STATE OF TENNESSEE
TENNESSEE DEPARTMENT OF HEALTH

Guidelines for Management of a Suspect Case of Smallpox in Acute Care Medical Settings in Tennessee

December 12, 2002

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Tennessee Department of Health
Guidelines for Management of a Suspect Case of Smallpox in Acute Care Medical Settings in Tennessee.

Since the September 11, 2001 attack on the World Trade Center and the Pentagon and the subsequent anthrax attacks, there has been an acceleration of public health preparedness at the local, state, and federal levels with respect to the possible intentional introduction of smallpox as a biological weapon. The risk of a bioterrorist incident involving smallpox cannot be quantified. However recent intelligence indicates that four nations, including Iraq and North Korea, may possess covert stocks of the smallpox virus. In order to be prepared for a possible bioterrorist attack involving smallpox, the Tennessee Department of Health (TDH) has developed these guidelines for hospitals and other acute care medical settings to use when evaluating a patient with "suspected smallpox."

These guidelines focus on the management of a "suspect" smallpox case occurring in the absence of an already recognized outbreak, that is, a case that may represent the index case of a bioterrorist event. Once there are one or more cases of laboratory-confirmed smallpox in the state, further specific guidance on patient management, contact investigation, and control activities will be provided by the TDH and the Centers for Disease Control and Prevention (CDC). General guidance on the management of smallpox patients and outbreaks is already available through CDC (www.bt.cdc.gov).

I. Steps that All Hospitals Should Consider to Ensure Preparedness

TDH recommends that all hospitals ensure their preparedness for the evaluation and management of a suspect smallpox case through the following steps:

A) Ensure that an effective emergency response (disaster) plan and infrastructure is in place, including but not limited to:

1) Maintain an active, functional emergency response (disaster) committee with representation from the following departments and areas: hospital, medical and nursing administration; internal medicine, pediatrics, and infectious disease departments; infection control; microbiology; emergency medicine; intensive care; pharmacy; employee health; public affairs; management information systems; legal services; mental health; central supply; engineering; laundry; waste management; and hospital security.

2) Establish and maintain notification protocols to ensure that all-relevant hospital staff and outside agencies are notified rapidly in the event of an emergency. This will require having 24-hour contact information for all key staff, including home telephone, pagers, cell phones and electronic mail (including mobile electronic mail accounts, when available) as well as a telephone tree system or emergency notification software to ensure the ability to rapidly contact staff to request that they report to duty. Twenty-four hour emergency contact information for key local and state agencies (e.g., Health Department, Tennessee Emergency

Management Agency) should be included in the hospital's emergency response plan.

3) Provide regular educational training to all hospital staff regarding the hospitals emergency response plans, and each staff person's expected role and responsibilities.

4) Establish an incident command system for most emergency response plans. An incident command system allows coordination of the emergency response along standardized functional responsibilities. The incident command system includes pre-designated roles, lines of authority and chains of communication, with at least one appropriate alternate/back-up person for each position. Job action sheets are prepared ahead of time outlining the roles and responsibilities for all emergency response positions.

B) This plan should be developed in conjunction with the Health Department. As part of overall emergency response (disaster) planning, each hospital should develop a specific response plan for smallpox.

C) Ensure that the emergency department and all primary care clinics have protocols in place to quickly identify patients presenting with fever and rash illness and to isolate them immediately pending clinical evaluation (see Section II for details).

D) Ensure that all pre-hospital transportation services (e.g., Emergency Medical Services) are aware of the need to notify the emergency department and/or clinic staff when transporting any patient with fever and rash illness so that the patient can be immediately placed in isolation on arrival.

E) Ensure that the emergency department has at least one airborne infection isolation room, when allowed by architectural and budget constraints

> Airborne infection isolation rooms are defined as negative pressure isolation rooms with a minimum of 6-12 air exchanges per hour and direct exhaust to the outside, which is located more than 25 feet from an air intake and from where people may pass (if air cannot be exhausted directly to the outside more than 25 feet from an air intake and from where people may pass, then air should be filtered through a HEPA filter). These rooms should be tested monthly (and daily when in use) to verify negative airflow.

