



# SOUTHERN ARIZONA HOUSEHOLD DENGUE INVESTIGATION

## HOUSEHOLD ENROLLMENT FORM

Date of visit (MM/DD /YYYY): \_\_\_\_ / \_\_\_\_ / \_\_\_\_  
 Team number: \_\_\_\_

*Complete one form for each household.*

1. Cluster ID# - Household ID# : \_\_\_\_ - \_\_\_\_
2. Phone number (Número de Teléfono): \_\_\_\_\_
3. Household Latitude: 32° \_\_\_\_ 'N Longitude: 114° \_\_\_\_ 'W

List all individuals who slept in the house last night and sleep in the house regularly in the last 3 months, starting with the head of household.

*If there are not enough spaces, please write the additional information below this section.*

		Individual ID #	
A.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood
B.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood
C.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood
D.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood
E.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood
F.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood
G.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood
H.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood
I.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood
J.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood
K.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood
L.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood
M.	_____ Age : ____ yrs <input type="checkbox"/> M <input type="checkbox"/> F	____-____-____	<input type="checkbox"/> Blood

\*Individual ID refers to the [cluster ID # - household ID # - individual id #] (e.g. 008 – 01 – 05)

4. Describe structure of the home (*Describe la estructura de la casa*):  Mobile home or trailer/*Casa móvil*  RV  Single Family Dwelling/*domicilio de una sola familia*  Duplex or Four-plex  Apartment/*Apartamento*  Multi-story Condominium/*Condominio de varios niveles*  Temporary shelter/*Refugio temporal*  Other: \_\_\_\_\_

5. What is the source of household water supply? *De donde obtiene el agua de su casa?*

Piped/Public -*público*  Well/*Pozo*  Rain water/*agua de lluvia*

Water tank/tanque de agua (Diamond Brooks)  Unknown/*no se*

Other: \_\_\_\_\_

6. In the last 3 months do you store water in open containers on your property? *En los últimos 3 meses tiene usted agua almacenada en envases/depositos abiertos dentro de su propiedad?*  Yes  No  Don't know

7. Have you had any visitors that have traveled from out of the country, for example Mexico, in the last three months? *En los últimos 3 meses ha tenido usted visitantes de otro país, por ejemplo de México?*  Yes  No  Unknown

If YES... 7a. Where did they travel from? *De que país vinieron?*

Mexico  Other country: \_\_\_\_\_

8. Has anyone in your household including visitors had a fever while residing in the house in the last three months? *Alguna persona en su casa ha tenido fiebre en los últimos tres meses?*

Yes  No  Unknown

9. Does your home have window screens? *Tiene su casa mosquiteros en las ventanas ?*

On all windows  On some windows  On no windows  Unknown

10. In the last 3 months do you leave your windows open? *En los últimos 3 meses usted deja sus ventanas abiertas?* *Note: If windows only rarely or sometimes left open, please check "no."*

Yes, At night and during day  Yes, at night  Yes, during the day  No  Unknown

10b. If yes, how often do you leave your windows open? *Si es así, con que frecuencia deja sus ventanas abiertas?*

*Note: If different frequency at different time, pick highest frequency. I.e., if day is always and night rarely, check always.*

Rarely  Sometimes  Usually  Always  Unknown

**11. In the last 3 months what methods do you use to cool your home? *En los últimos 3 meses que metodos usa para enfriar su casa?***

Swamp cooler(cooler)  AC (window unit or central air)  Nothing  Unknown

**12. In the past 3 months have you seen mosquitos in your home? *En los últimos 3 meses ha visto mosquitos dentro de su casa?***  Yes  No  Unknown

**13. In the last 3 months which of the following methods have you used to control mosquitos in or around your home? *En los últimos 3 meses cual de los siguientes metodos ha usado para controlar mosquitos dentro o alrededor su casa?***

Sprayed own house  Professional sprayed house  Fogging by Health Department

Mosquito coils  Citronella  None  Unknown

**13. Do you have a septic tank? *Tiene fosa septica?***

Yes  No  Unknown

**NOTES:**

# SOUTHERN ARIZONA HOUSEHOLD DENGUE INVESTIGATION

## IMMATURE MOSQUITO SURVEY FORM

Complete one form for each household.

Date of visit (MM/DD/YYYY): \_\_\_\_ / \_\_\_\_ / 2014  
 Team number: \_\_\_\_\_

Case Patient ID Number ID #: \_\_\_\_\_ - \_\_\_\_\_

Container ID	Type of Container	Number of containers (indoors)		
		Dry	Wet – water present	
			Larvae/pupae absent	Larvae/pupae present
1	Bucket			
2	Tire			
3	Water Drum			
4	Plastic container			
5	Aluminum can			
6	Styrofoam			
7	Jar			
8	Flower vase			
9	Septic tank			
10	Animal watering pan			
11	Potted plant			
12	Bird Bath/Fountains			
13	Other artificial container: _____			
14	Tree: _____			
15	Toys			
16	Pools			
17	Sewers			
18	Bamboo			
19	Other – natural container (specify)			
20	Tarps			

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	Dates of Travel <i>Fechas del viaje</i> (e.g. Dec 2012–Jan 2013)	Duration of travel <i>Duración del viaje</i> (weeks)
Country 1		
Country 2		
Country 3		
Country 4		
Country 5		

6. Have you had a fever in the last three months? *Ha tenido usted fiebre en los últimos tres meses?*  Yes  No  Multiple  Don't know

*Note: If respondent has had multiple fevers in the last 3 months, repeat all of question 6 using another copy of the survey for each fever episode that is separated by at least 1 week.*

6a. First day of fever. *Primer día con fiebre* (MM/DD/YYYY) \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

6b. Did you seek medical attention (e.g. doctor, pharmacist, healer, etc.)? *Buscó usted atención médica (doctor, farmacéutico, curandero, etc.)?*  Yes  No  Unknown

6b-1. If yes, what is the name of the health care facility where you sought care? *Si busco ayuda médica, cual es el nombre del lugar?*

Yuma Regional Medical Center  Sunset Community Health Center

Private physician  Urgent care  Mexico  Unknown

Other \_\_\_\_\_

6b-2. If yes, were you diagnosed with Dengue? *Si es así, le han diagnosticado con Dengue?*

Yes  No

6b-3. Were you hospitalized for this illness? *Estuvo usted hospitalizado por esta enfermedad?*  Yes  No  Unknown

6b-4a. Duration of hospitalization. *Duración de la hospitalización*  
\_\_\_\_\_ days

6b-4b. Hospital Name. *Nombre del hospital*  
\_\_\_\_\_

6c. During your illness, did you have any of the following:

	Yes	No	Unknown	Comments
Headache / <i>Dolor de la cabeza</i>				
Body/muscle pain / <i>Dolor del cuerpo o los musculos</i>				
Eye pain/ <i>Dolor de los ojos</i>				
Rash / <i>Erupcion de la piel</i>				
Weakness / <i>Cansancio</i>				
Lack of Appetite / <i>Falta de apetito</i>				
Nausea/vomiting / <i>Nausea/vomito</i>				
Dizziness / <i>Mareos</i>				
Severe persistent abdominal pain / <i>Dolor abdominal severo y persistente</i>				
Persistent vomiting ( $\geq 3$ times in 1 day) / <i>Vómito persistente</i>				
Bruising / <i>Moretones</i>				
Nose Bleeding / <i>Sangrado nasal</i>				
Bleeding from gums / <i>Sangrado en las encías</i>				
Blood in vomitus / <i>Vomito con sangre</i>				
Blood in urine / <i>Sangre en la orina</i>				
Blood in stool / <i>Sangre en el excremento</i>				
Black, tarry stools / <i>Excreta negra</i>				
Heavy vaginal bleeding / <i>Sangrado vaginal excesivo</i>				

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7. How do you pay for medical care? *Como paga por su cuidado medico?*

- Travel to Mexico and pay out of pocket
  Travel to Mexico and use employer insurance
  AHCCCS  
 VA/Military/TriCare
  Employer/private insurance
  Don't access medical care
  Other \_\_\_\_\_

Comments:



## Dengue Household Investigation in Arizona — Consent Form

The Arizona Department of Health Services and the U.S. Centers for Disease Control and Prevention (CDC) are investigating an illness called “dengue” that is spread by mosquitoes. There have been several cases of dengue in your community. We are trying to find out if the virus that causes dengue has been circulating locally. We are asking volunteer adults and children to answer a short survey and to have their blood drawn by a doctor or nurse and tested to see if they have had dengue. This investigation will help us learn what steps we need to take to prevent more dengue cases in your community.

