Smallpox

Revised 04/20/2005

Epidemiology

Smallpox is caused by the Orthopox virus, variola, which occurs in at least two strains, variola major and the milder disease, variola minor. Despite the global eradication of smallpox and continued availability of a vaccine, the potential weaponization of variola continues to pose a military threat. This threat can be attributed to the aerosol infectivity of the virus, the relative ease of large-scale production, and an increasingly Orthopoxvirus-naive populace. Although the fully developed cutaneous eruption of smallpox is unique, earlier stages of the rash could be mistaken for varicella. Secondary spread of infection constitutes a nosocomial hazard from the time of onset of a smallpox patient's exanthem until scabs have separated. Quarantine with respiratory isolation should be applied to secondary contacts for 17 days post-exposure. Vaccinia vaccination and vaccinia immune globulin each possess some efficacy in post-exposure prophylaxis.

Endemic smallpox was declared eradicated in 1980 by the World Health Organization (WHO). Although two WHO-approved repositories of variola virus remain at the Centers for Disease Control and Prevention (CDC) in Atlanta and the Institute for Viral Preparations in Moscow, the extent of clandestine stockpiles in other parts of the world remains unknown. In January 1996, WHO’s governing board recommended that all stocks of smallpox be destroyed by 30 June 1999. However, action on this was delayed by the Clinton administration in May 1999 due to concerns over the need for further study of the virus given its potential as a biological warfare agent. The smallpox stockpiles were scheduled for destruction on 30 June 2002.

The United States stopped vaccinating its military population in 1989 and civilians in the early 1980s. These populations are now susceptible to variola major, although recruits immunized in 1989 may retain some degree of immunity. Variola may have been used by the British Army against Native Americans by giving them contaminated blankets from the beds of smallpox victims during the eighteenth century. Japan considered the use of smallpox as a BW weapon in World War II and it has been considered as a possible threat agent against US forces for many years. In addition, the former Soviet Union is reported to have produced and stockpiled massive quantities of the virus for use as a biological weapon. It is not known whether these stockpiles still exist in Russia.

CLINICAL FEATURES

Signs and Symptoms: Clinical manifestations begin acutely with malaise, fever, rigors, vomiting, headache, and backache. 2-3 days later lesions appear which quickly progress from macules to papules, and eventually to pustular vesicles. They are more abundant on the extremities and face, and develop synchronously.
The incubation period of smallpox averaged 12 days, although it could range from 7-19 days following exposure. Clinical manifestations begin acutely with malaise, fever, rigors, vomiting, headache, and backache; 15% of patients developed delirium. Approximately 10% of light-skinned patients exhibited an erythematous rash during this phase. Two to three days later, an enanthem appears concomitantly with a discrete rash about the face, hands and forearms.

Following eruptions on the lower extremities, the rash spread centrally to the trunk over the next week. Lesions quickly progressed from macules to papules, and eventually to pustular vesicles. Lesions were more abundant on the extremities and face, and this centrifugal distribution is an important diagnostic feature. In distinct contrast to varicella, lesions on various segments of the body remain generally synchronous in their stages of development. From 8 to 14 days after onset, the pustules form scabs that leave depressed depigmented scars upon healing. Although variola concentrations in the throat, conjunctiva, and urine diminish with time, virus can be readily recovered from scabs throughout convalescence. Therefore, patients should be isolated and considered infectious until all scabs separate.

For the past century, two distinct types of smallpox were recognized. Variola minor was distinguished by milder systemic toxicity and more diminutive pox lesions, and caused 1% mortality in unvaccinated victims. However, the prototypical disease variola major caused mortality of 3% and 30% in the vaccinated and unvaccinated, respectively. Other clinical forms associated with variola major, flat-type and hemorrhagic type smallpox were notable for severe mortality. A naturally occurring relative of variola, monkeypox, occurs in Africa, and is clinically indistinguishable from smallpox with the exception of a lower case fatality rate and notable enlargement of cervical and inguinal lymph nodes.

**DIAGNOSIS**

Neither electron nor light microscopy is capable of discriminating variola from vaccinia, monkeypox or cowpox. The new PCR diagnostic techniques may be more accurate in discriminating between variola and other *Orthopoxviruses*.

Smallpox must be distinguished from other vesicular exanthems, such as chickenpox, erythema multiforme with bullae, or allergic contact dermatitis. Particularly problematic to infection control measures would be the failure to recognize relatively mild cases of smallpox in persons with partial immunity. An additional threat to effective quarantine is the fact that exposed persons may shed virus from the oropharynx without ever manifesting disease. Therefore, quarantine and initiation of medical countermeasures should be promptly followed by an accurate diagnosis so as to avert panic.

The usual method of diagnosis is demonstration of characteristic virions on electron microscopy of vesicular scrapings. Under light microscopy, aggregations of variola virus particles, called Guarnieri bodies are found. Another rapid but relatively insensitive test for Guarnieri bodies in vesicular scrapings is Gispen's modified silver stain, in which cytoplasmic inclusions appear black.

None of the above laboratory tests are capable of discriminating variola from vaccinia, monkeypox or cowpox. This differentiation classically required isolation of the virus and characterization of its growth on chorioallantoic membrane. The development of polymerase chain reaction diagnostic techniques promises a more accurate and less cumbersome method of discriminating between variola and other *Orthopoxviruses*.
**SURVEILLANCE**

Smallpox is a reportable condition. It should be reported immediately by phone because of concern about bioterrorism as a cause. Furthermore, all of the syndromic surveillance systems currently deployed by the Infectious Disease Epidemiology section utilize sets of clinical signs and symptoms that have been crafted to capture cases of smallpox prior to the availability of laboratory test results.

**CASE MANAGEMENT**

Treatment: At present there is no effective chemotherapy, and treatment of a clinical case remains supportive.