When the HEPA filter is changed in the airborne infection isolation room by the maintenance staff, the staff must wear personal protective equipment and an N-95 mask

that has been fit tested. The filter should be handled, contained, transported and disposed of as biohazard infectious waste.

When an airborne infection isolation room is not a viable option, or in clinical areas (e.g., primary care clinics) that do not have airborne infection isolation rooms that meet the above criteria, an enclosed room(s) should be pre-identified for isolating a suspect patient as far apart as possible from other patients and staff pending clinical evaluation (e.g. an examination room at the end of a hallway). In the emergency departments, the room designated for airborne infection isolation should ideally have a toilet and sink inside the room.

F) Maintain an up-to-date list of all isolation rooms (as defined in Section I.E) in the inpatient facility and ensure that all airborne infection isolation rooms are evaluated monthly (and daily when in use) to verify negative airflow characteristics. Pre-identify specific floor(s) or unit(s) with isolation rooms that would be used to admit a suspect or confirmed smallpox case(s). Consideration should be given ahead of time regarding the optimal route for transporting the suspect case(s) from the emergency department or clinic area to this pre-designated floor/unit.

G) Maintain enhanced awareness among all clinical care staff regarding the potential for bioterrorism and the key diagnostic clues to potential bioterrorist agents, including smallpox, and conduct training activities on at least an annual basis. All medical and nursing staff should receive educational training on the clinical presentation of smallpox and the differential diagnosis of vesicular and pustular rashes. Health Department staff are available to provide this training upon request. Place copies of the CDC's poster on "Evaluating Patients for Smallpox – Acute, Generalized Vesicular and Pustular Rash Illness Protocol" in the medical areas of the emergency department and all primary care clinics. Copies of this poster can be obtained through the CDC website at http://www.bt.cdc.gov/agent/smallpox/smallpox-images/index.asp. **All healthcare providers should know to report immediately any suspect smallpox case to the Health Department. Health Department contact information is listed in Appendix II.**

H) Hospitals (particularly those with large emergency rooms) should consider acquiring one digital camera for key personnel (e.g., emergency department staff) and train them in its proper use (including downloading of the images for electronic mail transmission) to facilitate rapid consultation with TDH. Digital photographs can be taken of suspect case-patient's lesions and the image sent via electronic mail to TDH physicians, who will consult with other subject matter experts (including CDC) to assist in the rapid evaluation of smallpox, as well as other cutaneous manifestations of diseases of potential bioterrorist or public health importance (e.g., cutaneous anthrax, measles, etc.). A public health investigation team will be immediately deployed to any hospital reporting a possible case of smallpox in moderate or high-risk patients (see definitions below, section II.C and Appendix I).

I) According to TDH and CDC information previously sent to your hospital, your hospital should consider pre-designating a Smallpox Health Care Team. The Advisory Committee on Immunization Practices (ACIP) has made recommendations on the composition of this team. This team would be mobilized to care for any suspect or confirmed smallpox case. These staff should receive specific smallpox disease and smallpox treatment training. The staff should use personal protective equipment, including respiratory masks (N-95 or higher) and strictly adhere to airborne and contact precautions during all patient care activities. Training on airborne and contact precautions and the proper use of personal protective equipment should be provided to these staff on a regular basis. Fit testing for respiratory masks should also be performed, as recommended by the manufacturer. This staff should be highly trained for their own protection during treatment of the suspect or confirmed smallpox patient and be able to supervise and direct other staff concerning the proper protocols to follow for their protection and the protection of others in the hospital. The members of the Smallpox Health Care Team would be physicians and hospital staff that have received the smallpox vaccination during the Pre-event Smallpox Vaccination Program and had a successful take.

J) Assure that the smallpox response plan is carefully reviewed annually.