If you agree, we will draw a small amount of blood – about 2 teaspoons – through a needle in your arm. We will test your blood to see if you have been exposed to dengue, and to see if you currently have dengue virus in your blood. We will tell you your test results in about a month. The blood draw may hurt a little. Some people may have bruising or bleeding at the needle site; some people feel dizzy when they have their blood drawn.

We will ask you to answer a brief survey. The survey will include questions about your health and recent activities, and about your household.

We will give you information about dengue, including tips for how to avoid dengue. Tips include avoiding mosquito bites by using mosquito repellent and wearing long sleeved shirts and pants, and emptying or covering water containers where mosquitoes breed. Also, if you have an illness that you think may be dengue, you should seek medical care immediately.

Taking part in this survey is voluntary.

If you choose to take part, you may stop at any time. We will keep your information private, to the extent allowed by law. There is no cost to you for taking part in this survey.

We are happy to answer any questions or concerns about the investigation. You may also contact the Yuma County Department of Health. Their phone number is 928-317-4550. We will give you a copy of this form to keep for your records.

Your blood sample will be sent to the CDC for testing. If any blood is left over after the tests are done, the CDC would like to store the remaining sample, if you agree. Stored samples may be used for future testing related to dengue or other similar illnesses, or for public health investigations that are relevant to your community.

**Yes**    **No**   **I agree to allow my blood specimen to be stored at the Centers for Disease Control and Prevention Dengue Branch.**

**Your signature:** \_\_\_\_\_ **Date** \_\_\_\_\_

## **Investigación de dengue en hogares de Arizona- Forma de consentimiento**

El Departamento de Servicios de Salud de Arizona y los Centros de Control y Prevención de Enfermedades (CDC) están investigando una enfermedad llamada dengue, que se transmite por mosquitos. Han habido varios casos de dengue en su comunidad. Estamos intentando investigar si el virus que causa dengue ha estado circulando localmente. Estamos pidiendo a voluntarios (adultos y niños) responder una breve encuesta y darnos una muestra de sangre tomada por un médico o enfermero/a. Es una prueba para ver si han tenido dengue. Esta investigación nos ayudará a decidir que acciones son necesarias para prevenir más casos de dengue en su comunidad.

Si está de acuerdo, tomaremos una pequeña muestra de sangre – unas dos cucharillas- de su brazo con una jeringa. Vamos a examinar la sangre para ver si usted ha sido expuesto/a a dengue, y para ver si usted en este momento tiene el virus del dengue en su sangre. Le comunicaremos los resultados de la prueba en un mes aproximadamente. El sacar de la sangre puede dolerle un poco. A algunas personas les puede causar moretones o salir un poco de sangre en el lugar del pinchazo; algunas personas pueden marearse cuando se les saque sangre.

Le pediremos que responda a una encuesta breve. La encuesta incluye preguntas sobre su salud, y actividades recientes y sobre su hogar. Le entregaremos información sobre dengue incluyendo sugerencias de como evitar la enfermedad. Las sugerencias incluyen evitar la picadura del mosquito usando repelente para mosquitos, llevar camisas de manga larga y pantalones, y vaciar o cubrir contenedores de agua donde los mosquitos se reproducen. También, si tiene una enfermedad que crea pueda ser dengue, le recomendamos buscar atención medica inmediatamente.

La participación en esta encuesta es voluntaria. Si decide participar, usted puede dejar de contestar en cualquier momento. Toda la información la mantendremos privada hasta el punto permitido por la ley. Participar en esta encuesta no tiene ningún costo para usted.

Estamos a su disposición para responder a cualquier pregunta o preocupación que tenga sobre esta investigación. También puede contactar al Departamento de Servicios de Salud del condado de Yuma. Su numero de teléfono es 928-317-4550. Le entregaremos una copia de este documento para que usted la guarde.

Su muestra de sangre será enviada al CDC para las pruebas. La muestra puede no usarse completamente y de ser así, el CDC quisiera almacenarla, si usted esta de acuerdo. Las muestras de sangre almacenadas podrían usarse para otras pruebas en el futuro relacionados con dengue u otras enfermedades similares, o para investigaciones de salud publica importante para su comunidad. No se harán pruebas de las muestras para condiciones genéticas o para evidencia de infección con VIH.

Si    No   **Estoy de acuerdo en permitir que mi muestra de sangre sea almacenada en la Subdivisión de Dengue de los Centros de Prevención y Control de Enfermedades (CDC).**

Firma: \_\_\_\_\_

Fecha \_\_\_\_\_

## Dengue Household Investigation in Arizona —Children Assent Form

You may have heard of the dengue virus. We are doing an investigation to find out if people living in this neighborhood have had this infection, which comes from mosquito bites. We would like you to be in this investigation. You don't have to be in the investigation unless you want to. It is up to you.

### What will happen?

If you let us, we will take a small amount of blood from you by putting a needle in your arm for a few seconds. First we will rub your skin with alcohol to clean it.

### Will it hurt?

The needle stick in your skin may hurt a little for a few seconds.

### Why are we doing this investigation?

This blood test is being done for this investigation. It is not necessary for you. We are not doing it because you are sick. It will tell us if you had dengue virus in your blood. We will tell you and your parents what we find out.

### You can say, 'No'

You can say, 'No' and we won't do the blood test. You will not be in trouble if you say, 'No.' Would you like to participate?

---

### Parental permission

If you agree allow your child to participate in this investigation, please check on of the boxes below regarding storage of your blood specimen, and sign or make your mark below:

Yes    No   I agree to allow my blood specimen to be stored at the Centers for Disease Control and Prevention Dengue Branch.

Your signature: \_\_\_\_\_

Date \_\_\_\_\_

## **Investigación de dengue en hogares de Arizona-**

### **Forma de consentimiento para niños**

Puede que hayas escuchado sobre el virus del dengue. Estamos haciendo una investigación para averiguar si personas que viven en este barrio han tenido esta infección, causada por la picadura de mosquitos. Quisiéramos que participaras en esta investigación. No estás obligado a participar si no quieres. Es tu decisión.

#### **¿Qué va a pasar?**

Si nos lo permite, te vamos a sacar una muestra de sangre pinchándote con una aguja en tu brazo por unos segundos. Primero, vamos a frotarte la piel con alcohol para limpiarla.

#### **¿Me va a doler?**

El pinchazo de la aguja en tu piel puede dolerte un poco por unos segundos.

#### **¿Por qué estamos haciendo esta investigación?**

No la estamos haciendo porque estés enfermo, estamos haciendo esta prueba solo para esta investigación, no porque la necesites. La prueba nos dirá si tú has tenido el virus de dengue. Te diremos los resultados a ti y a tus padres.

#### **Tu puedes decir 'NO'**

Tu puedes decir 'no' y no te va a causar ningún problema. Quisieras participar?

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#### **Permiso de tus padres**

Si está de acuerdo en permitir que su hijo participe en esta investigación. Por favor, firme y marque una de las opciones.

Si  No Estoy de acuerdo en permitir que la muestra de sangre de mi hijo se almacene en la Subdivisión de Dengue de los Centros de Control y Prevención de Enfermedades.

Firma: \_\_\_\_\_ Fecha: \_\_\_\_\_

## Infection Prevention and Control Questions for Investigation of Mucormycosis Outbreak in BMT Unit Undergoing Construction

### EXISTING PRECAUTIONS

- What special precautions were taken for the construction period?
  - all patients in unit 41 and unit 42
  - Bone marrow transplant patients
  - neutropenic patients?
  - immunocompromised patients?
- What barriers or protection from rest of hospital exist (i.e. anteroom or waiting area separating BMT unit)?
- What precautions were taken when patients walk in the hallways? What precautions were taken when patients left the ward?

