



Infectious Disease Epidemiology Section
Office of Public Health, Louisiana Dept of Health & Hospitals
(504) 219-4563 or 800-256-2748 (after-hours emergency)
www.infectiousdisease.dhh.louisiana.gov

Zoonotic Event

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Epidemiology

As a component of the bioterrorism plan there is a functional annex that defines the role of the Infectious Disease Epidemiology section in responding to non-human diseases. This document outlines the investigation of two types of diseases, diseases in vertebrate animals that can be transmitted to man and diseases that are common to both man and animal. The diseases of vertebrates that can be transmitted to man play a significant role in maintaining disease in nature. These diseases often exist in animal populations and only infect human hosts as an accident. The diseases that are common to both man and animals usually have a separate reservoir by which multiple species acquire the infection. Reservoirs for these diseases include soil, plants, water, invertebrate animals, etc however animals do not play an important role in the lifecycle of the disease agent.

All told there are more than 150 diseases that are of interest to public health that may have an animal component. Furthermore, new zoonoses are being identified on a regular basis. This may in part be the result of greater human intrusion into previously untouched ecosystems and due to the greater ease by which people and animals travel changing the increasing our risk of acquiring new diseases. Additionally, there is growing evidence in virology that some viruses may recombine with animal viruses resulting in greater diversity of disease.

The animal diseases of greatest concern among bioterrorism experts include Brucellosis, Tularemia, Plague, and Anthrax. Each of these diseases are described in their own disease specific appendix as part of the Infectious Disease Control/Bioterrorism Manual.

Other animal diseases that have been identified as important for both economic and public health importance are listed below. They are organized first into class A and class B diseases based on their potential for spreading rapidly thereby causing more widespread damage.

Class A Diseases

- Foot and mouth disease
- Swine vesicular disease
- Peste des petits ruminants
- Lumpy skin disease
- Bluetongue
- African horse sickness
- Classical swine fever
- Newcastle disease
- Vesicular stomatitis
- Rinderpest
- Contagious bovine pleuropneumonia
- Rift Valley fever
- Sheep pox and goat pox
- African swine fever
- Highly pathogenic avian influenza

Class B Diseases

Multiple species diseases

- Anthrax
- Aujeszky's disease
- Echinococcosis/hydatidosis
- Heartwater
- Leptospirosis
- New world screwworm (*Cochliomyia hominivorax*)
- Old world screwworm (*Chrysomya bezziana*)
- Paratuberculosis
- Q fever
- Rabies
- Trichinellosis

Sheep and goat diseases

- Caprine and ovine brucellosis (excluding *B. ovis*)
- Caprine arthritis/encephalitis
- Contagious agalactia
- Contagious caprine pleuropneumonia
- Enzootic abortion of ewes (ovine chlamydiosis)
- Maedi-visna
- Nairobi sheep disease
- Ovine epididymitis (*Brucella ovis*)
- Ovine pulmonary adenomatosis
- Salmonellosis (*S. abortusovis*)
- Scrapie

Swine diseases

- Atrophic rhinitis of swine
- Enterovirus encephalomyelitis
- Porcine brucellosis
- Porcine cysticercosis
- Porcine reproductive and respiratory syndrome
- Transmissible gastroenteritis

Lagomorph diseases

- Myxomatosis
- Rabbit hemorrhagic disease

Cattle diseases

- Bovine anaplasmosis
- Bovine babesiosis
- Bovine brucellosis
- Bovine cysticercosis
- Bovine genital campylobacteriosis
- Bovine spongiform encephalopathy
- Bovine tuberculosis
- Dermatophilosis
- Enzootic bovine leukosis
- Haemorrhagic septicaemia
- Infectious bovine rhinotracheitis/infectious pustular vulvovaginitis
- Malignant catarrhal fever
- Theileriosis
- Trichomonosis
- Trypanosomosis (tsetse-transmitted)

Equine diseases

- Contagious equine metritis
- Dourine
- Epizootic lymphangitis
- Equine encephalomyelitis (Eastern and Western)
- Equine infectious anaemia
- Equine influenza
- Equine piroplasmiasis
- Equine rhinopneumonitis
- Equine viral arteritis
- Glanders
- Horse mange
- Horse pox
- Japanese encephalitis
- Surra (*Trypanosoma evansi*)
- Venezuelan equine encephalomyelitis

Avian diseases

- Avian chlamydiosis
- Avian infectious bronchitis
- Avian infectious laryngotracheitis
- Avian mycoplasmosis (*M. gallisepticum*)
- Avian tuberculosis
- Duck virus enteritis
- Duck virus hepatitis
- Fowl cholera
- Fowl pox
- Fowl typhoid
- Infectious bursal disease (Gumboro disease)
- Marek's disease
- Pullorum disease