Medical personnel must be prepared to recognize a vesicular exanthem in possible biowarfare theaters as potentially variola, and to initiate appropriate countermeasures. Any confirmed case of smallpox should be considered an international emergency with immediate report made to public health authorities. Droplet and Airborne Precautions are recommended for a minimum of 17 days following exposure for all persons in direct contact with the index case, especially the unvaccinated. In the civilian setting strict quarantine of asymptomatic contacts may prove to be impractical and impossible to enforce. A reasonable alternative would be to require contacts to check their temperatures daily. Any fever above 38 C (101 F) during the 17-day period following exposure to a confirmed case would suggest the development of smallpox. The contact should then be isolated immediately, preferably at home, until smallpox is either confirmed or ruled out and remain in isolation until all scabs separate. Patients should be considered infectious until all scabs separate. Immediate vaccination or revaccination should also be undertaken for all personnel exposed to either weaponized variola virus or a clinical case of smallpox.

The potential for airborne spread to other than close contacts is controversial. In general, close person-to-person contact is required for transmission to reliably occur. Nevertheless, variola's potential in low relative humidity for airborne dissemination was alarming in two hospital outbreaks. Smallpox patients were infectious from the time of onset of their eruptive exanthem, most commonly from days 3-6 after onset of fever. Infectivity was markedly enhanced if the patient manifested a cough. Indirect transmission via contaminated bedding or other fomites was infrequent. Some close contacts harbored virus in their throats without developing disease, and hence might have served as a means of secondary transmission.

Vaccination with a verified clinical "take" (vesicle with scar formation) within the past 3 years is considered to render a person immune to smallpox. However, given the difficulties and uncertainties under wartime conditions of verifying the adequacy of troops' prior vaccination, routine revaccination of all potentially exposed personnel would seem prudent if there existed a significant prospect of smallpox exposure.

Antivirals for use against smallpox are under investigation. Cidofovir has been shown to have significant in vitro and in vivo activity in experimental animals. Whether it would offer benefit superior to immediate post-exposure vaccination in humans has not been determined.
CASE DEFINITION

Clinical Case Definition

An illness with acute onset of fever $\geq 101^\circ$ F ($\geq 38.3 \, ^\circ$ C) followed by a rash characterized by firm, deep seated vesicles or pustules in the same stage of development without other apparent cause. Clinically consistent cases are those presentations of smallpox that do not meet this classical clinical case definition: a) hemorrhagic type, b) flat type, and c) variola sine eruptione. (Detailed clinical description is available on the CDC web site, see URL: http://www.bt.cdc.gov/agent/smallpox/index.asp).

Laboratory Criteria

Polymerase chain reaction (PCR) identification of variola DNA in a clinical specimen, OR
Isolation of smallpox (variola) virus from a clinical specimen (Level D laboratory only; confirmed by variola PCR).

Note: Indications for laboratory testing of patients with suspected smallpox should be followed as described in detail in Guide A of the CDC Smallpox Response Plan. Laboratory diagnostic testing for variola virus should be conducted in Level C or D laboratories only.

Case Classification*

Confirmed: case of smallpox that is laboratory confirmed, or a case that meets the clinical case definition that is epidemiologically linked to a laboratory confirmed case.

Probable: A case that meets the clinical case definition, or a clinically consistent case that does not meet the clinical case definition and has an epidemiological link to a confirmed case of smallpox.

Suspected: A case with a generalized, acute vesicular or pustular rash illness with fever preceding development of rash by 1-4 days.

*Exclusion Criteria: A case may be excluded as a suspect or probable smallpox case if an alternative diagnosis fully explains the illness or appropriate clinical specimens are negative for laboratory criteria for smallpox.

Note: The smallpox case definition is to be used only during post-event surveillance. The case definition described in Guide A of the Smallpox Response Plan and Guidelines (Version 3) on the CDC bioterrorism preparedness website (URL: http://www.bt.cdc.gov/agent/smallpox/response-plan/index.asp) includes different criteria for the suspected case definition and the confirmed smallpox case definition the Council of State and Territorial Epidemiologists has subsequently approved this nomenclature for use in the National Notifiable Diseases Surveillance System (NNDSS). The smallpox case definition on the CDC bioterrorism web site is more sensitive and less specific than the case definition for the NNDSS, in that a "suspect" case is defined as: "a case with febrile rash illness with fever preceding the development of rash by 1-4 days."
PROPHYLAXIS

Immediate vaccination or revaccination should be undertaken for all personnel exposed.

Vaccine: Smallpox vaccine (vaccinia virus) is most often administered by intradermal inoculation with a bifurcated needle, a process that became known as scarification because of the permanent scar that resulted. Vaccination after exposure to weaponized smallpox or a case of smallpox may prevent or ameliorate disease if given as soon as possible and preferably within 7 days after exposure. A vesicle typically appears at the vaccination site 5-7 days post-inoculation, with surrounding erythema and induration. The lesion forms a scab and gradually heals over the next 1-2 weeks.

Side effects include low-grade fever and axillary lymphadenopathy. The attendant erythema and induration of the vaccination vesicle is frequently misdiagnosed as bacterial superinfection. More severe first-time vaccine reactions include secondary inoculation of the virus to other sites such as the face, eyelid, or other persons (~6/10,000 vaccinations), and generalized vaccinia, which is a systemic spread of the virus to produce mucocutaneous lesions away from the primary vaccination site (~3/10,000 vaccinations).

Vaccination is contraindicated in the following conditions: immunosuppression, HIV infection, history or evidence of eczema, or current household, sexual, or other close physical contact with person(s) possessing one of these conditions. In addition, vaccination should not be performed during pregnancy. Despite these caveats, most authorities state that, with the exception of significant impairment of systemic immunity, there are no absolute contraindications to post-exposure vaccination of a person who experiences bona fide exposure to variola. However, concomitant VIG administration is recommended for pregnant and eczematous persons in such circumstances.

Passive Immunoprophylaxis: Vaccinia Immune Globulin (VIG) is generally indicated for treatment of complications to the smallpox (vaccinia) vaccine, and should be available when administering vaccine. Limited data suggests that vaccinia immune globulin may be of value in post-exposure prophylaxis of smallpox when given within the first week following exposure, and concurrently with vaccination. Vaccination alone is recommended for those without contraindications to the vaccine. If greater than one week has elapsed after exposure, administration of both products, if available, is reasonable. The dose for prophylaxis or treatment is 0.6 ml/kg intramuscularly. Due to the large volume (42 mls in a 70 Kg person), the dose would be given in multiple sites over 24-36 hours.

