EDII exam rooms, and PICU Isolation rooms) have 6 air exchanges per hour and can be used if the door is kept closed. PICU open unit has 13 air exchanges per hour.
 - C. Isolation for Smallpox/R/O Smallpox patients:**
 1. Airborne plus Contact Isolation.
 2. HEPA mask must be used for all personnel entering the room, who are not immune. Place disposable Isolation mask over HEPA mask, discard in red bag trash when leaving room.
 - D. Smallpox Health Care Team:**
 1. All employees and physicians who have received the smallpox vaccine and have registered a “take”.

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ESSENTIAL STEPS / KEY POINTS & PRECAUTIONS

I. EMERGENCY DEPARTMENT

A. Triage Criteria

1. Rash (Lesions) Present

- a. Deep sealed, firm/hard, rounded vesicles or pustules; may become umbilicated or confluent
- b. All lesions at the same stage
- c. Most lesions are on face and distal extremities
- d. Lesions present on oral mucosa/palate, face or forearms
- e. Lesions present on palms and soles of feet

AND

2. Fever $\geq 101^{\circ}\text{F}$ for 1-4 days before rash occurred AND at least one of the following:

- a. Prostration
- b. Headache
- c. Backache
- d. Chills
- e. Vomiting or severe abdominal pain

AND

3. Patient appears toxic or moribund.

B. If rash/lesions and fever(as above) are present:

- 1. Place HEPA mask on employee – place disposable isolation mask over HEPA mask
- 2. Place an isolation mask on the patient or cover face with a sheet
- 3. Transfer immediately, to negative pressure (E.D. room T-1).
- 4. Call physician to evaluate patient.
- 5. Place signage on exam room door “Airborne and Plus Contact (A+C) Precautions. HEPA mask required for all entry.”

C. Evaluation

- 1. Physician will evaluate patient and assign level of risk as to possibility of smallpox (See Appendix I)
- 2. If patient is judged moderate to high risk for smallpox:
 - a. Notify ID physician (541-8709)
 - b. Notify Infection Control (541-8191, 567-4307)
- 3. ID physician and/or Infection Control will notify the TN Dept. of Health.

D. Admission to Inpatient Unit

- 1. During transport, place mask on patient and HEPA masks on employees transferring the patient.
- 2. Notify receiving unit of need for A & C Isolation and HEPA masks.



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3. Admit patient to:
 - a. Negative Pressure room, if available
 - b. Room with door closed will suffice if negative pressure room is not available.

E. Decontamination of Emergency Department.

1. All equipment and surfaces should be washed down with:
 - a hospital supplied disinfectant, or
 - with a freshly made 1:10 bleach solution (1 part bleach plus 9 parts water).

II. INFECTION CONTROL FOR SMALLPOX PATIENT

A. Smallpox Health Care Team

1. The Nursing Coordinators, the Director of Support Services, the Director of Infection Control and the Employee Health Coordinator will maintain a list of personnel who are considered immune to smallpox.
2. Members of Smallpox Health Care Team will be assigned to these patients.

B. Isolation

Patients will be placed on "Airborne plus Contact" isolation.

C. Disposable equipment, if possible

1. Blood pressure cuff
2. Stethoscope

No personal equipment (e.g. stethoscopes) may be used on suspect patients

D. Dedicated Equipment

If disposable equipment is not available, equipment must be labeled and kept for this patient's use, only.

E. HEPA Mask

1. HEPA mask must be worn by all personnel who are not immune to smallpox.
2. Place disposable isolation mask over HEPA mask before entering the patient's room. Discard mask in red bag trash when leaving the room.

F. Dishes, Trays

1. Order disposable dishes, trays and utensils from Food Service
2. Discard into Red Bag trash bags

G. Waste

1. Dispose of all waste into Red Bag trash hampers.

H. Linen/Laundry

1. Order disposable sheets, wash clothes, linens, if available, from Environmental Services.



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2. Discard all linen (disposable or regular) into Red Bag trash.

I. Cleaning and Disinfection

1. All surfaces and equipment must be cleaned with either:

- a hospital supplied disinfectant or
- a freshly made 1:10 bleach solution (1 part bleach plus 9 parts water).

III. HOSPITAL QUARANTINE/LOCKDOWN

A. Initiation of a Quarantine/Lockdown

1. Only the Tennessee Department of Health in consultation with hospital administration can initiate a quarantine/lockdown.