II. Initial Evaluation of Patients with Suspect Smallpox

All hospitals and clinics should have policies in place to ensure that any patient presenting for evaluation in an emergency department or other primary care clinical setting with fever and an acute, generalized vesicular or pustular rash be immediately identified and placed in isolation with airborne and contact precautions, and that the infection control staff be notified immediately while awaiting further clinical evaluation. The measures described here are similar to those that should be applied for suspect cases of other airborne diseases, such as tuberculosis, varicella, or measles.

A) Recognition of a Suspected Smallpox Case:

1) Signage (bi- or multilingual depending on the hospital's patient population) should be placed at the walk-in entrance to the emergency department and primary care clinics stating that any patient with fever and rash illness immediately inform security or triage staff.

2) Triage, receptionist and all primary care staff should be trained to be alert for patients with any rash illnesses, and immediately notify the appropriate nursing or medical staff to expedite the patient's placement in the room pre-designated for airborne infection isolation.

3) All ambulance or pre-hospital transport services should be alert to the need to notify the emergency department staff if transporting a patient with fever and rash illness so that the patient can be immediately placed in isolation on arrival. Hospitals are encouraged to work with Emergency Medical Systems operating in their areas to alert them about the importance of this procedure.

B) Isolation of a Suspected Smallpox Case Pending the Initial Clinical Evaluation by Emergency Department or Clinic Staff

1) Airborne and contact precautions should be used by staff at all times.

2) **A surgical mask should immediately be placed on patients presenting with fever and rash illness, and they should be escorted directly to the room pre-designated for airborne infection isolation**. If suspect patients are initially seen in clinical areas (e.g., primary care clinics) that do not have pre-designated isolation rooms as defined in Section I.E., a surgical mask should be placed on the patient, and he/she should be isolated from other patients and staff as best as possible pending clinical evaluation (e.g., an enclosed examination room separated from other patients at the end of a hallway).

3) Further details on isolation precautions that should be taken for the care of suspected smallpox cases are outlined in Section IV. These precautions may be discontinued once the medical evaluation has ruled out smallpox or other potentially communicable diseases that are spread by airborne transmission (e.g., varicella).

C) Clinical Assessment of a Suspect Smallpox Case

The clinical assessment of the risk of smallpox should use the CDC criteria for determining whether the patient is at low, moderate or high risk for smallpox, as summarized in Appendix I.

1) For **low risk patients**, as defined on the CDC poster "Evaluating Patients for Smallpox" and in Appendix I of this Guideline (especially if chickenpox or disseminated herpes zoster is the likely diagnosis based on history and physical examination), varicella laboratory testing is optional and the patient should be kept under airborne and contact isolation as per the hospital's varicella protocol. For patients determined to be at low risk for smallpox, but for whom the diagnosis is uncertain, laboratory testing for varicella zoster virus antigen (using rapid DFA or PCR tests) and/or other conditions should be considered as indicated clinically. **It is NOT necessary to report the case to TDH, unless a consultation is needed.**

2) For **moderate risk patients**, as defined on the CDC poster "Evaluating Patients for Smallpox" and in Appendix I of this Guideline, TDH should be contacted immediately. In addition, an infectious disease or dermatology consult should be arranged, as well as rapid testing for varicella (DFA or PCR testing for varicella antigen) if available, and for other diseases as clinically indicated. **The Health Department should be contacted immediately, and will assist in determining the likelihood of smallpox.**

3) For **high risk patients**, as defined on the CDC poster "Evaluating Patients for Smallpox" and in Appendix I of this Guideline, **The Health Department should be contacted immediately**. TDH will provide rapid medical, epidemiology, and laboratory consultation to the hospital and will deploy a regional public health investigation team to assist with the diagnosis of these patients and their management.

III. Consultation with TDH

A) Contact Information for TDH:

The Health Department should be consulted immediately for any patient deemed to be at **moderate** or **high risk** for smallpox**. Health Department staff are available 24 hours per day, 7-days per week for consultations.** Telephone numbers are listed in Appendix II.