Isolation

Droplet and Airborne Precautions for a minimum of 17 days following exposure for all contacts. Patients should be considered infectious until all scabs separate. In the civilian setting strict quarantine of asymptomatic contacts may prove to be impractical and impossible to enforce and may increase the risk of infection within the quarantined population. A reasonable alternative would be to require contacts to check their temperatures daily. Any fever above 38 C (101 F) during the 17-day period following exposure to a confirmed case would suggest the development of smallpox. The contact should then be isolated immediately, preferably at home, until smallpox is either confirmed or ruled out and remain in isolation until all scabs separate.

Infectious Disease Epidemiology: Epidemiologic Response Checklist
Consultation/ Confirmation
- Discuss bioterrorism event definitions with key public health personnel (health officer, communicable disease control staff, laboratorians, etc.)

Laboratory Confirmation
- Identify point of contact (POC) at appropriate state public health laboratory in a potential bioterrorist event

Notification
- Establish local notification network to be activated in case of a possible bioterrorist event; disseminate contact information and notification protocol
- Establish relationships with local Office of Emergency Preparedness and FBI contacts to be notified in a suspected bioterrorist event and maintain up-to-date contact information

Coordination
- Establish Epidemiologic Response as a part of local Incident Command System
- Identify personnel available for epidemiologic investigation and perform inventory of skills and duties
- Establish contacts at regional and Parrish health units identify potential personnel resources available for epidemiologic “mutual aid”
- Establish contacts at the local FBI office for coordination with epidemiologic/ criminal Investigation

Communication
- Identify epidemiologic investigation spokesperson and Public Information Officer (PIO)
- Establish communication protocol to be implemented during an epidemiologic investigation between PIO and epidemiologic investigation spokesperson
- Establish a plan for rapid dissemination of information to key individuals: FAX, Email, website on the internet (if capability exists)

Epidemiologic Investigation
A. Case Finding
- Establish plans/ capacity to receive a large number of incoming telephone calls
- Develop telephone intake form
- Identify individuals available to perform telephone intake duties
- Identify potential reporting sources (persons/ facilities) to receive case definition
- Establish a plan for rapid dissemination of case definition to potential reporting sources

B. Case Interviews
- Obtain appropriate case investigation questionnaires
- Identify personnel available to conduct case interviews
 ✓ Establish a protocol for training case interviewers
 ✓ Obtain template outbreak disease-specific investigation questionnaires

**C. Data Analysis**
 ✓ Obtain template database for data entry
 ✓ Assure Epi Info software is installed on data entry computers
 ✓ Identify personnel available for data entry
 ✓ Identify personnel with skills to perform descriptive and analytic epidemiologic analysis
 ✓ Develop/obtain data analysis plan
 ✓ Develop/obtain outbreak investigation monitoring tool

**Contact Tracing**
 ✓ Establish a system for locating contacts and familiarize personnel with contact tracing protocol(s)

 ✓ Obtain Contact Tracing Forms
 ✓ Obtain contact management algorithms for diseases that are communicable from person-to-person
 ✓ Obtain treatment/prophylaxis guidelines
 ✓ Develop local drug and vaccine distribution plan
 ✓ Establish a system for daily monitoring of all contacts under surveillance

**Public Health Recommendations**
 ✓ Obtain treatment and prophylaxis recommendations for bioterrorist threat agents

 ✓ Develop or obtain bioterrorist disease-specific fact sheets
 ✓ Establish contact with key health care providers/facilities and establish protocol for rapid dissemination of recommendations regarding treatment, prophylaxis, personal protective equipment, infection control, and isolation/quarantine

**Consultation/Confirmation**
 ✓ Disease scenario meets the bioterrorist event definition

**Laboratory Confirmation**
 ✓ Lab specimens are en route to the local public health laboratory/Laboratory Response Network

**Notification**
 ✓ Department of Health and Human Services
 ✓ State Medical Officer
Coordination
☑ Epidemiology personnel identified for investigation
☑ Additional epidemiology personnel support requested (From other regions) Investigation activities coordinated with FBI

Communication
☑ Epidemiology investigation spokesperson identified
☑ Communication protocol established between epidemiologic investigation spokesperson and Public Information Officer (PIO)

Epidemiologic Investigation
☑ Hypothesis-generating interviews conducted
☑ Preliminary epidemiologic curve generated
☑ Case definition established

A. Case finding
☑ Telephone hotline established
☑ Telephone intake form distributed
☑ Case definition disseminated to potential reporting sources
  • Hospitals
  • Physicians
  • Laboratories
  • EMS
  • Coroner
  • Media

B. Case interviews
☑ Interviewers trained
☑ Uniform multi-jurisdictional outbreak investigation form(s) obtained

C. Data Analysis
☑ Uniform multi-jurisdictional database template for data entry obtained
☑ Epidemiologic curve generated
Cases line-listed
Case descriptive epidemiology completed
  • Age
  • Gender
  • Illness onset
  • Clinical profile
  • % Laboratory confirmed
  • Hospitalization rate
  • Case fatality rate
  • Case geographic distribution mapped (GIS mapping if available)
  Analytic epidemiology completed
  • Disease risk factors identified
  • Mode of transmission identified
  • Source of transmission identified
  • Population at continued risk identified

Contact Tracing
Contact tracing forms distributed
Health education materials available
Contact management triage algorithm reviewed with staff
Treatment/ prophylaxis guidelines available
Treatment/ prophylaxis distribution plan in place
System in place for locating contacts
Tracking system in place to monitor contacts’ trends/ gaps

Laboratory
Establish point of contact (POC) at appropriate Level A and/ or Level B public health laboratory to refer queries regarding specimen packaging, storage and shipping guidelines in a potential bioterrorist event [See Laboratory Section’s Bioterrorism Plan]

Public Health Recommendations
See Medical Response Section Bioterrorism Plan
SMALLPOX