Bee diseases

- Acariosis of bees
- American foulbrood

- Tularemia

Fish diseases

- Epizootic haematopoietic necrosis
- Infectious haematopoietic necrosis
- *Oncorhynchus masou* virus disease
- Spring viraemia of carp
- Viral haemorrhagic septicaemia

Crustacean diseases

- Taura syndrome
- White spot disease
- Yellowhead disease

- European foulbrood
- Nosemosis of bees
- Varroosis

Mollusc diseases

- Bonamiosis (*Bonamia exitiosus*, *B. ostreae*, *Mikrocytos roughleyi*)
- Marteiliosis (*Marteilia refringens*, *M. sydneyi*)
- Mikrocytosis (*Mikrocytos mackini*)
- MSX disease (*Haplosporidium nelsoni*)
- Perkinsosis (*Perkinsus marinus*, *P. olseni/atlanticus*)

Other List B diseases

- Leishmaniosis

Mode of Transmission

Primary modes of disease transmission from animals to humans include direct contact, scratches, bites, inhalation, contact with urine or feces, and ingestion of contaminated food, water, or feces as well as contact with arthropod intermediate hosts.

Clinical Description

No single clinical description is sufficient to describe these diseases. In the event of an outbreak of one of the aforementioned diseases a focus would be placed on unexplained illnesses. Additionally, the combined efforts of the veterinary community, the medical community, and the public health community would be required to determine the precise description of the clinical presentation. Once developed this information would immediately be shared with healthcare providers via the Health Alert Network and other media channels.

Laboratory Tests

- Much like the clinical description of these diseases different laboratory tests might be used to identify the etiologic agent responsible for the diseases. Many of these laboratory tests would be conducted by the

Surveillance

Surveillance for various animal diseases occurs in multiple organizations. In terms of the diseases that are likely to pose a risk to agriculture the Department of Agriculture and Forestry take responsibility for surveillance. Those diseases that are of public health importance are within the domain of the Infectious Disease Epidemiology Section. Formal MOUs exist between these two agencies and provide for significant cross jurisdictional involvement.

The web-based system for reporting veterinary disease events that might be of public health, agricultural, or bioterrorism surveillance is presently available on the web and several (10-15) veterinary clinics throughout the state, including the clinics of the LSU School of Veterinary Medicine, have agreed to test the system. Disease reporting, real time survey functions, advisory posting, and laboratory result postings have all been built into this system. This system is jointly administered by the Infectious Disease

Epidemiology Section (IDES) of the Office of Public Health and the State Veterinarian, an official representative of the Louisiana Department of Agriculture and Forestry (LDAF).

Case Definition

Case definitions for animal diseases of interest to public health are as varied as the disease presentations. None the less the commonality in case definitions will include an animal component. In some instances peoples exposure to an animals may be prominent in a case definition, rats for instance in relation to plague. Alternatively, some case definitions may be directed at ill animals exposed to humans during a specified time period, situations involving hand foot and mouth disease are an example. Finally, when diseases are common to humans and animals multiple species may be identified.

Intervention

Interventions to reducing the spread of zoonotic infections and infections that are common to both animals and man will be determined by the mode of transmission, the reservoir, and any unique characteristics of the agent involved. The determination of an appropriate intervention will be made collaboratively by the State Epidemiologist, the State Veterinarian, the State Medical Officer, and the State Public Health Veterinarian. Upon determination of an appropriate intervention the information will immediately be disseminated to the public, health care institutions, and any other appropriate group.

Hospital precaution and isolation: Standard precautions are always advised when dealing with infectious diseases. As a situation warrants, advice about other precautions will be disseminated.

Control Measures

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
- Identify point of contact at the Louisiana Veterinary Medical Diagnostic Laboratory.

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
(225)342-3417 (regular business hours)
(800)990-5366 pin 6710 (pager for evenings, weekends, holidays)
- State Epidemiologist (504)458-5428 Mobile
- Public Health Lab (504)568-5371
- Public Health Lab Pager (800)538-5388
- OPH Regional Offices (Internal Notification Network)
- Louisiana EOC (225)-925-7500
- Louisiana State Police (800)469-4828 (Crisis Management Center)
- Sanitarian Services (225)736-5553
- Louisiana Department of Agriculture- Office of Animal Health
State Veterinarian Office: (225)935-2168 Mobile: (225)933-8121

Coordination

- Epidemiology personnel identified for investigation
- Office of Animal Health Services personnel identified for investigations
- 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