### POTENTIAL EXPOSURES

- Have you noticed any water damage, leaks, discoloration, moisture/condensation?
- What equipment or supplies are used in the nose or mouths of patients? Where and how are they stored? (i.e. nasal sprays, nasal cannula, masks, nebulizer machines, medicine/water for breathing tx)
- Are any oral procedures done on the ward?
- Where are linens laundered and stored? How are they delivered to the wards?
- How are the units cleaned?
- How are respiratory viral panels obtained?
- How are patients transported off the units?

### AIR SUPPLY

- What is the difference in air quality of rooms on the ward?
- What regular maintenance or upgraded precautions were done on the air supply (HEPA filters/air units)?
- Was ward duct system/plumbing exposed to construction area? Was HVAC system in construction isolated?
- Was vacuuming or air pressure systems used to protect air quality?
- Any air leaks from the outdoors?
- Was air supply shared between unit 41 and unit 42?
- What are the air pressure differentials on unit 41 and unit 42?
- How was air exhausted out of the construction area?

### CONSTRUCTION

- What other special precautions taken during construction?
- Was construction site completely isolated from ward?
- What kind of barriers were used to isolate construction area?
- What holes existed in completely isolating construction?
- Did any construction personnel have to access ward? If so, what precautions were used?
- How long after construction were barriers removed? How were barriers and debris removed?
- What cleaning was done after construction?
- What air testing or monitoring was done during construction and before barriers were removed?
- What was the flow of patient and construction traffic during the construction period?
- How was negative pressure attained? How was it monitored?
- How was demolition waste removed?

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[Type text]

[Type text]

[Type text]

# Data Abstraction Form (long-version): Matched-Case Control Investigation of Mucormycosis Disease among Bone Marrow Transplant Patients

Patient initials: \_\_\_\_\_

Patient Investigation #: \_\_\_\_\_

Medical Record #: \_\_\_\_\_

Date of Birth:   /   /

Phone #:    -    -

Reviewers Initials: \_\_\_\_\_

Review Date: \_\_\_\_\_

## **Confirmed Case of Nosocomial Rhinocerebral or Pulmonary Mucormycosis Infection**

Rhinocerebral or pulmonary mucormycosis in a patient with a hematologic malignancy diagnosed by histopathology or culture between January 1, 2014 – present with an admission to Hospital A for at least 5 days within the 30 days prior to date of clinical suspicion for mucormycosis defined as initiation of antifungal medications for treatment of suspected mucormycosis

Clinical suspicion for mucormycosis is defined as initiation of antifungal medications for treatment of suspected mucormycosis

## **Definition of histopathological confirmation**

Histopathological examination showing hyphae consistent with a mucormycete from needle aspiration or biopsy specimen

## **Definition of culture confirmation**

Positive culture result for a sample obtained by sterile procedure from normally sterile

**Appendix 1: Case Abstraction Form****Section I: Demographic and Admission Data**

1. Date of Birth: \_\_\_\_/\_\_\_\_/\_\_\_\_
2. Gender: \_\_\_\_\_
3. Race: (select all that apply)  white/Caucasian  black/African-American  
 Asian, American  Indian/Alaskan  Hawaiian/Pacific Islander  Not known
4. Ethnicity:  Hispanic  non-Hispanic  Not known
5. Occupation: \_\_\_\_\_
6. City of Residence: \_\_\_\_\_ State of Residence: \_\_\_\_\_
7. Date of clinical suspicion for mucormycosis (mm/dd/yy): \_\_\_\_/\_\_\_\_/\_\_\_\_

**Section II: Underlying Medical Conditions and Risk Factors**

8. Underlying Conditions (active within 30 days prior to or at the time of clinical suspicion for mucormycosis)
9. Diabetes?  Yes  No
  - a. If yes, specify last Hemoglobin A1C level within 30 days prior to mucormycosis diagnosis \_\_\_\_\_ mmol/mol or  Unknown  
Date of this HgA1C: \_\_/\_\_/\_\_\_\_
  - b. If yes, did the patient have Diabetic Ketoacidosis (DKA) during stay on unit?  Yes  No
10. Iron Overload?  Yes  No
  - a. If yes, specify level \_\_\_\_\_ µg/dL or  Unknown
  - b. If yes, check underlying disease  
 Hemochromatosis  
 Frequent Transfusion  
 Other \_\_\_\_\_
11. Previous fungal infections?  Yes  No
  - a. If yes, which organism?  
 *Candida* spp.  Aspergillus  Mucormycosis  Histoplasmosis  
 Unknown  Other \_\_\_\_\_
  - b. If yes, date of diagnosis (mm/dd/yy): \_\_\_\_/\_\_\_\_/\_\_\_\_ or  Unknown
12. Solid tumor malignancy?  Yes  No
  - a. If yes, specify type: \_\_\_\_\_
13. Solid organ transplant (ever)?  Yes  No
  - a. If yes, specify type (select all that apply):  Renal  Liver  Lung  Heart  
 Other (specify) \_\_\_\_\_
  - b. If yes, date of most recent transplant (mm/dd/yy): \_\_\_\_/\_\_\_\_/\_\_\_\_ or  Unknown
14. Aplastic anemia?  Yes  No

15. Myelodysplastic syndrome (e.g. RA, RARS, RAEB-1, RAEB-2, RCMD, RCMD/RS, 5q syndrome, CMML)?

Yes       No

16. Hematologic malignancy?       Yes    No

a. If yes, check all that apply:

Leukemia (if marked, indicate subtype below)

Acute myeloid leukemia (AML) (e.g. M0-M7)

Chronic myeloid leukemia (CML) (e.g. Chronic phase, Accelerated phase, Blast crisis)

Acute lymphocytic leukemia (ALL) (e.g. L1-L3)

Chronic lymphocytic leukemia (CLL) (e.g. B cell origin, T cell origin, Adult T cell leukemia, Sezary syndrome, Unclassified)

Other \_\_\_\_\_

Unknown

Hodgkin's disease (e.g. Lymphocyte predominant, Lymphocyte rich, Nodular sclerosis, Hairy cell leukemia, Mixed cellularity, Lymphocyte depleted, Large, granular lymphocyte leukemia)

Non-Hodgkin's lymphoma (e.g. B cell origin, T cell origin)

Multiple myeloma

Other \_\_\_\_\_

None

#### Transplant-related history

17. Has the patient had a hematopoietic stem cell transplant?  Yes       No

a. If yes, check the type of transplant:

Allogeneic

If allogeneic, which type:  Identical Sib     Haploidentical     MUD     Cord blood

Autologous

b. If transplant recipient, date of most recent transplant (mm/dd/yy): \_\_\_\_/\_\_\_\_/\_\_\_\_

c. If transplant recipient, last CD4 count within 30 days prior clinical suspicion for mucormycosis  
\_\_\_\_\_ cells/mm<sup>3</sup> or  Unknown

18. Has the patient had Graft-versus-host disease (GVHD):  Yes       No

a. If yes, did they have acute GVHD?  Yes       No

i. If yes, record grade (I-IV) \_\_\_\_\_ or  Unknown

ii. If yes, date of most recent acute GVHD diagnosis (mm/dd/yy): \_\_\_\_/\_\_\_\_/\_\_\_\_ or  Unknown

iii. If yes, is disease:  Treated     Untreated     Unknown

b. If yes, did they have chronic  Yes       No

i. If yes, check one:  limited     extensive     unknown



- ii. If yes, date of most recent chronic GVHD diagnosis (mm/dd/yy): \_\_\_\_/\_\_\_\_/\_\_\_\_ or  Unknown
  - iii. If yes, is disease:  Treated  Untreated  Unknown
19. Has the patient undergone chemotherapy in the past 30 days prior to clinical suspicion for mucormycosis (If yes, document chemotherapy agents in the Medication section)  Yes  No
20. Has the patient had neutropenia (< 500 neutrophils per mm<sup>3</sup>) within 30 days prior clinical suspicion for mucormycosis ?  Yes  No
- a. If yes, total number of neutropenic days within 30 day period: \_\_\_\_\_ or  Unknown
21. Has the patient received systemic corticosteroids at avg dose ≥0.3 mg/kg/day prednisone (or equivalent) for > 2 weeks?  Yes  No