Case investigation form

ID NUMBER:_________

INTERVIEWER:_____________________ JOB TITLE:__________________________

DATE OF INTERVIEW:_____/_____/____

PERSON INTERVIEWED:  Patient     Other

IF OTHER, NAME OF PERSON ___________________________________________

TELEPHONE _____ - _____ - ________

DESCRIBE RELATIONSHIP______________________________________________

DEMOGRAPHIC INFORMATION

LAST NAME: ___________________________ FIRST NAME: ________________________

DRIVER LICENCE OR SOCIAL SECURITY NUMBER (Circle one): ___________________

SEX:  Male  Female   DATE OF BIRTH:___/___/___    AGE____

RACE:  White  Black  Asian  Other, specify _________ Unknown

ETHNICITY:  Hispanic  Non-Hispanic  Unknown

HOME PHONE: (      ) ______-_________ WORK/OTHER PHONE: (      ) _____ - ________

HOME ADDRESS STREET: _____________________________________

CITY:________________________________ STATE:_______________ZIP:_____________

EMPLOYED:  Yes  No  Unknown

BRIEF DESCRIPTION OF JOB:___________________________________________________

SCHOOL/PLACE OF EMPLOYMENT:_____________________________________________

DEPARTMENT_________________________   FLOOR:_________   ROOM:______________

WORK/SCHOOL ADDRESS: STREET: _________________________ CITY: _____________

STATE:______________ZIP:______________
ARE YOU A:

LAB WORKER/TECHNICIAN:  Yes  No  Unknown
TAXIDERMIST:  Yes  No  Unknown
VETERINARIAN:  Yes  No  Unknown
FARMER:  Yes  No  Unknown
ABATTOIR:  Yes  No  Unknown
BUTCHER:  Yes  No  Unknown
OTHER FOOD PREPARATION:  Yes  No  Unknown

HOBBY:

Do you work with fibers/wool/animal skin/or other animal product?  Yes  No  Unknown
Have you been camping in past two months?  Yes  No  Unknown
Have you stayed in cabins in the past two months?  Yes  No  Unknown
Have you been hunting?  Yes  No  Unknown
Have you skinned or dressed and animal?  Yes  No  Unknown
Have you had an animal stuffed or mounted?  Yes  No  Unknown

HOW MANY PEOPLE RESIDE IN THE SAME HOUSEHOLD? __________

LIST NAME(S), AGE(S), AND RELATIONSHIPS (use additional pages if necessary):

<table>
<thead>
<tr>
<th>PERSON 1</th>
<th>PERSON 2</th>
<th>PERSON 3</th>
<th>PERSON 4</th>
<th>PERSON 5</th>
<th>PERSON 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

HOUSEHOLD PETS:

Does your household have any pets (indoor or outdoor)?  Yes  No  Unknown

If so what type of pet: ____________________________________________________________

Have any of the pets been ill or died recently?  Yes  No  Unknown

If so describe: _________________________________________________________________

CLINICAL INFORMATION (as documented in admission history of medical record or from case/proxy interview)

CHIEF COMPLAINT: ____________________________

DATE OF ILLNESS ONSET: ____/____/____

Briefly summarize History of Present Illness:

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
### SIGNS AND SYMPTOMS

<table>
<thead>
<tr>
<th>SIGN/SYMPTOM</th>
<th>Present at interview?</th>
<th>Present before rash? (Prodromal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>If yes, Maximum temperature____°F</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Antipyretics taken</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Chills</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
<tr>
<td>Headache</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
<tr>
<td>Malaise/Fatigue</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
<tr>
<td>Back Pain</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
<tr>
<td>Muscle tenderness/pain</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
<tr>
<td>Delirium/confusion</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
<tr>
<td>Cough</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
<tr>
<td>Coryza</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
<tr>
<td>Conjunctivitis</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
<tr>
<td>Lymphadenopathy</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
<tr>
<td>Bleeding</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
<tr>
<td>Other Symptoms/Abnormality</td>
<td>. Yes . No . Unknown</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### PAST MEDICAL HISTORY:

Do you have a regular physician? . Yes . No . Unknown
If yes, Name:_____________________________ Phone Number: (_____) ______-__________
Are you currently taking any medication? . Yes . No . Unknown
If yes, list:_____________________________________________________________________
Have you had any wound or lesion in the past several months? . Yes . No . Unknown
If yes, where:________________________________ Appearance: _______________________
Other Dermatologic condition   Yes   No  Unknown
If yes, describe:_________________________________________________________________

Food or drug allergies 

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>Yes</td>
<td>No</td>
<td>Unknown</td>
</tr>
<tr>
<td>Malignancy</td>
<td>Yes</td>
<td>No</td>
<td>Unknown</td>
</tr>
<tr>
<td>Currently pregnant</td>
<td>Yes</td>
<td>No</td>
<td>Unknown</td>
</tr>
<tr>
<td>HIV infection</td>
<td>Yes</td>
<td>No</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Other immunocompromising condition (e.g., renal failure, cirrhosis, chronic steroid use)

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently on treatment</td>
<td>Yes</td>
<td>No</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

If yes, specify disease or drug therapy:______________________________________________

Other underlying condition(s):
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Prescription medications:
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Were antibiotics taken in the week prior to the onset of the rash?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Unknown</th>
</tr>
</thead>
</table>

If yes identify:____________________________________________________________

SOCIAL HISTORY:

Current alcohol abuse:       . Yes | . No | . Unknown
Past alcohol abuse:          . Yes | . No | . Unknown
Current injection drug use:  . Yes | . No | . Unknown
Past injection drug use:     . Yes | . No | . Unknown
Current smoker:              . Yes | . No | . Unknown
Former smoker:               . Yes | . No | . Unknown
Other illicit drug use:      . Yes | . No | . Unknown
If yes, specify:______________________________________________________________

HOSPITAL INFORMATION:

HOSPITALIZED: Yes No

NAME OF HOSPITAL: _____________________________________________________________
DATE OF ADMISSION: ___/___/____ DATE OF DISCHARGE ___/___/____
ATTENDING PHYSICIAN:
LAST NAME:__________________________ FIRST NAME:__________________________
Office Telephone: (      )____-______ Pager: (      )____-______ Fax: (      )____-______
MEDICAL RECORD ABSTRACTION:

MEDICAL RECORD NUMBER: ________________________________

WARD/ROOM NUMBER: ________________________________

ADMISSION DIAGNOSIS(ES):  1) ________________________________
2) ________________________________
3) ________________________________

PHYSICAL EXAM:

Admission Vital Signs:

Temp: ____ (Oral / Rectal F / C) Heart Rate: _____ Resp. Rate: _____ B/P: ____/____

Mental Status: Normal Abnormal Not Noted
If abnormal, describe: ____________________________________________

Respiratory status: Normal spontaneous Respiratory distress Ventilatory support
If abnormal, check all that apply: Rales Stridor/wheezin Decreased or absent
Other (specify: ____________________________________________)

Skin rash:

Rash description, check all that apply:
- Papular
- Macular
- Vesticular
- Petechial
- Bullous
- Erythematous
- Purpuriic
- Pustules
- Scabs
- Other: ____________________________________________

Rash location: Check off all areas of the body where rash is/was, check all that apply:
- Face
- Neck
- Mouth
- Chest
- Abdomen
- Back
- Arms
- Hands
- Palms
- Legs
- Feet
- Soles

Did the rash develop at the same stage on any body area?

Yes No Unknown

Through what order of body parts did the rash spread? (number the following boxes 1=first and 3=last. Multiple boxes can have the same number)

_____ Head _____ Trunk _____ Extremities

Is the rash concentrated in one or more areas?

Yes No Unknown
If yes, where? ____________________________________________
Skin Exam Continued:

Is there flushing?  Yes  No  Unknown
If yes, where?_____________________________________

Is there edema?  Yes  No  Unknown
If yes, where?_____________________________________

Is there Jaundice?  Yes  No  Unknown

Other Findings:

Lymphadenopathy  Yes  No  Unknown
Hepatomegaly  Yes  No  Unknown
Conjunctivitis  Yes  No  Unknown
Pharyngeal inflammation  Yes  No  Unknown
If yes, explain:_____________________________________

Other abnormal physical findings (describe): _________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________
## DIAGNOSTIC STUDIES:

<table>
<thead>
<tr>
<th>Test</th>
<th>Results of tests done on Admission (<em><strong>/</strong></em>/___)</th>
<th>Abnormal test result at any time (specify date mm/dd/yyyy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoglobin (Hb)</td>
<td></td>
<td>(<em><strong>/</strong></em>/___)</td>
</tr>
<tr>
<td>Hematocrit (HCT)</td>
<td></td>
<td>(<em><strong>/</strong></em>/___)</td>
</tr>
<tr>
<td>Platelet (plt)</td>
<td>Thrombocytopenia?</td>
<td>(<em><strong>/</strong></em>/___)</td>
</tr>
<tr>
<td>Total white blood cell (WBC)</td>
<td></td>
<td>(<em><strong>/</strong></em>/___)</td>
</tr>
<tr>
<td>WBC differential:</td>
<td></td>
<td>(<em><strong>/</strong></em>/___)</td>
</tr>
<tr>
<td>% granulocytes (PMNs)</td>
<td></td>
<td>(<em><strong>/</strong></em>/___)</td>
</tr>
<tr>
<td>% bands</td>
<td></td>
<td>(<em><strong>/</strong></em>/___)</td>
</tr>
<tr>
<td>% lymphocytes</td>
<td></td>
<td>(<em><strong>/</strong></em>/___)</td>
</tr>
<tr>
<td>Prothrombin Time (PT)</td>
<td></td>
<td>(<em><strong>/</strong></em>/___)</td>
</tr>
<tr>
<td>Partial Thromboplastin Time (PTT)</td>
<td></td>
<td>(<em><strong>/</strong></em>/___)</td>
</tr>
<tr>
<td>Renal function: BUN/Cr</td>
<td></td>
<td>(<em><strong>/</strong></em>/___)</td>
</tr>
<tr>
<td>Liver enzymes: ALT/AST</td>
<td></td>
<td>(<em><strong>/</strong></em>/___)</td>
</tr>
<tr>
<td>Blood cultures: (Bacterial) (specify positive)</td>
<td>negative pending not done</td>
<td>(specify positive) negative pending not done</td>
</tr>
<tr>
<td>Test</td>
<td>Results of tests done on Admission (<strong>/</strong>/___)</td>
<td>Abnormal test result at any time (specify date mm/dd/yy)</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Blood cultures: (Viral)</td>
<td>positive (specify____________________)</td>
<td>positive (specify____________________)</td>
</tr>
<tr>
<td></td>
<td>negative pending not done</td>
<td>negative pending not done</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(<strong><strong>/</strong></strong>/____)</td>
</tr>
<tr>
<td>Viral isolation culture of lesion</td>
<td>positive (specify____________________)</td>
<td>positive (specify____________________)</td>
</tr>
<tr>
<td></td>
<td>negative pending not done</td>
<td>negative pending not done</td>
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<tr>
<td></td>
<td></td>
<td>(<strong><strong>/</strong></strong>/____)</td>
</tr>
<tr>
<td>Tzank smear</td>
<td>positive (specify____________________)</td>
<td>positive (specify____________________)</td>
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<tr>
<td></td>
<td>negative pending not done</td>
<td>negative pending not done</td>
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<tr>
<td></td>
<td></td>
<td>(<strong><strong>/</strong></strong>/____)</td>
</tr>
<tr>
<td>Lesion scraping/biopsy</td>
<td>positive (specify____________________)</td>
<td>positive (specify____________________)</td>
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<tr>
<td></td>
<td>negative pending not done</td>
<td>negative pending not done</td>
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<tr>
<td></td>
<td></td>
<td>(<strong><strong>/</strong></strong>/____)</td>
</tr>
<tr>
<td>Urinalysis</td>
<td>positive (specify____________________)</td>
<td>positive (specify____________________)</td>
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<tr>
<td></td>
<td>negative pending not done</td>
<td>negative pending not done</td>
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<tr>
<td></td>
<td></td>
<td>(<strong><strong>/</strong></strong>/____)</td>
</tr>
<tr>
<td>Hematuria</td>
<td>positive</td>
<td>positive</td>
</tr>
<tr>
<td></td>
<td>negative</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>pending</td>
<td>pending</td>
</tr>
<tr>
<td></td>
<td>not done</td>
<td>not done</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(<strong><strong>/</strong></strong>/____)</td>
</tr>
<tr>
<td>Chest radiograph</td>
<td>normal unilateral, lobar/consolidation</td>
<td>normal unilateral, lobar/consolidation</td>
</tr>
<tr>
<td></td>
<td>bilateral, lobar/consolidation</td>
<td>bilateral, lobar/consolidation</td>
</tr>
<tr>
<td></td>
<td>interstitial infiltrates</td>
<td>interstitial infiltrates</td>
</tr>
<tr>
<td></td>
<td>widened mediastinum</td>
<td>widened mediastinum</td>
</tr>
<tr>
<td></td>
<td>pleural effusion</td>
<td>pleural effusion</td>
</tr>
<tr>
<td></td>
<td>other</td>
<td>other</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(<strong><strong>/</strong></strong>/____)</td>
</tr>
<tr>
<td>Other pertinent study results (e.g., chest CT, pleural fluid)</td>
<td></td>
<td>(<strong><strong>/</strong></strong>/____)</td>
</tr>
</tbody>
</table>
INFECTIOUS DISEASE CONSULT:   Yes   No   Unknown