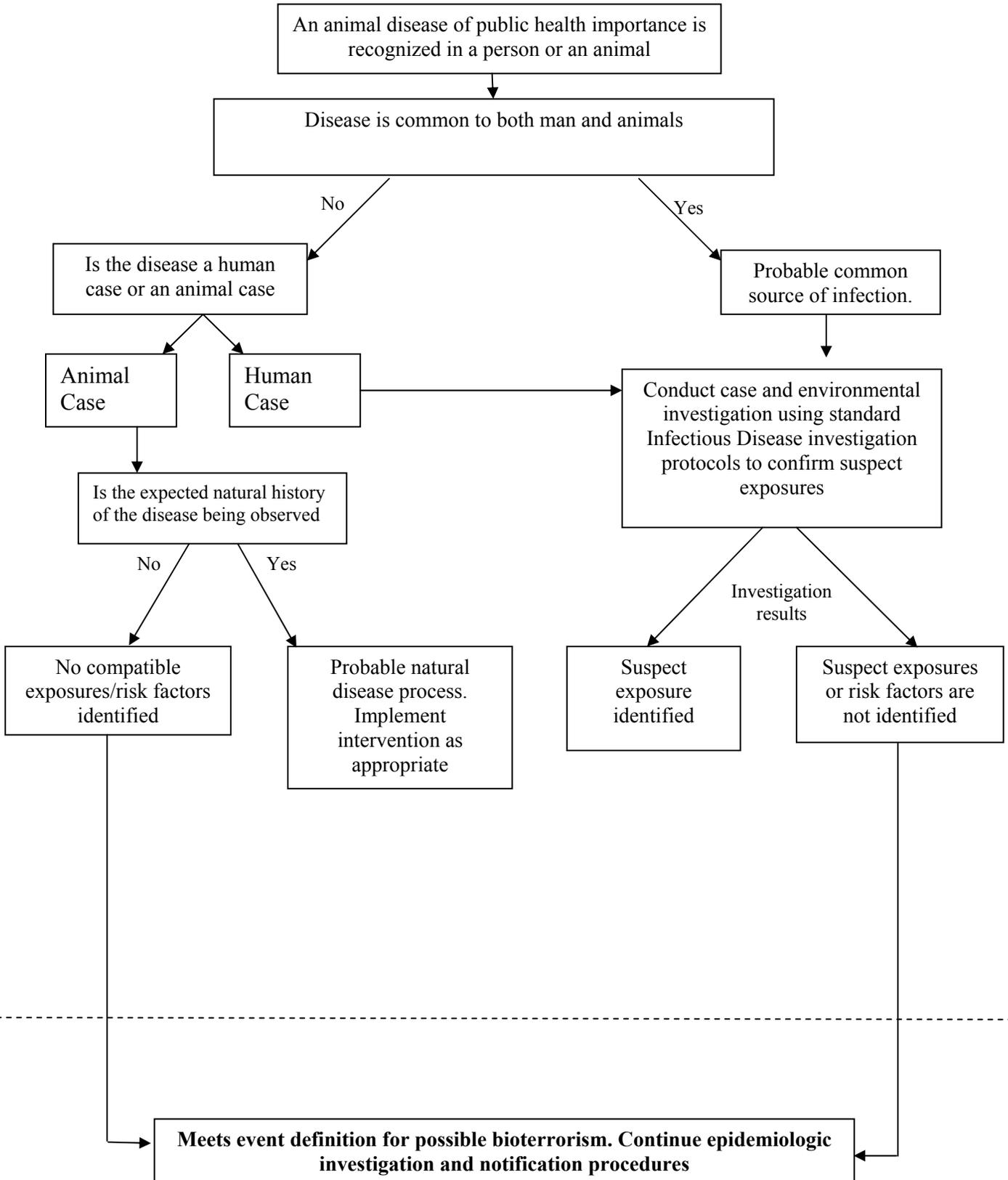
Laboratory

- 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
- ≤

Zoonosis Investigation Algorithm



Zoonotic

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 PREPERATION: Yes No Unknown

SIGNS AND SYMPTOMS

- Cough Yes No Unknown
- If yes, sputm production Yes No Unknown
- If yes, any blood Yes No Unknown
- Chest Pain Yes No Unknown
- Shortness of breath Yes No Unknown
- Stridor or wheezing Yes No Unknown
- Cyanosis Yes No Unknown
- Conjunctivitis Yes No Unknown
- Tender or enlarged lymph nodes Yes No Unknown
- Fever Yes No Unknown