**Section III: Patient flow**

22. Dates of admission during which mucormycosis was diagnosed? (mm/dd/yy): \_\_\_\_/\_\_\_\_/\_\_\_\_ - \_\_\_\_/\_\_\_\_/\_\_\_\_ or  Ongoing, patient is still hospitalized
23. Where was patient admitted from?
- Home
  - Nursing home/subacute care facility
  - Other acute care hospital
  - Unknown
- a. If Nursing home, subacute care facility or acute care facility: specify facility name \_\_\_\_\_
24. Did this patient have any inpatient hospitalizations at Kansas University Medical Center within 30 days prior to clinical suspicion for mucormycosis? Note: include the admission during which the diagnosis was made.
- No  Unknown
  - Yes (fill out the patient flow table below with room locations for all KUMC admissions within 30 days prior to clinical suspicion and including the admission during which the diagnosis was made. Please choose one location per row. If a patient moved rooms or units during a single admission, document that change in location on a separate line, using the same admission number. If a patient had exposure to the same location on a separate admission, please document this in a separate row with a new admission number. The earliest admission within 30 days of clinical suspicion should be denoted as admission #1))

Admission #	Location Unit	Room Number	Start and (mm/dd/yy)	Stop date (mm/dd/yy)
	<input type="checkbox"/> Unit 41 <input type="checkbox"/> Unit 42 <input type="checkbox"/> Unit 45 <input type="checkbox"/> Other, specify _____		____/____/____	____/____/____ or <input type="checkbox"/> Ongoing

	<input type="checkbox"/> Unit 41 <input type="checkbox"/> Unit 42 <input type="checkbox"/> Unit 45 <input type="checkbox"/> Other, specify _____		____/____/____	____/____/____ or <input type="checkbox"/> Ongoing
	<input type="checkbox"/> Unit 41 <input type="checkbox"/> Unit 42 <input type="checkbox"/> Unit 45 <input type="checkbox"/> Other, specify _____		____/____/____	____/____/____ or <input type="checkbox"/> Ongoing

**Section IV: Medications and Procedures**

**Medications**

25. Has patient received immunosuppressive medications (including chemotherapy and GVHD treatment) within 30 days of clinical suspicion for mucormycosis?  Yes     No

a. If yes, please complete the following table:

Immunosuppressant medications	Medication Indication	Most recent dose prior to clinical suspicion (mm/dd/yy)	Total treatment days	Average daily dose (steroids only)
<input type="checkbox"/> MEC <input type="checkbox"/> Flu/Cyt/TBI <input type="checkbox"/> FLAG <input type="checkbox"/> Intrathecal MTX <input type="checkbox"/> Cyt/Daun <input type="checkbox"/> Intrathecal Cyt <input type="checkbox"/> Solumedrol <input type="checkbox"/> Prednisone <input type="checkbox"/> Dexamethasone <input type="checkbox"/> None <input type="checkbox"/> Other _____	<input type="checkbox"/> Induction chemo <input type="checkbox"/> Maintenance chemo <input type="checkbox"/> GVHD <input type="checkbox"/> Other _____	____/____/____ <input type="checkbox"/> Unknown		
<input type="checkbox"/> MEC <input type="checkbox"/> Flu/Cyt/TBI <input type="checkbox"/> FLAG <input type="checkbox"/> Intrathecal MTX <input type="checkbox"/> Cyt/Daun <input type="checkbox"/> Intrathecal Cyt <input type="checkbox"/> Solumedrol <input type="checkbox"/> Prednisone <input type="checkbox"/> Dexamethasone <input type="checkbox"/> None <input type="checkbox"/> Other _____	<input type="checkbox"/> Induction chemo <input type="checkbox"/> Maintenance chemo <input type="checkbox"/> GVHD <input type="checkbox"/> Other _____	____/____/____ <input type="checkbox"/> Unknown		
<input type="checkbox"/> MEC <input type="checkbox"/> Flu/Cyt/TBI <input type="checkbox"/> FLAG <input type="checkbox"/> Intrathecal MTX <input type="checkbox"/> Cyt/Daun <input type="checkbox"/> Intrathecal Cyt <input type="checkbox"/> Solumedrol <input type="checkbox"/> Prednisone <input type="checkbox"/> Dexamethasone <input type="checkbox"/> None <input type="checkbox"/> Other _____	<input type="checkbox"/> Induction chemo <input type="checkbox"/> Maintenance chemo <input type="checkbox"/> GVHD <input type="checkbox"/> Other _____	____/____/____ <input type="checkbox"/> Unknown		

<input type="checkbox"/> MEC <input type="checkbox"/> FLAG <input type="checkbox"/> Cyt/Daun <input type="checkbox"/> Solumedrol <input type="checkbox"/> Dexamethasone <input type="checkbox"/> Other_____	<input type="checkbox"/> Flu/Cyt/TBI <input type="checkbox"/> Intrathecal MTX <input type="checkbox"/> Intrathecal Cyt <input type="checkbox"/> Prednisone <input type="checkbox"/> None	<input type="checkbox"/> Induction chemo <input type="checkbox"/> Maintenance chemo <input type="checkbox"/> GVHD <input type="checkbox"/> Other_____	____/____/____ <input type="checkbox"/> Unknown		
<input type="checkbox"/> MEC <input type="checkbox"/> FLAG <input type="checkbox"/> Cyt/Daun <input type="checkbox"/> Solumedrol <input type="checkbox"/> Dexamethasone <input type="checkbox"/> Other_____	<input type="checkbox"/> Flu/Cyt/TBI <input type="checkbox"/> Intrathecal MTX <input type="checkbox"/> Intrathecal Cyt <input type="checkbox"/> Prednisone <input type="checkbox"/> None	<input type="checkbox"/> Induction chemo <input type="checkbox"/> Maintenance chemo <input type="checkbox"/> GVHD <input type="checkbox"/> Other_____	____/____/____ <input type="checkbox"/> Unknown		
<input type="checkbox"/> MEC <input type="checkbox"/> FLAG <input type="checkbox"/> Cyt/Daun <input type="checkbox"/> Solumedrol <input type="checkbox"/> Dexamethasone <input type="checkbox"/> Other_____	<input type="checkbox"/> Flu/Cyt/TBI <input type="checkbox"/> Intrathecal MTX <input type="checkbox"/> Intrathecal Cyt <input type="checkbox"/> Prednisone <input type="checkbox"/> None	<input type="checkbox"/> Induction chemo <input type="checkbox"/> Maintenance chemo <input type="checkbox"/> GVHD <input type="checkbox"/> Other_____	____/____/____ <input type="checkbox"/> Unknown		

26. Did the patient receive systemic antifungal medication in the 30 days prior to clinical suspicion for mucormycosis that were given for reasons other than treatment of the mucormycosis infection (i.e. prophylaxis or treatment of another fungal infection)? **DO NOT** include drugs given to treat mucormycosis.

Yes (fill out the table below, select one antifungal drug per row)     No     Unknown

Antifungal drug	Purpose	Start date (mm/dd/yy)	Stop date (mm/dd/yy)	Course Status at time of diagnosis
<input type="checkbox"/> Amphotericin B <input type="checkbox"/> Fluconazole <input type="checkbox"/> Micafungin <input type="checkbox"/> Posaconazole <input type="checkbox"/> Itraconazole <input type="checkbox"/> Voriconazole	<input type="checkbox"/> Prophylaxis  <input type="checkbox"/> Treatment	Start: ____/____/____  <input type="checkbox"/> Unknown	Stop: ____/____/____  <input type="checkbox"/> Unknown	<input type="checkbox"/> Completed <input type="checkbox"/> Ongoing <input type="checkbox"/> Unknown
<input type="checkbox"/> Amphotericin B <input type="checkbox"/> Fluconazole <input type="checkbox"/> Micafungin <input type="checkbox"/> Posaconazole <input type="checkbox"/> Itraconazole <input type="checkbox"/> Voriconazole	<input type="checkbox"/> Prophylaxis  <input type="checkbox"/> Treatment	Start: ____/____/____  <input type="checkbox"/> Unknown	Stop: ____/____/____  <input type="checkbox"/> Unknown	<input type="checkbox"/> Completed <input type="checkbox"/> Ongoing <input type="checkbox"/> Unknown

<input type="checkbox"/> Amphotericin B <input type="checkbox"/> Miconazole <input type="checkbox"/> Posaconazole <input type="checkbox"/> Voriconazole	<input type="checkbox"/> Fluconazole <input type="checkbox"/> Itraconazole	<input type="checkbox"/> Prophylaxis <input type="checkbox"/> Treatment	Start: ____/____/____ <input type="checkbox"/> Unknown	Stop: ____/____/____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Completed <input type="checkbox"/> Ongoing <input type="checkbox"/> Unknown
<input type="checkbox"/> Amphotericin B <input type="checkbox"/> Miconazole <input type="checkbox"/> Posaconazole <input type="checkbox"/> Voriconazole	<input type="checkbox"/> Fluconazole <input type="checkbox"/> Itraconazole	<input type="checkbox"/> Prophylaxis <input type="checkbox"/> Treatment	Start: ____/____/____ <input type="checkbox"/> Unknown	Stop: ____/____/____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Completed <input type="checkbox"/> Ongoing <input type="checkbox"/> Unknown

27. Did the patient have administration of any of the following products to the oral or nasal cavities in the thirty days prior to diagnosis? (Check all that apply)

- Nasal Packing   
  nasal saline spray   
  Afrin   
  RVP   
  Other \_\_\_\_\_  
 None

28. Did the patient have any inpatient respiratory therapies in the 30 days prior to clinical suspicion for mucormycosis?