Date of Exam: ___/___/___

Name of ID physician: Last Name ___________________ First Name ____________________

Telephone or pager number (          ) _____ - _____

HOSPITAL COURSE:

A. antibiotics:  Yes   No   Unknown
   If yes, list all that apply: ______________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

B. antivirals: Yes No Unknown
   If yes, check all that apply:
      Acyclovir (Zovirax)
      Amantadine (Symmetrel)
      Oseltamivir (Tamiflu)
      Rimantidine (Flumadine)
      Zanamivir (Relenza)
      other ____________________________________________________________

C. Was the patient placed in a negative pressure room?:   Yes   No   Unknown
   If yes, how soon after admission:  Immediatly   Minutes   Hours   Days

D. Did patient require intensive care:   Yes   No   Unknown
   If patient was admitted to Intensive Care Unit:
      a. Length of stay in ICU, in days: __________
      b. Was patient on mechanical ventilation:   Yes   No   Unknown

WORKING OR DISCHARGE DIAGNOSIS(ES) :

1) _________________________________________________________________________

2) _________________________________________________________________________

3) _________________________________________________________________________

OUTCOME:
   Recovered/discharged
   Died
   Still in hospital: improving?   worsening?

Risk Exposure Questions
The following questions pertain to the 2 week period prior to the onset of your illness/symptoms:

*Occupation (provide information for all jobs/ volunteer duties)*
1. Please briefly describe your job/ volunteer duties: ________________________________________________

2. Does your job involve contact with the public? : Yes   No
   If "Yes", specify____________________________________________

3. Does anyone else at your workplace have similar symptoms?
   Yes   No   Unknown
   If "Yes", name and approximate date on onset (if known)__________________

*Knowledge of Other Ill Persons*
4. Do you know of other people with similar symptoms? : Yes   No   Unknown
   (If Yes, please complete the following questions)

<table>
<thead>
<tr>
<th>Name of ill Person</th>
<th>AGE</th>
<th>Sex</th>
<th>Address</th>
<th>Phone</th>
<th>Date of Onset</th>
<th>Relation To you</th>
<th>Did they seek Medical care? Where</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

*Travel*
*Travel is defined as staying overnight (or longer) at somewhere other than the usual residence*

8. Have you traveled anywhere in the last two weeks? : Yes   No   Unknown
   Dates of Travel: _____/____/____ to _____/____/____
   Method of Transportation for Travel: ____________________________
   Where Did You Stay? ___________________________________________________________________
   Purpose of Travel? ___________________________________________________________________
   Did You Do Any Sightseeing on your trip? : Yes   No
   If yes, specify: ___________________________________________________________________
   Did Anyone Travel With You? : Yes   No
   If yes, specify: ___________________________________________________________________
   Are they ill with similar symptoms? : Yes   No   Unknown
   If yes, specify: ___________________________________________________________________
## Public Functions/Venues (during 2 weeks prior to symptom onset)

<table>
<thead>
<tr>
<th>Category</th>
<th>Y/N/U</th>
<th>Description of Activity</th>
<th>Location of Activity</th>
<th>Date of Activity</th>
<th>Time of Activity (start, end)</th>
<th>Others ill? (Y/N/U)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Airports</td>
<td></td>
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<tr>
<td>10. Beaches</td>
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<td>11. Bars/Clubs</td>
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<tr>
<td>12. Campgrounds</td>
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<tr>
<td>13. Carnivals/Circus</td>
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<td>14. Casinos</td>
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<td>15. Family Planning Clinics</td>
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<tr>
<td>16. Government Office Building</td>
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<tr>
<td>17. Gym/Workout Facilities</td>
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<tr>
<td>18. Meetings or Conferences</td>
<td></td>
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<tr>
<td>19. Movie Theater</td>
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<tr>
<td>20. Museums</td>
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<tr>
<td>21. Parks</td>
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<tr>
<td>22. Parties (including Raves, Prom, etc)</td>
<td></td>
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<tr>
<td>23. Performing Arts (ie Concert, Theater, Opera)</td>
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<tr>
<td>24. Picnics</td>
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<tr>
<td>25. Political Events (including Rallies)</td>
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<tr>
<td>26. Religious Gatherings</td>
<td></td>
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<tr>
<td>27. Shopping Malls</td>
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<tr>
<td>28. Sporting Event</td>
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<tr>
<td>29. Street Festivals, Flea Markets, Parades</td>
<td></td>
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<tr>
<td>30. Tourist Attractions (ie French Quarter, Aquarium)</td>
<td></td>
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</tbody>
</table>
Transportation
Have you used the following types of transportation in the 2 weeks prior to onset?