If yes, Maximum temperature _____ oF
Antipyretics taken Yes No Unknown

- Headache Yes No Unknown
- Stiff neck Yes No Unknown
- Muscle aches Yes No Unknown
- Fatigue Yes No Unknown
- Joint pains Yes No Unknown
- Altered mental status Yes No Unknown
- Unconscious/unresponsive Yes No Unknown
- Sore throat Yes No Unknown
- Nausea Yes No Unknown
- Diarrhea Yes No Unknown
- Vomiting Yes No Unknown
- Rash Yes No Unknown

If yes, describe: _____

Other Symptom or abnormality: _____

PAST MEDICAL HISTORY:

Do you have a regular physician? Yes No Unknown
If yes, Name: _____ Phone Number: (____) _____ - _____

Are you allergic to any medications? Yes No Unknown
If yes, list: _____

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: _____

Hypertension Yes No Unknown
Neurologic Condition Yes No Unknown
Diabetes Yes No Unknown
Cardiac disease Yes No Unknown
Seizures Yes No Unknown

Other Pulmonary Disease Yes No Unknown

If yes, describe: _____

Malignancy Yes No Unknown

If yes, specify type: _____

Currently on treatment: Yes No Unknown

HIV infection Yes No Unknown

Currently pregnant Yes No Unknown

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

Yes No Unknown

If yes, specify disease or drug therapy: _____

Other underlying condition(s):

Prescription medications:

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: Normal Abnormal Not Noted

If abnormal, check all that apply:

- Edema Chest wall edema Cyanosis Erythema

- Petechiae Sloughing/necrosis Purpura Rash

If rash present, describe type and location on body : _____

Other abnormal physical findings (describe): _____

DIAGNOSTIC STUDIES:

Test	Results of tests done on Admission (___/___/___)	Abnormal test result at any time (specify date mm/dd/yyyy)
Hemoglobin (Hb)		(___/___/___)
Hematocrit (HCT)		(___/___/___)
Platelet (plt)		(___/___/___)
Total white blood cell (WBC)		(___/___/___)
WBC differential:		(___/___/___)
% granulocytes (PMNs)		(___/___/___)
% bands		(___/___/___)
% lymphocytes		(___/___/___)
Renal function: BUN/Cr		(___/___/___)
Liver enzymes: ALT/AST		(___/___/___)
Blood cultures:	<input type="checkbox"/> positive (specify _____) <input type="checkbox"/> negative <input type="checkbox"/> pending <input type="checkbox"/> not done (___/___/___)	<input type="checkbox"/> positive (specify _____) <input type="checkbox"/> negative <input type="checkbox"/> pending <input type="checkbox"/> not done (___/___/___)

Test	Results of tests done on Admission (___/___/___)	Abnormal test result at any time (specify date mm/dd/yy)
Respiratory secretions:	<input type="checkbox"/> expectorated sputum <input type="checkbox"/> induced sputum <input type="checkbox"/> bronchial alveolar lavage (BAL)	<input type="checkbox"/> expectorated sputum <input type="checkbox"/> induced sputum <input type="checkbox"/> bronchial alveolar lavage (BAL)
Specimen Type:	<input type="checkbox"/> tracheal aspirate	<input type="checkbox"/> tracheal aspirate (___/___/___)
Respiratory secretions:	<input type="checkbox"/> PMNs <input type="checkbox"/> epithelial cells	<input type="checkbox"/> PMNs <input type="checkbox"/> epithelial cells
Gram Stain (Check all that apply)	<input type="checkbox"/> gram positive cocci <input type="checkbox"/> gram negative cocci <input type="checkbox"/> gram positive rods <input type="checkbox"/> gram negative coccobacilli <input type="checkbox"/> gram negative rods <input type="checkbox"/> gram negative rods with bipolar staining (safety pins) <input type="checkbox"/> other _____	<input type="checkbox"/> gram positive cocci <input type="checkbox"/> gram negative cocci <input type="checkbox"/> gram positive rods <input type="checkbox"/> gram negative coccobacilli <input type="checkbox"/> gram negative rods <input type="checkbox"/> gram negative rods with bipolar staining (safety pins) <input type="checkbox"/> other _____ (___/___/___)
Respiratory secretions analysis: Bacterial culture	<input type="checkbox"/> positive (specify _____) <input type="checkbox"/> negative <input type="checkbox"/> pending <input type="checkbox"/> not done	<input type="checkbox"/> positive (specify _____) <input type="checkbox"/> negative <input type="checkbox"/> pending <input type="checkbox"/> not done (___/___/___)
Respiratory secretions analysis: Viral culture	<input type="checkbox"/> positive (specify _____) <input type="checkbox"/> negative <input type="checkbox"/> pending <input type="checkbox"/> not done	<input type="checkbox"/> positive (specify _____) <input type="checkbox"/> negative <input type="checkbox"/> pending <input type="checkbox"/> not done (___/___/___)
Respiratory secretions analysis: Influenza antigen	<input type="checkbox"/> positive <input type="checkbox"/> negative <input type="checkbox"/> pending <input type="checkbox"/> not done	<input type="checkbox"/> positive <input type="checkbox"/> negative <input type="checkbox"/> pending <input type="checkbox"/> not done (___/___/___)
Respiratory secretions: Other test (e.g., DFA, PCR, etc)		(___/___/___)
Chest radiograph	<input type="checkbox"/> normal <input type="checkbox"/> unilateral, lobar/consolidation <input type="checkbox"/> bilateral, lobar/consolidation <input type="checkbox"/> interstitial infiltrates <input type="checkbox"/> widened mediastinum <input type="checkbox"/> pleural effusion <input type="checkbox"/> other _____	<input type="checkbox"/> normal <input type="checkbox"/> unilateral, lobar/consolidation <input type="checkbox"/> bilateral, lobar/consolidation <input type="checkbox"/> interstitial infiltrates <input type="checkbox"/> widened mediastinum <input type="checkbox"/> pleural effusion <input type="checkbox"/> other _____ (___/___/___)
Legionella urine antigen	<input type="checkbox"/> positive <input type="checkbox"/> negative <input type="checkbox"/> pending <input type="checkbox"/> not done	<input type="checkbox"/> positive <input type="checkbox"/> negative <input type="checkbox"/> pending <input type="checkbox"/> not done (___/___/___)