B. Implementation of a Lockdown/Quarantine

1. The public health Investigation Team will assume responsibility for:

- Identifying
- Interviewing
- Vaccinating
- Educating and tracking case contacts

2. All visitors and other patients in the E.D or inpatient unit who had potential contact with a suspect case should be held in a separate room/area until interviewed by public health staff.

3. All persons who were in the E.D. waiting room with the suspect case will be considered potential contacts.

IV. ACTIVATION OF HOSPITAL DISASTER PLAN

A. Administration will decide when to activate the Disaster Plan.

Appendix I: Evaluating Patients for Smallpox

The following risk assessment should be considered when evaluating a patient with a vesicular or pustular rash to determine the likelihood of smallpox.

I. High Risk of Smallpox – All 3 of the following criteria must be present

A. Febrile prodrome – Occurring 1-4 days before rash onset: with fever $\geq 101^{\circ}\text{F}$ and at least one of the following: prostration, headache, backache, chills, vomiting or severe abdominal pain,

AND

B. Classic smallpox lesions – Deep-seated, firm/hard, round well-circumscribed vesicles or pustules; as they evolve, lesions may become umbilicated or confluent,

AND



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- C. Lesions in same stage of development: on any one part of the body (e.g., the face, or arm) all the lesions are in the same stage of development (*i.e., all are vesicles or all are pustules*)

II. Moderate Risk of Smallpox:

- A. Febrile prodrome – Occurring 1-4 days before rash onset: with fever $\geq 101^{\circ}\text{F}$ and at least one of the following: prostration, headache, backache, chills, vomiting or severe abdominal pain, **and one other major smallpox criteria**

1. Classic smallpox lesions – Deep-seated, firm/hard, round well-circumscribed vesicles or pustules; as they evolve, lesions may become umbilicated or confluent,

OR

2. Lesions in same stage of development: on any one part of the body (*e.g., the face, or arm*) all the lesions are in the same stage of development (*i.e., all are vesicles or all are pustules*)

OR

3. Febrile prodrome: occurring 1-4 days before rash onset with fever $\geq 101^{\circ}\text{F}$ and at least one of the following: prostration, headache, backache, chills, vomiting or severe abdominal pain, **and FOUR or more of the following MINOR smallpox criteria:**

- Centrifugal distribution: greatest distribution of lesions on the face and distal extremities
- First lesions occur on the oral mucosa/palate, face, or forearms
- Patient appears toxic or moribund
- Slow evolution: lesions evolve from macules to papules → pustules over days (each state lasts 1-2 days)
- Lesions on the palms and soles

III. Low Risk of Smallpox:

- A. No febrile prodrome

OR

- B. Febrile prodrome: occurring 1-4 days before rash onset with fever $\geq 101^{\circ}\text{F}$ and at least one of the following: prostration, headache, backache, chills, vomiting or severe abdominal pain, **and LESS THAN FOUR MINOR smallpox criteria:**

- Centrifugal distribution: greatest distribution of lesions on the face and distal extremities
- First lesions occur on the oral mucosa/palate, face, or forearms
- Patient appears toxic or moribund
- Slow evolution: lesions evolve from macules to papules → pustules over days (each state lasts 1-2 days)
- Lesions on the palms and soles

IV. Differentiating of Chickenpox from Smallpox:

Chickenpox (varicella) is the most likely condition to be confused with smallpox. In chickenpox, the following findings on history and physical examination are usually found:

- No or mild prodrome



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- Lesions are superficial vesicles (“Dewdrops on a rose petal”)
 - 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 the lesions on the trunk, fewest lesions on the distal extremities. May involve the face and scalp. Occasionally, the entire body is equally affected
 - First lesions appear on the face or trunk
 - Patients rarely toxic or moribund
 - Rapid evolution: lesions evolve from macules → papules → vesicles → crusts quickly (<24 hrs)
 - Palms and soles rarely involved
 - Patient lacks reliable history of varicella or varicella vaccination
 - 50-80% recall an exposure to chickenpox or shingles 10-21 days before rash onset.
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Reference: TN Dept of Health, Guidelines for Management of a Suspect Case of Smallpox in Acute Medical Settings in Tennessee, December 12, 2002.

Approved: Emergency Preparedness Steering Committee

Distribution: Generic