B) TDH Initial Triage of Calls Regarding Suspect Smallpox Cases:

The health department has physicians and other specially trained staff available by telephone on a 24-hour, 7-day a week basis to assist providers in evaluation of suspect smallpox cases, in consultation with CDC. If it is deemed necessary following the initial telephone consultation (including review of digital photographic images, if available), a public health investigation team would be deployed to the hospital. There are 8 such teams located strategically throughout the state. Team members include public health physicians, nurses and epidemiologists, all with highly specialized smallpox training. Team members will assist hospital staff with the clinical evaluation of the patient and collection of laboratory samples for definitive diagnosis. In the case of a confirmed or highly suspicious case, team members would make decisions concerning quarantine and vaccine deployment and would conduct contact tracing and vaccination, as necessary.

Currently laboratory tests for smallpox are only available at the CDC. Therefore, team members will arrange for urgent transportation of the specimen to the CDC to expedite testing and preliminary results should be available within 4-6 hours of the specimen's arrival in Atlanta to guide further clinical and public health management of the patient. Appropriate specimens include vesicle fluid or swabbed lesions material obtained aseptically, throat swabs and serum.

C) Notification of other State and Federal Agencies:

TDH will notify CDC regarding all suspect cases deemed to be at moderate or high risk for smallpox, as well as other supporting agencies and will maintain communications with them throughout the event. TDH will also notify the state agencies including TEMA as needed.

IV. Infection Control Practices Pending TDH Evaluation

TDH advises hospitals to take the following steps for managing suspect moderate or high risk patients (as defined on the CDC poster "Evaluating Patients for Smallpox" and in Appendix I of this Guideline) while awaiting further recommendations from the TDH Public Health Investigation Teams or laboratory test results.

When a diagnosis of smallpox is suspected or confirmed, steps must be taken to protect other patients, staff, and visitors from smallpox infection. The patient should be kept in a room pre-designated for isolation (as defined in Section I.E.). Suspected or confirmed smallpox patients should be kept in their rooms except for medically essential procedures that necessitate transport to other hospital locations. Transfer to another hospital should be considered only if medically necessary to protect the life of the patient (e.g., need for intensive care in a hospital that does not have an ICU available). To minimize the potential for contamination when transported outside of their isolation rooms, a surgical mask should be placed on the suspected or confirmed smallpox patient(s), a sheet should be used to cover their skin as much as possible, and efforts should be made to minimize patient movement to protect against aerosolization of any potentially infectious material. The route for moving the patient should be cleared of all people not involved in the transfer. All staff coming in close contract or involved in the treatment of the patient should use personal protective equipment, including mask or respirator (N-95 or higher that have been fit tested as recommended by the manufacturer) even when the patient is covered and wearing the surgical mask.

Infection control personnel should be immediately notified regarding the suspect case. If not already involved, consultations should be requested from dermatology and infectious disease specialists, if available.

A standardized isolation sign noting the need for airborne and contact precautions should be displayed outside the patient's room, and an isolation cart should be placed outside the door.

The door to the patient's room should be kept closed (self-closing doors are preferable).

All personal protective equipment (e.g., gowns, gloves, and masks) should be stocked outside the door to the patient's room. Persons leaving the room should dispose of their protective clothing and equipment and wash their hands in a pre-designated area right outside the isolation room.

The number of persons who enter the patient's room should be reduced to the minimum necessary, as well as the traffic in and out. No visitors should be allowed without the approval of the public health investigation team.

All hospital staff, (including transport personnel) and visitors must don contact and airborne personal protection equipment prior to entering a suspected or confirmed

smallpox patient's room [i.e., disposable gloves and gowns and an N-95 or higher respiratory mask] regardless of their prior smallpox vaccination status. All staff should have undergone fit-testing for respiratory masks.

All staff and visitors entering the room should be instructed in the meaning of contact, airborne and standard precautions.