- Yes   
  No   
  Unknown

a. If yes, check all that apply:

- NC O2   
  NC O2 w/ humidified air   
  Nebulized meds (SVN)   
  MDIs  
 CPAP/BIPAP   
  Other \_\_\_\_\_   
 None   
 Unknown

b. If 'yes' to SVN or MDI, fill in the table below:

Drug	Mode of Administration (SVN or MDI)

**Procedures**

29. Did the patient have any procedures within 30 days prior to the clinical suspicion for mucormycosis?

- No   
 Unknown

Yes (fill out the patient table below with all procedures within 30 days prior to clinical suspicion and including the admission during which the diagnosis was made. Please choose one procedure per row. If a patient had the same procedure on multiple occasions, please document each procedure on a separate row. )

Procedure	Procedure type (document for OMFS/Dental, ENT, radiology and GI procedures	Date (mm/dd/yy)	Location/Unit	Procedure Room	If surgery or procedure, list orifices manipulated
<input type="checkbox"/> Oral Intubation <input type="checkbox"/> Nasal Intubation <input type="checkbox"/> Oral Maxillary Facial/Dental <input type="checkbox"/> ENT procedure <input type="checkbox"/> Tracheostomy <input type="checkbox"/> Bronchoscopy <input type="checkbox"/> Radiology <input type="checkbox"/> GI procedure <input type="checkbox"/> Other_____		____/____/____	<input type="checkbox"/> OR <input type="checkbox"/> ICU <input type="checkbox"/> Ward <input type="checkbox"/> IR <input type="checkbox"/> Radiology <input type="checkbox"/> GI suite <input type="checkbox"/> Unknown <input type="checkbox"/> Other_____		
<input type="checkbox"/> Oral Intubation <input type="checkbox"/> Nasal Intubation <input type="checkbox"/> Oral Maxillary Facial/Dental <input type="checkbox"/> ENT procedure <input type="checkbox"/> Tracheostomy <input type="checkbox"/> Bronchoscopy <input type="checkbox"/> Radiology <input type="checkbox"/> GI procedure <input type="checkbox"/> Other_____		____/____/____	<input type="checkbox"/> OR <input type="checkbox"/> ICU <input type="checkbox"/> Ward <input type="checkbox"/> IR <input type="checkbox"/> Radiology <input type="checkbox"/> GI suite <input type="checkbox"/> Unknown <input type="checkbox"/> Other_____		
<input type="checkbox"/> Oral Intubation <input type="checkbox"/> Nasal Intubation <input type="checkbox"/> Oral Maxillary Facial/Dental <input type="checkbox"/> ENT procedure <input type="checkbox"/> Tracheostomy <input type="checkbox"/> Bronchoscopy <input type="checkbox"/> Radiology <input type="checkbox"/> GI procedure <input type="checkbox"/> Other_____		____/____/____	<input type="checkbox"/> OR <input type="checkbox"/> ICU <input type="checkbox"/> Ward <input type="checkbox"/> IR <input type="checkbox"/> Radiology <input type="checkbox"/> GI suite <input type="checkbox"/> Unknown <input type="checkbox"/> Other_____		

<input type="checkbox"/> Oral Intubation <input type="checkbox"/> Nasal Intubation <input type="checkbox"/> Oral Maxillary Facial/Dental <input type="checkbox"/> ENT procedure <input type="checkbox"/> Tracheostomy <input type="checkbox"/> Bronchoscopy <input type="checkbox"/> Radiology <input type="checkbox"/> GI procedure <input type="checkbox"/> Other_____		____/____/____	<input type="checkbox"/> OR <input type="checkbox"/> ICU <input type="checkbox"/> Ward <input type="checkbox"/> IR <input type="checkbox"/> Radiology <input type="checkbox"/> GI suite <input type="checkbox"/> Unknown <input type="checkbox"/> Other_____		
<input type="checkbox"/> Oral Intubation <input type="checkbox"/> Nasal Intubation <input type="checkbox"/> Oral Maxillary Facial/Dental <input type="checkbox"/> ENT procedure <input type="checkbox"/> Tracheostomy <input type="checkbox"/> Bronchoscopy <input type="checkbox"/> Radiology <input type="checkbox"/> GI procedure <input type="checkbox"/> Other_____			<input type="checkbox"/> OR <input type="checkbox"/> ICU <input type="checkbox"/> Ward <input type="checkbox"/> IR <input type="checkbox"/> Radiology <input type="checkbox"/> GI suite <input type="checkbox"/> Unknown <input type="checkbox"/> Other_____		
<input type="checkbox"/> Oral Intubation <input type="checkbox"/> Nasal Intubation <input type="checkbox"/> Oral Maxillary Facial/Dental <input type="checkbox"/> ENT procedure <input type="checkbox"/> Tracheostomy <input type="checkbox"/> Bronchoscopy <input type="checkbox"/> Radiology <input type="checkbox"/> GI procedure <input type="checkbox"/> Other_____			<input type="checkbox"/> OR <input type="checkbox"/> ICU <input type="checkbox"/> Ward <input type="checkbox"/> IR <input type="checkbox"/> Radiology <input type="checkbox"/> GI suite <input type="checkbox"/> Unknown <input type="checkbox"/> Other_____		

**Section V: Diagnosis**

**Radiology**

30. Did the patient have a CT head or sinuses within 30 days of clinical suspicion for mucormycosis?

Yes    No    Unknown

a. If yes, please list date of first CT head or sinuses after clinical suspicion of mucormycosis: \_\_\_\_/\_\_\_\_/\_\_\_\_  
and findings

- Thrombosis    Changes to the orbit    Infarct    Sinusitis    Osteomyelitis  
 Other findings: \_\_\_\_\_

31. Did the patient have a MRI brain within 30 days of clinical suspicion for mucormycosis?

- Yes    No    Unknown

a. If yes, please list date of first MRI brain after clinical suspicion of mucormycosis : \_\_\_\_/\_\_\_\_/\_\_\_\_ and findings

- Thrombosis    Changes to the orbit    Infarct    Sinusitis    Osteomyelitis  
 Other findings: \_\_\_\_\_

**Laboratory**

**Histopathology**

32. Did patient have specimens sent to pathology for review within 30 days before or 30 days after clinical suspicion for mucormycosis?  Yes    No    Unknown

a. If yes, please complete table:

Date (mm/dd/yy)	Anatomical site	Mucormycosis mentioned in report	Pathology Technique
____/____/____	<input type="checkbox"/> Nasal cavity <input type="checkbox"/> Palate <input type="checkbox"/> Orbit <input type="checkbox"/> Lung <input type="checkbox"/> Skin <input type="checkbox"/> Brain <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Other _____	<input type="checkbox"/> Morphology <input type="checkbox"/> Stain <input type="checkbox"/> Unknown <input type="checkbox"/> Other _____
____/____/____	<input type="checkbox"/> Nasal cavity <input type="checkbox"/> Palate <input type="checkbox"/> Orbit <input type="checkbox"/> Lung <input type="checkbox"/> Skin <input type="checkbox"/> Brain <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Other _____	<input type="checkbox"/> Morphology <input type="checkbox"/> Stain <input type="checkbox"/> Unknown <input type="checkbox"/> Other _____
____/____/____	<input type="checkbox"/> Nasal cavity <input type="checkbox"/> Palate <input type="checkbox"/> Orbit <input type="checkbox"/> Lung <input type="checkbox"/> Skin <input type="checkbox"/> Brain <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Other _____	<input type="checkbox"/> Morphology <input type="checkbox"/> Stain <input type="checkbox"/> Unknown <input type="checkbox"/> Other _____
____/____/____	<input type="checkbox"/> Nasal cavity <input type="checkbox"/> Palate <input type="checkbox"/> Orbit <input type="checkbox"/> Lung <input type="checkbox"/> Skin <input type="checkbox"/> Brain <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Other _____	<input type="checkbox"/> Morphology <input type="checkbox"/> Stain <input type="checkbox"/> Unknown <input type="checkbox"/> Other _____

**Culture**

33. Did patient have tissue or aspirate specimens sent for fungal culture within 30 days before or 30 days after clinical suspicion for mucormycosis?  Yes    No    Unknown

a. If yes, please complete table (do not include blood cultures) :

Culture Date (mm/dd/yy)	Specimen Type	Result	Micro Technique
____/____/____	<input type="checkbox"/> Tissue, specify type: _____ <input type="checkbox"/> Aspirate <input type="checkbox"/> Sinus fluid/drainage <input type="checkbox"/> BAL <input type="checkbox"/> Other _____	<input type="checkbox"/> No growth of fungus <input type="checkbox"/> Growth of fungus, specify organism _____	<input type="checkbox"/> Morphology <input type="checkbox"/> Thermotolerance <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown
____/____/____	<input type="checkbox"/> Tissue, specify type: _____ <input type="checkbox"/> Aspirate <input type="checkbox"/> Sinus fluid/drainage <input type="checkbox"/> BAL <input type="checkbox"/> Other _____	<input type="checkbox"/> No growth of fungus <input type="checkbox"/> Growth of fungus, specify organism _____	<input type="checkbox"/> Morphology <input type="checkbox"/> Thermotolerance <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown
____/____/____	<input type="checkbox"/> Tissue, specify type: _____ <input type="checkbox"/> Aspirate <input type="checkbox"/> Sinus fluid/drainage <input type="checkbox"/> BAL <input type="checkbox"/> Other _____	<input type="checkbox"/> No growth of fungus <input type="checkbox"/> Growth of fungus, specify organism _____	<input type="checkbox"/> Morphology <input type="checkbox"/> Thermotolerance <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown
____/____/____	<input type="checkbox"/> Tissue, specify type: _____ <input type="checkbox"/> Aspirate <input type="checkbox"/> Sinus fluid/drainage <input type="checkbox"/> BAL <input type="checkbox"/> Other _____	<input type="checkbox"/> No growth of fungus <input type="checkbox"/> Growth of fungus, specify organism _____	<input type="checkbox"/> Morphology <input type="checkbox"/> Thermotolerance <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown

**Section VI: Treatment**

34. Did the patient undergo surgical treatment for mucormycosis?  Yes  No  Unknown

a. If yes, complete the following chart of all surgical treatments for mucormycosis within 30 days after clinical suspicion.



Date (mm/dd/yy)	Surgery type
____/____/____	
____/____/____	
____/____/____	
____/____/____	
____/____/____	

35. Did the patient receive hyperbaric oxygen therapy (HBO)?  Yes  No  Unknown

36. Was the patient treated with an antifungal drug for their mucormycosis infection?  Yes  No  Unknown

a. If yes, complete table:

Antifungal drug	Route	Start dates (mm/dd/yy)	Total treatment days	Course Status
<input type="checkbox"/> Amphotericin B <input type="checkbox"/> Posaconazole <input type="checkbox"/> Other, specify _____	<input type="checkbox"/> IV <input type="checkbox"/> PO <input type="checkbox"/> Topical administration <input type="checkbox"/> Unknown	Start:____/____/____ <input type="checkbox"/> Unknown		<input type="checkbox"/> Finished <input type="checkbox"/> Ongoing <input type="checkbox"/> Unknown
<input type="checkbox"/> Amphotericin B <input type="checkbox"/> Posaconazole <input type="checkbox"/> Other, specify _____	<input type="checkbox"/> IV <input type="checkbox"/> PO <input type="checkbox"/> Topical administration <input type="checkbox"/> Unknown	Start:____/____/____ <input type="checkbox"/> Unknown		<input type="checkbox"/> Finished <input type="checkbox"/> Ongoing <input type="checkbox"/> Unknown
<input type="checkbox"/> Amphotericin B <input type="checkbox"/> Posaconazole <input type="checkbox"/> Other, specify _____	<input type="checkbox"/> IV <input type="checkbox"/> PO <input type="checkbox"/> Topical administration <input type="checkbox"/> Unknown	Start:____/____/____ <input type="checkbox"/> Unknown		<input type="checkbox"/> Finished <input type="checkbox"/> Ongoing <input type="checkbox"/> Unknown

37. Did the patient receive iron chelator therapy?  Yes  No  Unknown

a. If yes, which medication?  Deferasirox  Deferiprone  None  Other (specify) \_\_\_\_\_

**Section VII: Outcomes**

38. Was there extension of the disease from the original site observed at surgical diagnosis?

Yes  No  Unknown

a. If yes, did disease extend to:

Brain?  Yes  No                      Orbit?  Yes  No

Sinuses?  Yes  No                      Jaw?  Yes  No

Other?  Yes  No    If yes, specify \_\_\_\_\_

39. Did the patient suffer any complications?  Yes  No  Unknown
- a. If yes, did patient develop:
- Nerve Palsy?  Yes  No                      Vascular Event?  Yes  No
- Enucleation?  Yes  No                      Renal failure from mediations?  Yes  No
- Other?  Yes  No    If yes, specify \_\_\_\_\_
40. Status at discharge:  Alive  Deceased  Unknown
41. Current status:  Alive  Deceased  Unknown
- a. If deceased, date of death: (mm/dd/yy)\_\_\_\_/\_\_\_\_/\_\_\_\_
- b. If deceased, what was the cause of death? Specify \_\_\_\_\_ or  Unknown
- c. If deceased, how was cause of death determined?  Chart Review  Death Certificate  ICD-9  
 Autopsy report  Other \_\_\_\_\_

**Section VIII: Symptoms/Signs**

42. When was the onset of symptoms? (mm/dd/yy)\_\_\_\_/\_\_\_\_/\_\_\_\_ or  Unknown

Please check all symptoms and signs which were documented within 30 days prior to clinical suspicion for mucormycosis

**Constitutional**

43. Fever?  Yes  No  Unknown
44. Headache?  Yes  No  Unknown

**Ophthalmologic/Integument**

45. Reddish skin over nose?  Yes  No  Unknown
46. Swollen skin over nose?  Yes  No  Unknown
47. Proptosis?  Yes  No  Unknown

**Respiratory**

48. Nasal congestion?  Yes  No  Unknown
49. Rhinorrhea?  Yes  No  Unknown
50. Dilated pupil?  Yes  No  Unknown
51. Nonreactive pupil?  Yes  No  Unknown
52. Necrotic lesions visualized in mouth?  Yes  No  Unknown
53. Necrotic lesions visualized within nares?  Yes  No  Unknown
54. Edema of the nasal turbinates?  Yes  No  Unknown
55. Edema of the posterior pharynx?  Yes  No  Unknown
56. Sputum production?  Yes  No  Unknown
57. Hemoptysis?  Yes  No  Unknown

58. Epistaxis?  Yes  No  Unknown

59. Dyspnea?  Yes  No  Unknown

**Neurologic**

60. Facial pain?  Yes  No  Unknown

61. Tinnitus?  Yes  No  Unknown

62. Ptosis of the eyelid?  Yes  No  Unknown

63. Cranial Nerve deficits?  Yes  No  Unknown

64. Alerted Mentation?  Yes  No  Unknown

65. Blindness of the eye?  Yes  No  Unknown

# Entrevistas de Seguimento na Comunidade

Formulário Aprovado  
OMB N.º. 0920-1011  
Data de validade:  
31/03/2017

Nome

Apelido

Idade

Sexo

M  F

Codigo do individuo

Consentimento verbal obtido

Bairro

- 25 de Junho  Cahu  Vale de Chitima  Guebuza  
 Boroma  Catondo  Cawira B  Cadongolo  
 Josina Machel  Cawira A  1 de Maio  Outro

Teve alguns sintomas durante as ultimas quatro semanas?