Test	Results of tests done on Admission (___/___/___)	Abnormal test result at any time (specify date mm/dd/yy)
Other pertinent study results (e.g., chest CT, pleural fluid)		(___/___/___)
Other pertinent study results (e.g., toxin assays)		(___/___/___)

PULMONOLOGY CONSULTED: Yes No Unknown

Date of Exam: ___/___/___

Name of neurologist: Last Name _____ First Name _____

Telephone or beeper number () _____ - _____

INFECTIOUS DISEASE CONSULT: Yes No Unknown

Date of Exam: ___/___/___

Name of ID physician: Last Name _____ First Name _____

Telephone or beeper number () _____ - _____

HOSPITAL COURSE:

A. antibiotics: Yes No Unknown

If yes, check all that apply:

- Amoxicillin
- Ampicillin
- Ampicillin and sulbactam (Unasyn)
- Augmentin (amoxicillin and clavulanate)
- Azithromycin (Zithromax)
- Cefazolin (Ancef, Kefzol)
- Cefepime (Maxipime)
- Cefixime (Suprax)
- Cefotetan (Cefotan)
- Cefotaxime (Claforan)
- Cefoxitin (Mefoxin)
- Ceftazidime (Fortaz, Tazicef, Tazidime)
- Ceftizoxime (Cefizox)
- Ceftriaxone (Rocephin)
- Cefuroxime (Ceftin)
- Cefalexin (Keflex, Keftab)
- Ciprofloxacin (Cipro)
- Clarithromycin (Biaxin)
- Doxycycline (Doryx, Vibramycin)
- Erythromycin (E-Mycin, Ery-Tab, Eryc)
- Gentamicin (Garamycin)
- Levofloxacin (Levaquin)
- Nafcillin
- Ofloxacin (Floxin)
- Streptomycin
- Ticarcillin and clavulanate (timentin)
- Trimethaprim-sulfamethoxazole (Bactrim, Cotrim, TMP/SMX)
- Vancomycin (Vancocin)
- other _____

B. antivirals : Yes No Unknown

If yes, check all that apply:

- Acyclovir (Zovirax)
- Amantadine (Symmetrel)
- Oseltamivir (Tamiflu)
- Rimantidine (Flumadine)
- Zanamivir (Relenza)
- other _____

C. 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

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)

Name of ill Person	AGE	Sex	Address	Phone	Date of Onset	Relation To you	Did they seek Medical care? Where	Diagnosis

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)

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

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?*

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

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

- Grocery store Yes No Unknown
- Race/competition Yes No Unknown
- Public gathering? Yes No Unknown
- Private gathering? Yes No Unknown

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
- Ponds
- 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
- Vaporizers
- Misters
- Hot tub
- Creeks and/or ponds
- Other (please explain) _____
- Respiratory devices
- Humidifiers
- Whirlpool spas
- Spa baths
- Decorative fountains

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. 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

48. 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? _____

49. 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: _____

50. 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: _____