After the diagnosis of smallpox is **confirmed**, care for the patient cannot be provided in the same environment where other patients are admitted. The smallpox patient(s) shall be placed in an airborne infection isolation room, or (if that is not an option) cared for in a separate part of the building that has restricted access and is physically distinct from other patient care areas (e.g., a separate wing or floor).

Specific Infection Control Recommendations

1) Dedicated equipment (e.g., blood pressure cuffs and stethoscopes) should be left in the room. No personal equipment (e.g., stethoscopes) should be used on the suspect patient and then taken out of the room for use on other patients.

2) Use disposable items whenever possible. Arrange to have food brought into the room in disposable containers.

3) Dispose of all non-sharps waste in biohazard bags and have these bags autoclaved before disposal or transport for incineration.

4) Place all laundry and linens (e.g., bedding, towels) in water-soluble biohazard bags that can be used to transport laundry. Since the laboratory test results for a moderate to high risk suspect smallpox patient will likely be available in < 24 hours, hospitals may want to consider keeping all linens and other patient laundry in the patient's isolation room or anteroom, if one is available, until smallpox has been ruled out. The water-soluble bag (with laundry inside) should be placed directly in the laundry machine without opening the bag to protect against aerosolization of any potentially infectious material. If water-soluble bags are not available, the items may be transported to the laundry in biohazard bags, then laundered using hot water (71 °C) and bleach according to the standard proportions recommended. The contaminated clothing should be wetted before sorting by laundry personnel as this should help prevent the aerosolization of contaminated particles during sorting. The laundry staff should be provided with the same level of personnel protective equipment, including the mask (N95 or higher), wear gloves when handling the laundry or laundry bag and be provided with the proper training for the handling, transporting and laundering of laundry and linens for their protection, protection of other staff and people in the hospital.

V. Management of the Emergency Department After Patient Evaluation

The following guidelines apply to the emergency department or clinic area where the moderate to high-risk patient (as defined on the CDC poster "Evaluating Patients for Smallpox" and in Appendix I of this Guideline) was initially seen and may have spent time prior to being placed in an airborne infection isolation room, while awaiting determination of whether or not the patient has smallpox. All hospital emergency departments and primary care clinics are expected to have effective triage protocols in place to rapidly identify and effectively isolate any patient with a fever and rash illness in order to minimize the number of persons potentially exposed in the waiting area.

A) Decision on Hospital Quarantine or Temporary "Termination of Services"

If a suspect case-patient thought to be moderate to high risk for smallpox is seen at the hospital, the hospital should immediately call the Health Department for assistance in determining the appropriate action concerning quarantine of the facility.

Legally sanctioned and enforced quarantine can be only decided by public health officials. The decision to terminate services or lock down the emergency department or the hospital for reasons related to smallpox should be done by senior hospital administrative staff, in consultation with public health officials**. TDH should be involved in any decision regarding termination of services or hospital lock down.**

B) Tracking and management of Potential Contacts

The public health investigation team will assume responsibility for identifying, interviewing, vaccinating, educating and tracking contacts to a confirmed case of smallpox.

All visitors and other patients in the emergency department/clinic who had potential contact with a suspect moderate or high-risk case patient should ideally be held in a separate room until interviewed by public health staff.

For purposes of identifying these persons, all persons in the same room (i.e., waiting room) as the patient should be considered potential contacts.

Pending the arrival of the public health staff, infection control or other properly instructed hospital staff should track the names, job duty (for staff), home address, and all contact numbers (including home and work telephone, cellular phone, and beepers) for all hospital and ambulance staff, visitors and others who entered the patient's room or had potential contact with the moderate or high risk patient from the moment he/she entered the hospital.

C) Decontamination of Emergency Department or Clinic Area

All equipment and surfaces in the emergency department or clinic that may potentially have been in contact with the suspect case patient (including in the waiting room and any other rooms in which the patient was placed prior to moving to the isolation room) should be decontaminated with standard hospital disinfectants (e.g., 1:10 bleach or any disinfectant bearing a label showing EPA approval for tuberculocidal activity), especially in any areas where a suspect case-patient has been coughing. Housekeeping staff, should wear appropriate personal protective equipment [i.e., disposable gloves and gowns and an N-95 or higher respiratory mask] while cleaning the area. These staff should have undergone fit testing for respiratory masks.