Voce foi atendido no banco socorro ou centro de saude por causa dessas sintomas?

Se sim, foi internado?

Data de internamento

Sintomas Neurologicas

Marcar se o paciente tenha esta sintoma agora ou teve esta sintoma durante as ultimas 4 semanas. Se o paciente nao saba, escreve "nao sabe." Escreve "ate agora" se o paciente tenha esta sintoma agora.

<input type="checkbox"/> Fraqueza generalizada	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Fraqueza nos membros	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Perda de sensacao (maos ou pes)	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Formigueiro	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Problemas de equilibrio	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Cefaleia	Dia de Inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Tontura	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Visao embacada	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Perda da visao periferica	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Perda de audicao	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Zumbido dos ouvidos	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Dificuldades de engolir	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Perda da memoria	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Dificuldades de sorrir ou fechar dos olhos	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Tremor	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>
<input type="checkbox"/> Convulsoes	Dia de inicio	<input type="text"/>	Data resolvido	<input type="text"/>

Outras

A carga de relatando publico desta colecta de informacao é estimado serem média 20 minutos por resposta, incluindo o tempo para revisar as instruções, a busca de fontes de dados que ja existem, a coleta e manutenção dos dados necessários e completar e rever a coleta de informações. Uma agência não poderá realizar ou patrocinar, e uma pessoa não é obrigada a responder a uma coleta de informações, a menos que mostra um número de controle atual e válido de OMB. Envie comentários sobre esta carga estimativa ou qualquer outro aspecto da recolha de informações, incluindo sugestões para reduzir esta carga para: CDC / ATSDR Reports Clearance Officer; 1600 Clifton Road NE, M5 D-74 Atlanta, Georgia 30333 E.U.A.; ATTN: PRA (0920-1011)

### Gastrointestinal

- |   |               |                      |                |                      |
|---|---------------|----------------------|----------------|----------------------|
| <input type="checkbox"/> Dor abdominal  | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Nausea         | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Vomitos        | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Diarreia       | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Olhos amarelos | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |

### Cardiopulmonary

- |  |               |                      |                |                      |
|--|---------------|----------------------|----------------|----------------------|
| <input type="checkbox"/> Dor toraxica              | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Palpitacao                | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Dificuldade de respiracao | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Inchaco nas pernas        | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |

### Sintomas Gerais e Outros

- |   |               |                      |                |                      |
|---|---------------|----------------------|----------------|----------------------|
| <input type="checkbox"/> Rash ou outras manchas novas no pele (descrever) | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Mudancas nos cabelos ou unhas (descrever)        | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Febre  | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Contusoes anormal                                | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Sangramento                                      | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Quantidade de urina diminuiu                     | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |
| <input type="checkbox"/> Perda de appetite?                               | Dia de inicio | <input type="text"/> | Data resolvido | <input type="text"/> |

Voce ja se sente completamente curado dessa doenca?

Os seus sintomas afectaram as suas actividades de vida diárias?

Notas / Outro

Tainted Beverage Investigation  
Medical Record Abstraction

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# Dados Clínicos dos Centros de Saúde em Chitima e Songo

Código individual

Nome

Apelido

Idade

Sexo

M  F

Barrio de residencia

- 25 de Junho     Cahu     Vale de Chitima     Guebuza  
 Boroma     Catondo     Cawira B     Cadongolo  
 Josina Machel     Cawira A     1 de maio     Outro

Data de inicio dos sintomas

Hora de inicio dos sintomas

Hospital de internamento

Data de internamento

Hora de interamento

Desfecho

Data de desfecho

Hora de desfecho

## Sinais Vitais #1

Data

Hora

Pulso

Pressao Arterial Sistólica

Frequência Respiratória

Temperatura (C)

Pressao Arterial Diastólica

## Sinais Vitais #2

Data

Hora

Pulso

Pressao Arterial Sistólica

Frequência Respiratória

Temperatura (C)

Pressao Arterial Diastólica

## Sinais Vitais #3

Data

Hora

Pulso

Pressao Arterial Sistólica

Frequência Respiratória

Temperatura (C)

Pressao Arterial Diastólica

# Dados Clínicos dos Centros de Saúde em Chitima e Songo

## Laboratório #1

Data

Hora

WBC

Hgb

HCT

Plt

PMN

Lymphocytes

MXD

Na

K

HCO<sub>3</sub>

Cl

BUN

Cr

Gluc

AST (SGOT)

ALT (SGPT)

TBili

Alk Phos

Total Protein

Albumin

## Laboratório #2

Data

Hora

WBC

Hgb

HCT

Plt

PMN

Lymphocytes

MXD

Na

K

HCO<sub>3</sub>

Cl

BUN

Cr

Gluc

AST (SGOT)

ALT (SGPT)

TBili

Alk Phos

Total Protein

Albumin

## Outros Resultados Laboratoriais

## Problemas Médicos

## Medicamentos em Casa



# Dados Clínicos dos Centros de Saúde em Chitima e Songo

## Sintomas

- |  |  |  |                                    |
|--|--|--|------------------------------------|
| <input type="checkbox"/> Cefaleia        | <input type="checkbox"/> Dor abdominal | <input type="checkbox"/> Tosse                   | <input type="checkbox"/> Febre     |
| <input type="checkbox"/> Tontura         | <input type="checkbox"/> Náusea        | <input type="checkbox"/> Dificuldade em respirar | <input type="checkbox"/> Agitação  |
| <input type="checkbox"/> Parestesias     | <input type="checkbox"/> Vômitos       | <input type="checkbox"/> Dor torácica            | <input type="checkbox"/> Convulsos |
| <input type="checkbox"/> Fraqueza        | <input type="checkbox"/> Diarréia      | <input type="checkbox"/> Palpitação              | <input type="checkbox"/> Tremor    |
| <input type="checkbox"/> Outras Sintomas |  |  |                                    |

Se sim, quais sintomas?

## Exame Físico

- |   |   |   |                                    |
|---|---|---|------------------------------------|
| <input type="checkbox"/> Ataxia                 | <input type="checkbox"/> Ternura abdominal    | <input type="checkbox"/> Dispneia         | <input type="checkbox"/> Agitação  |
| <input type="checkbox"/> Diminuição da sensação | <input type="checkbox"/> Vômitos              | <input type="checkbox"/> Roncos           | <input type="checkbox"/> Coma      |
| <input type="checkbox"/> Fraqueza muscular      | <input type="checkbox"/> Diarréia             | <input type="checkbox"/> Edema nas pernas | <input type="checkbox"/> Convulsos |
| <input type="checkbox"/> Reflexos diminuídos    | <input type="checkbox"/> Vômito sanguinolento | <input type="checkbox"/> Icterícia        | <input type="checkbox"/> Tremor    |
| <input type="checkbox"/> Outros achados         |   |   |                                    |

Se sim, quais achados?

## Narrativa

## Intervenções

## Tainted Beverage Questionnaire

### **Follow up Interviews in the Community**

Patient ID

First Name, Last Name, Age, M/F

Neighborhood of residence (radio button list)

Have you had other symptoms during the last 4 weeks? (drop down Y/N)

Have you been seen at the first aid clinic or health center because of these symptoms? (dropdown Y/N)

If yes, were you hospitalized? (dropdown Y/N) / Date of hospitalization:

### **Neurologic symptoms**

Checkboxes:

Weakness - Date of onset/Date of resolution

Generalized weakness – Date of onset/Date of resolution

Extremity weakness - Date of onset/Date of resolution

Loss of sensation - Date of onset/Date of resolution

Paresthesias - Date of onset/Date of resolution

Problems with equilibrium - Date of onset/Date of resolution

Headache - Date of onset/Date of resolution

Dizziness - Date of onset/Date of resolution

Visual changes - Date of onset/Date of resolution

Blurry vision - Date of onset/Date of resolution

Double vision - Date of onset/Date of resolution

Loss of peripheral vision - Date of onset/Date of resolution

Hearing loss - Date of onset/Date of resolution

Buzzing in the ears - Date of onset/Date of resolution

Difficulty swallowing - Date of onset/Date of resolution

Memory loss - Date of onset/Date of resolution

### **GI symptoms**

Checkboxes:

Abdominal pain - Date of onset/Date of resolution

Nausea - Date of onset/Date of resolution

Vomiting - Date of onset/Date of resolution

Diarrhea - Date of onset/Date of resolution

Yellow eyes - Date of onset/Date of resolution

### **Cardiopulmonary**

Checkboxes:

Chest pain - Date of onset/Date of resolution

Palpitations - Date of onset/Date of resolution

Difficulty breathing - Date of onset/Date of resolution

**General and other symptoms**

Checkboxes:

Fever - Date of onset/Date of resolution

Chills - Date of onset/Date of resolution

Leg swelling - Date of onset/Date of resolution

Bruising - Date of onset/Date of resolution

Bleeding - Date of onset/Date of resolution

Decreased urine output - Date of onset/Date of resolution

(ADD) Loss of appetite - Date of onset/Date of resolution

Do you feel that you are completely cured of this disease? (dropdown Y/N)

If no, are these symptoms affecting your activities of daily living?