31. Bus/Streetcar: Yes  No  Unknown
   Frequency of this type of transportation: Daily  Weekly  Occasionally  Rarely
   Bus Number: ___________________________ Origin:____________________________
   Any connections?  Yes  No (Specify: Location________________ Bus#__________)
   Company Providing Transportation: ___________________________ Destination:__________

32. Train: Yes  No  Unknown
   Frequency of this type of transportation: Daily  Weekly  Occasionally  Rarely
   Route Number: ___________________________ Origin:____________________________
   Any connections?  Yes  No (Specify: Location________________ Route #__________)
   Company Providing Transportation: ___________________________ Destination:__________

33. Airplane: Yes  No  Unknown
   Frequency of this type of transportation: Daily  Weekly  Occasionally  Rarely
   Flight Number: ___________________________ Origin:____________________________
   Any connections?  Yes  No (Specify: Location_____________ Flight #___________)
   Company Providing Transportation: ___________________________ Destination:__________

34. Ship/Boat/Ferry: Yes  No  Unknown
   Frequency of this type of transportation: Daily  Weekly  Occasionally  Rarely
   Ferry Number: ___________________________ Origin:____________________________
   Any connections?  Yes  No (Specify: Location_____________ Ferry #__________)
   Company Providing Transportation: ___________________________ Destination:__________

35. Van Pool/Shuttle: Yes  No  Unknown
   Frequency of this type of transportation: Daily  Weekly  Occasionally  Rarely
   Route Number: ___________________________ Origin:____________________________
   Any connections?  Yes  No (Specify: Location_____________ Route #__________)
   Company Providing Transportation: ___________________________ Destination:__________
**Food & Beverage**

36. During the 2 weeks before your illness, did you eat at any of the following *food establishments or private gatherings with food or beverages*?

<table>
<thead>
<tr>
<th>Food Establishment</th>
<th>Y/N/U</th>
<th>Name of Establishment</th>
<th>Location of Meal</th>
<th>Date of Meal</th>
<th>Time of Meal (start, end)</th>
<th>Food and Drink items consumed</th>
<th>Others ill? (Y/N/U)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cafeteria at School, hospital, or other</td>
<td></td>
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<tr>
<td>Casino or mall food court</td>
<td></td>
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<tr>
<td>Grocery Store or Corner Store</td>
<td></td>
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<tr>
<td>Concert, movie, or other entertainment</td>
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<tr>
<td>Dinner party, birthday party or other celebration</td>
<td></td>
<td></td>
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<tr>
<td>Gas station or convenience store</td>
<td></td>
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<tr>
<td>Plane, boat, train, or other</td>
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<tr>
<td>Picnic, Barbecue, Crawfish boil, or potluck</td>
<td></td>
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<tr>
<td>Outdoor farmers market, festival, or swap meet</td>
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<tr>
<td>Restaurant, fast-food, or deli</td>
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<tr>
<td>Sporting event or snack bar</td>
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<tr>
<td>Street vended food</td>
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<tr>
<td>Other food establishment</td>
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<tr>
<td>Other Private Gathering</td>
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</tbody>
</table>

37. During the 2 weeks before your illness, did you consume any free *food samples* from………?

<table>
<thead>
<tr>
<th>Grocery store</th>
<th>Yes, No Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race/competition</td>
<td>Yes, No Unknown</td>
</tr>
<tr>
<td>Public gathering?</td>
<td>Yes, No Unknown</td>
</tr>
<tr>
<td>Private gathering?</td>
<td>Yes, No Unknown</td>
</tr>
</tbody>
</table>
If “YES” for any in question #37, provide date, time, location and list of food items consumed:
Date/Time: ____________________
Location (Name and Address): ______________________________________
Food/drink consumed: _____________________________________________

Others also ill?  Yes , No  Unknown
(Explain): _______________________________________________________

38. During the 2 weeks before your illness, did you consume any of the following products?
Vitamins  Yes , No  Unknown
Specify (Include Brand Name):_______________________________________
Herbal remedies  Yes , No  Unknown
Specify (Include Brand Name):_______________________________________
Diet Aids  Yes , No  Unknown
Specify (Include Brand Name):_______________________________________
Nutritional Supplements  Yes , No  Unknown
Specify (Include Brand Name):_______________________________________
Other Ingested non-food  Yes , No  Unknown
Specify (Include Brand Name):_______________________________________

39. During the 2 weeks before your illness, did you consume any unpasteurized products (ie milk, cheese, fruit juices)?  Yes , No  Unknown
If yes, specify name of item:_______________________________________
Date/Time: ____________________
Location (Name and Address):_______________________________________
Others also ill?  Yes , No  Unknown
(Explain): _______________________________________________________

40. During the 2 weeks before your illness, did you purchase food from any internet grocers?  Yes , No  Unknown
If yes, specify date/time of delivery:__________________ Store/Site:__________________
Items purchased:_______________________________________________________
_______________________________________________________________________
_______________________________________________________________________
____________________________________

41. During the 2 weeks before your illness, did you purchase any mail order food?  Yes , No  Unknown
If yes, specify date/time of delivery:__________________
Store purchased from:______________________________________________ Items purchased:_______________________________________________________
_______________________________________________________________________
_______________________________________________________________________
____________________________________
42. Please check the routine sources for drinking water (check all that apply):
   Community or Municipal
   Well (shared)
   Well (private family)
   Bottled water (Specify Brand:_______________)
   Other (Specify:_______________)

* Aerosolized water

43. During the 2 weeks prior to illness, did you consume water from any of the following sources (check all that apply):
   Wells
   Lakes
   Streams
   Springs
   Creeks
   Rivers
   Sewage-contaminated water
   Street-vended beverages (Made with water or ice and sold by street vendors)
   Ice prepared w/ unfiltered water (Made with water that is not from a municipal water supply or that is not bottled or boiled)
   Unpasteurized milk
   Other (Specify:______________________________)