VI. Operation of the Hospital While Awaiting Laboratory Confirmation

A) Activation of the hospital's emergency response (disaster) plan

The decision whether to activate the hospital's emergency response (disaster) plan should be made based on the individual circumstances of the event. The Emergency Response (Disaster) Committee should ensure that the internal notification procedures and contact lists include all essential staff that might be needed in the event of a smallpox emergency (*e.g., infection control, infectious diseases, dermatology)* as well as emergency contact information for all key local and state agencies.

B) Communication Issues:

1) Internal

The hospital administration and/or Emergency Response (disaster) committee should ensure that a mechanism and plan is in place for frequent communication with all hospital staff to address the likely concerns that they may have about the risk of smallpox in the institution and to provide timely updates on the situation, as new information becomes available. Mechanisms may include broadcast email, frequent meetings for each hospital shift, internal websites, etc. The Health Department and Public Health Investigation Team will work closely with the hospital staff to develop educational materials and fact sheets, as well as provide speakers for internal briefings, if needed.

As with all patients, there is a need for the protection of patient confidentiality for the suspect and confirmed cases of smallpox. As stated above the Health Department will work closely with the hospital on the appropriate internal release of information.

2) External

While awaiting laboratory confirmation, the TDH Office of Public Information will provide the news media with the medical, epidemiologic, and infection control details relevant to the event, as needed. It is important that communication be handled in coordination with the TDH to ensure consistent messages about the likelihood of smallpox and the steps being taken by the hospital and government agencies to determine the diagnosis, as well as any contingency plans being put into place. Informational and educational material for both health care professionals and the public will be available through the TDH. TDH will work closely with the hospital administration and public affairs staff in the event that public statements and press conferences are needed to insure accurate and consistent information.

C) Security Issues

Ensure sufficient security is present to implement isolation and to respond to any potential disruptions that may occur due to the concerns about smallpox (e.g., significant media attention). If assistance is needed, the request should be directed to local law enforcement agencies and the local emergency management coordinator.

Security plans should include:

1) Ability to minimize points of access and egress to the physical plant and quarantine the building if deemed appropriate by the Commissioner of Health

2) A rapid identification process for hospital staff and local, state and federal emergency workers such as photo identification.

3) An external vehicular "flow of traffic" prioritizing emergency vehicle access, supply delivery needs and law enforcement access

4) A method for routing persons other than patients to and from the facility

5) A triage protocol to route additional patients that may have smallpox based on fever and rash symptoms for immediate clinical evaluation to an appropriate, pre-designated site with sufficient airborne infection isolation rooms

6) Ensuring that appropriate protective equipment and training is provided to security staff, when indicated.

Appendix I: Guidelines for Assessing Vesicular and Pustular Rashes

(Adapted from the CDC's Poster for "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:

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 ≥101 °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

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)*

Moderate Risk of Smallpox:
a) Febrile prodrome: occurring 1-4 days before rash onset with fever ≥101 °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 ≥101 °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:**

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

Low Risk of Smallpox:
a) No febrile prodrome
or

b) Febrile prodrome: occurring 1-4 days before rash onset: with fever ≥101 °F and at least one of the following: prostration, headache, backache, chills, vomiting or severe abdominal pain, and **LESS THAN FOUR MINOR smallpox criteria:**

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

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:

a) No or mild prodrome
b) Lesions are superficial vesicles ("dewdrops on a rose petal")
c) Lesions appear in crops; on any one part of the body there are lesions in different stages (*papules, vesicles, crusts)*
d) 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
e) First lesions appear on the face or trunk
f) Patients rarely toxic or moribund
g) Rapid evolution: lesions evolve from macules → papules → vesicles → crusts quickly (< 24 hours)
h) Palms and soles rarely involved
i) Patient lacks reliable history of varicella or varicella vaccination
j) 50-80% recall an exposure to chickenpox or shingles 10-21 days before rash onset.