Notes/other (free text)

## Tainted Beverage - Medical Record Abstraction

### Clinical data of the Health Centers in Chitima and Songa

Patient ID

First Name, Last Name, Age, M/F

Neighborhood of residence (radio button list)

Date of symptom onset, time of symptom onset

Date of hospitalization, hour of hospitalization

Where hospitalized (drop down: Chitima/Songo/Other)

Date of disposition, hour of disposition

Final disposition (drop down: discharged home, transferred, left AMA, died, no information)

**Vital Signs #1:** Date, hour, pulse, SBP, DBP, RR, temp

**Vital Signs #2:** Date, hour, pulse, SBP, DBP, RR, temp

**Vital Signs #3:** Date, hour, pulse, SBP, DBP, RR, temp

**Laboratory Data #1:** Date, hour, WBC, Hgb, Hct, Plt, PMN%, Lymph%, MXD% (eos/baso/monocytes), Na, K, Cl, HCO<sub>3</sub>, Cr, BUN, Cr, Gluc, AST, ALT, TBili, Alk Phos, TP, Alb

**Laboratory Data #2:** Date, hour, WBC, Hgb, Hct, Plt, PMN%, Lymph%, MXD% (eos/baso/monocytes), Na, K, Cl, HCO<sub>3</sub>, Cr, BUN, Cr, Gluc, AST, ALT, TBili, Alk Phos, TP, Alb

**Laboratory Data #3:** Date, hour, WBC, Hgb, Hct, Plt, PMN%, Lymph%, MXD% (eos/baso/monocytes), Na, K, Cl, HCO<sub>3</sub>, Cr, BUN, Cr, Gluc, AST, ALT, TBili, Alk Phos, TP, Alb

Other laboratory data (free text, consider adding malaria testing as a separate entry)

Medical problems (free text):

Home medications (free text):

### **Symptoms (checkboxes):**

Headache, dizziness, paresthesias, weakness, abdominal pain, nausea, vomiting, diarrhea, cough, breathing difficulties, chest pain, palpitations, fever, agitation, convulsions, tremor, other symptoms (if yes, which other symptoms)?

### **Physician exam (checkboxes):**

Ataxia, diminished sensation, muscle weakness, diminished reflexes, abdominal tenderness, vomiting, diarrhea, hematemesis, dyspnea, rhonchi, leg edema, icterus, agitation, coma, convulsions, tremor

**Narrative (free text):**

**Interventions (free text):**

## Exposure History for Blood Donors

LAST NAME: \_\_\_\_\_ FIRST NAME: \_\_\_\_\_

SEX:  Male  Female DATE OF BIRTH: \_\_\_/\_\_\_/\_\_\_ AGE \_\_\_

RACE:  White  Black  Asian  Other ETHNICITY:  Hispanic  Non-Hispanic  Unknown

PHONE: ( ) \_\_\_\_\_ - \_\_\_\_\_

HOME ADDRESS STREET: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

1. What is your occupation (job title)? \_\_\_\_\_
2. Were you on the inspection tour on January 20-23? \_\_\_Yes \_\_\_No
3. Did you work with **rhesus macaque IL38 or rhesus macaque 1b22?**

Husbandry?	___Yes	___No	___Maybe/Unsure*
Treatment of sick animal?	___Yes	___No	___Maybe/Unsure
Necropsy?	___Yes	___No	___Maybe/Unsure
Clinical Pathology?	___Yes	___No	___Maybe/Unsure
Other (specify) _____			
4. Have you worked in the TNPRC now or in the past? \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure
5. Have you previously worked with *Burkholderia pseudomallei*?  
 \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure  
 If yes, please explain any possibly exposures: \_\_\_\_\_

6. Did you exit the vehicle while inside the facility? \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure
7. Were you in the van driven by Skip Bohm or by Jim Blanchard on day 1 (circle).

8. Did you:

Area	8. a. Look from outside?	8. b. Enter inside?	8. c. Did you touch anything inside?
Necropsy Anteroom			
Necropsy Suite			
Visit sample transfer area			
Animal Clinic			
Other Areas			

9. Did you touch any soil or water while on the tour? \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure

10. Location/Site?

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11. Do you have any of the following chronic conditions that can increase your risk of disease from *Burkholderia* exposure?

Diabetes \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure

Chronic liver or kidney disease \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure

Alcohol abuse \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure

Hematologic malignancy  
(blood cancers such as leukemia) \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure

Neutropenia or neutrophil dysfunction  
(low white blood cell count) \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure

Chronic lung disease (asthma,  
bronchitis, emphysema,  
cystic fibrosis) \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure

Thalassemia \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure

Long-term steroid use \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure

Other form of immunosuppression \_\_\_Yes \_\_\_No \_\_\_Maybe/Unsure

12. Have you ever traveled or been deployed during military service to areas where *Burkholderia pseudomallei* occurs naturally, including:

Asia: Thailand, Laos, Singapore, Vietnam, Malaysia, Burma, Vietnam, Taiwan, China

Northern Australia

Africa: South Africa, Madagascar

Central, South America and Caribbean

Country	Dates of Visit	Working in Soil or Water

13. What animals do you have in your home or regularly interact with? If possible include species and numbers.

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Risk Assessment for individuals who may have had contact with  
*Burkholderia pseudomallei*

Name: \_\_\_\_\_ Department: \_\_\_\_\_

Date completed: \_\_\_\_\_ Contact phone number: \_\_\_\_\_

**Please complete and return to Occupational Health as soon as possible,**

**PLEASE CHECK ALL APPROPRIATE BOXES:**

**LOW RISK**

- Inadvertent opening of a lid of an agar plate growing *B. pseudomallei*
- Inadvertent sniffing of agar plate growing *B. pseudomallei*
- Splash event leading to visible contact of *B. pseudomallei*
- Spillage of small volume of liquid culture within a functioning biologic safety cabinet
- Contamination of intact skin with culture

**HIGH RISK**

- The presence of any predisposing condition **without** proper PPE (personal protective equipment) diabetes mellitus; chronic liver or kidney disease; alcohol abuse; long-term steroid use; hematologic malignancy; neutropenia or neutrophil dysfunction; chronic lung disease (including cystic fibrosis); thalassemia; any other form of immunosuppression
- Needlestick or other penetrating injury with implement contaminated with *B. pseudomallei*
- Bite or scratch by experimental animal infected with *B. pseudomallei*
- Splash event leading to contamination of mouth or eyes
- Generation of aerosol outside biologic safety cabinet (e.g., sonication, centrifuge incident)

**Acknowledgements:**

- I do not believe I have any of the above low or high risk factors.
- I have had the opportunity to have all of my questions answered by Occupational Health
- I have had the opportunity to have all of my questions answered by the Office of Environmental Health and Safety
- I have had the opportunity to have all of my questions answered by the Office of Biosafety
- I am aware that I can contact Occupational Health at 985.966.6515 or the infectious disease department at Tulane at 504.988.5263 if I develop any symptoms of infection.
- I would like to request a private counseling session with (circle one/or more)  
                    Biosafety                      OEHS                      Occupational Health

**Employee Signature:** \_\_\_\_\_