If “YES” for any in question #43, provide date, time, location and type of water consumed:
   Date/Time: __________________
   Location (Name and Address):________________________
   Type of water consumed: ______________________________________________________
   Others also ill?: Yes  No  Unknown
   (Explain):___________________________________________

44. During the 2 weeks prior to illness, did you engage in any of the following recreational activities (check all that apply):
   Swimming in public pools (e.g., community, municipal, hotel, motel, club, etc)
   Swimming in kiddie/wading pools
   Swimming in sewage-contaminated water
   Swimming in fresh water, lakes, ponds, creeks, rivers, springs, sea, ocean, bay (please circle)
   Wave pools? Water parks? Waterslides? Surfing
   Rafting? Boating?
   Hot tubs (non-private)? Whirlpools (non-private)?
   Jacuzzis (non-private)? Other (Specify:________________________)

If “YES” for any in question #44, provide date, time, location and type of activity:
   Date/Time: __________________
   Location (Name and Address):________________________
   Type of water consumed: ______________________________________________________
   Others also ill?: Yes  No  Unknown
   (Explain):________________________________________________________
45. During the 2 weeks prior to illness, were you exposed to aerosolized water from any of the following non-private (i.e., used in hospitals, malls, etc) sources (check all that apply):
   - Air conditioning at public places
   - Respiratory devices
   - Vaporizers
   - Humidifiers
   - Misters
   - Whirlpool spas
   - Hot tub
   - Spa baths
   - Creek and ponds
   - Decorative fountains
   - Other (please explain) _______________________________________

If “YES” for any in question #45, provide date, time, and location of exposure to aerosolized water:
   Date/Time: ________________________________
   Location (Name and Address): _______________________________________
   Explanation of aerosolized water: _______________________________________
   Others also ill: Yes  No  Unknown
   (Explain): _______________________________________________________

Recreation (Activities that are not related to work)
46. In the past two weeks, did you participate in any outdoor activities?
   - Yes  No  Unknown

   (If “yes”, list all activities and provide locations)
   ________________________________________________________
   ________________________________________________________
   ________________________________________________________

47. Do you recall any insect or tick bites during these outdoor activities?
   - Yes  No  Unknown

   (If “yes”, list all activities and provide locations of activities)
   ________________________________________________________
   ________________________________________________________
   ________________________________________________________

48. Did you participate in other indoor recreational activities (i.e. clubs, crafts, etc that did not occur in a private home)?
   - Yes  No  Unknown

   (List all activities and provide location)
   ________________________________________________________
   ________________________________________________________
   ________________________________________________________
Vectors

49. Do you recall any insect or tick bites in the last 2 weeks?
   Yes  No  Unknown

   Date(s) of bite(s): ________________________________________ Bitten by:  Mosquito
   . Tick  . Flea  . Fly  . Other:
   Where were you when you were bitten? __________________________

50. Have you had any contact with wild or domestic animals, including pets?
   Yes  No  Unknown

   Type of Animal: ______________________
   Explain nature of contact: ______________________
   Is / was the animal ill recently:  Yes  No  Unknown
   If yes please describe the animal’s symptoms:
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________
   Date / Time of contact: ______________________
   Location of contact: ______________________

51. To your knowledge, have you been exposed to rodents/rodent droppings in the last 2 weeks?
   Yes  No  Unknown

   If yes, explain type of exposure: ______________________
   Date/Time of exposure: ______________________
   Location where exposure occurred: ______________________
Smallpox Contact Surveillance Form

Vaccination is recommended for contacts and response to the vaccination should be monitored. In a typical successful primary vaccination response, a red papule appears at the vaccination site after 3 days, becomes vesicular by the 5th day, by the 7th days the lesion becomes umbilicated with turbid lymph surrounded by an erythematous areola that expands for 3 more days. Regional lymphadenopathy and fever may develop. The pustule then dries up leaving a dark crust which normally falls at 3 weeks. A response that reaches a peak erythema within 48 hours is a hypersensitivity reaction and is an indication for re-vaccination. Individuals immunized previously may present an accelerated reaction with a small papule surrounded by erythema that reaches a peak between 3 and 7 days.

Contacts should be monitored up to 18 days after exposure to event or last exposure to a case. If a person’s temperature is $\geq 38^\circ C$ or $100.4^\circ F$ on two consecutive readings, place on home isolation. Monitor for the next 5 days, if no rash develops, release from home isolation.

Household members should be educated about pneumonic smallpox transmission, risks and precautions.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Type</th>
<th>V=visual, P=phone</th>
<th>Temp</th>
<th>Fever: $Y \geq 38^\circ C$</th>
<th>Rash</th>
<th>Headache</th>
<th>Backache</th>
<th>Malaise</th>
<th>Prostration</th>
<th>Cough</th>
<th>Vaccination site</th>
</tr>
</thead>
</table>

Vaccination site: 0 = No vaccination, 1 = No reaction, 2 = redness, 3 = induration, 4 = papule, 5 = ulcer, 6 = adverse reaction

Contact disposition: Fw = fever watch, DPr = Droplet precautions, Tx = referred for treatment, Hi = Home isolation
Individual has had household, hospital, and/or face-to-face contact (<6.5 feet) with a confirmed smallpox case from the onset of the case’s symptoms.

Has the contact been vaccinated during this event?

Has the Vaccine take been confirmed?

Is contact experiencing fever (oral temp. >100.4 F/ 38 C) and/or has developed a cough.

Educate household about smallpox transmission risks and precautions

Refer contact to be vaccinated (or re-vaccinated as appropriate). Continue temperature checks two times per day for 17 days after last exposure to a case.

Consider the contact to be a new case. Refer the patient for medical care. Patient should remain in respiratory isolation and if possible wear a mask while waiting for transportation to an isolation facility.

Contact has been successfully vaccinated against smallpox. Continue temperature checks two times per day for 17 days after last exposure to a case.
### OPH-ID Epidemiology Section: Master List for contacts /exposed individuals
#### Surveillance for outbreak of Smallpox

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Date of Birth</th>
<th>Days</th>
<th>Final Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Enter a check mark if surveillance interview done</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Days: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21</td>
<td></td>
</tr>
</tbody>
</table>