The full protocol with color photographs of smallpox and varicella skin lesions is available as a poster ("Evaluating Patients for Smallpox – Acute, Generalized Vesicular and Pustular Rash Illness Protocol"). Copies of this poster can be obtained through the CDC website at http://www.bt.cdc.gov/agent/smallpox/smallpox-images/index.asp.

Appendix II - Tennessee Department of Health Contact Information

Metropolitan and Regional Health Departments Bioterrorism (BT) Contact List

Central Office: 24-hour 615-741-7247 / on call beeper 1-800-815-7824 ***Enter your phone # & area code***

Last Name	*First Name*	*Title*	*Work Phone*	*E-mail*
Craig, MD	Allen	State Epidemiologist	615-532-8491	allen.craig@state.tn.us
Galfano	Greg	Senior BT Planner	615-253-2307	greg.galfano@state.tn.us
Garman	Robb	BT Preparedness Coordinator	615-532-8507	robb.garman@state.tn.us
Hagstrom, MD	Ruth	Bureau Medical Director	615-532 2431	ruth.hagstrom@state.tn.us
Jones, MD	Tim	Deputy State Epidemiologist	615-532-1408	tim.f.jones@state.tn.us
Kimberly	Mike	State Laboratory Director	615-262-6300	michael.kimberly@state.tn.us
Palmer	Kenneth	Director Hospital BT Preparedness	615-741-1915	kenneth.palmer@state.tn.us

Chattanooga-Hamilton County: Main #: 423-209-8000 / On-call beeper 423-846-6633

East Tennessee Region (surrounding Knoxville): Main #: 865-546-9221 / On-call beeper 877-630-4612
Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Loudon, Monroe, Morgan, Roane, Scott, Sevier, and Union counties

Jackson-Madison County: Main #: 731-423-3020 / On-call beeper 800-841-7243 access code #32139

Knoxville-Knox County: Main #: 865-215-5093 / On-call beeper 865-222-3175

Mid-Cumberland Region (surrounding Nashville) Main #: 615-650-7000 / on call beeper 800-841-7243 access code #33185
Cheatham, Dickson, Houston, Humphreys, Montgomery, Robertson, Rutherford, Stewart, Sumner, Trousdale, Williamson, and Wilson counties

Memphis-Shelby County Main #: 901-544-7600 / Main # Epidemiologist 901-544-7717 / On-call beeper 1-800-542-6155

Nashville-Davidson County – Emergency telephone # 615-340-5616

Northeast Region (Johnson City) Main #: 423 979 3200 / On-call numbers 877-953-5711 or 888-509-1408
Carter, Greene, Hancock, Hawkins, Johnson, Unicoi, Washington counties

South Central Region (Columbia) Main #: 931 380 2532 / on-call cell phone 800-841-7243 access code # 33187
Bedford, Coffee, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Perry and Wayne counties

Southeast Region (surrounding Chattanooga) Main #: 423-634-3124 / On-call beeper 866-207-1268
Bledsoe, Bradley, Franklin, Grundy, Marion, McMinn, Meigs, Polk, Rhea, and Sequatchie counties

Sullivan County Main #: 423-279-2776 or 423-279-2777 / on call number 1-877-592-6902

Upper Cumberland Region (Cookeville) Main #: 931-528-7531 after hours #'s 931-526-3179 or 931-260-1474
Cannon, Clay, Cumberland, DeKalb, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, Van Buren, Warren, and White counties

West Tennessee Region (surrounding Jackson) Main #: 731-423-6600:
Benton, Carroll, Chester, Crockett, Decatur, Dyer, Fayette, Gibson, Hardeman, Hardin, Haywood, Henderson, Henry, Lake, Lauderdale, McNairy, Obion, Tipton, and Weakley counties

We appreciate consultation with the CDC and the Kansas Department of Health and Environment in developing these guidelines.