Revised 1/27/2012

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Free Living Ameba Case Report

Date of Report: _____

Demographics

Patient's Last Name	First	M.I.	Age	Gender: ☐Male ☐Female ☐Unknown

Ethnicity:	Race:	
☐Hispanic ☐Unknown	☐White ☐Asian/Pacific Islander ☐Unknown	County and State of Residence: _____
☐Non-Hispanic	☐Black ☐American Indian ☐Other _____	County and State of Treatment: _____

Immigrant? ☐ Yes ☐ No ☐ Unknown Country of origin: _____ Date of immigration: _____ Occupation: _____

Exposure History

County/State of Suspected Exposure: _____ / _____ Number of persons exposed (if known): ____

Source of possible exposure, if known: *(please check all that apply and provide best estimates of dates)*

Recreational Water Exposures
☐ Yes
☐ No
☐ Unknown
*If "**yes**", please fill out specifics*

Type:	Date(s):	Type:	Date(s):	Type:	Date(s):
☐ Canal	_____	☐ Private Club Pool	_____	☐ Community Pool	_____
☐ Lake	_____	☐ Private Home Pool	_____	☐ Apartment Pool	_____
☐ Pond	_____	☐ Fill-and-Drain Pool	_____	☐ Fountain	_____
☐ Ocean	_____	☐ Hotel Pool	_____	☐ Water park	_____
☐ River/Stream	_____	☐ Spring (hot/cold)	_____		
☐ Well	_____	☐ Spa/hot tub/whirlpool	_____		
☐ Other, specify _____		Date(s): _____			

Recreational Water Activities
☐ *Yes*
☐ *No*
☐ *Unknown*
*If "**yes**", please fill out specifics*

	Yes	No	Unknown		Yes	No	Unknown
Diving into water	☐	☐	☐	Snorkeling/scuba diving	☐	☐	☐
Inhaled water	☐	☐	☐	Swimming	☐	☐	☐
Jumped into water	☐	☐	☐	Water sports (skiing etc.)	☐	☐	☐
Swallowed water	☐	☐	☐	Wore nose clip or plugged nose when jumping/diving	☐	☐	☐
Splashed water	☐	☐	☐	Other, specify_____			

Nasal Irrigation
☐ Yes
☐ No
☐ Unknown
*If "**yes**", please fill out specifics*

Type:	Date(s):
☐ Neti pot	_____
☐ Squeeze bottle	_____
☐ Shower nozzle	_____
☐ Other, specify _____	Date(s): _____

Soil Exposures
☐ Yes
☐ No
☐ Unknown
*If "**yes**", please fill out specifics*

Type:	Date(s):
☐ Gardening	_____
☐ Composting	_____
☐ Farm/Ranch	_____
☐ Other,: _____	
specify _____	

Occupational Exposures
☐ Yes
☐ No
☐ Unknown
*If "**yes**", please fill out specifics*

☐ Farmer/rancher
☐ Firefighter
☐ Lifeguard/pool attendant
☐ Other, specify: _____

Route of Entry if known:
(please check all that apply)

☐ Inhalation ☐ Ingestion ☐ Contact ☐ Via Wound ☐ Other, specify: _____

If Water Source , Please List Source Characteristics:

Name of Water Exposure: _____ Geospatial Coordinates: _____ Thermally Polluted: Y / N

Size of Body Water: ☐ < 10 acres ☐ 10-100 acres ☐ >100 acres ☐ Unknown

Water Turbidity: ☐ Clear ☐ Cloudy ☐ Murky ☐ Unknown

Water level: ☐ Low ☐ High ☐ Normal ☐ Flood Stage ☐ Unknown

Flow Rate: ☐ Slow ☐ Normal ☐ Fast ☐ Unknown

Ambient Air Temperature: ___ F/C Water Temperature: ___F/C Depth: _____

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Travel History last 2 years: ☐ Yes ☐ No ☐ Unknown If yes, please specify in table below:

Locations	Dates (from – to)

Past Medical History:

Please check all conditions/symptoms that patient has currently or has had within past 2 years:

Treatment/drugs:

- ☐ Excessive antibiotic use (specify in Provider comments)
- ☐ Illegal drug use, specify:_____
- ☐ Immunosuppressants
- ☐ Radiation therapy
- ☐ Steroid use

HIV/AIDS:

HIV	☐ Yes	☐ No	☐ Unknown
AIDS	☐ Yes	☐ No	☐ Unknown
On Antiretrovirals	☐ Yes	☐ No	☐ Unknown

Other Immunocompromised Conditions

- ☐ Alcohol misuse ☐ Diabetes mellitus
- ☐ G6PD deficiency ☐ Liver cirrhosis
- ☐ Malnourishment ☐ Pregnancy (recent)
- ☐ Renal failure ☐ Lymphoproliferative disease
- ☐ Systemic Lupus Erythematosus (SLE)
- ☐ Cancer, specify:_____
- ☐ Other hematologic disease, specify: _____
- ☐ Other autoimmune disease, specify: _____
- ☐ Organ transplant, specify: _____

ENT/Respiratory:

- ☐ Otitis
- ☐ Rhinitis
- ☐ Broken Nose
- ☐ Deviated septum
- ☐ Tuberculosis
- ☐ Other lung disease, specify:_____
- ☐ Sinusitis
- ☐ Epistaxis
- ☐ Nasal Surgery
- ☐ Pharyngitis
- ☐ Pneumonitis

Other Conditions:

- ☐ Dermatitis
- ☐ Skin infections
- ☐ Eye infection
- ☐ Other, specify: _____
- ☐ Injury, specify: _____

Current Illness

Date of Illness onset: _____ Duration of illness: (in days) ____

Was patient admitted to hospital for current illness? ☐ Yes ☐ No ☐ Unknown

If Yes, Date of **most recent** hospitalization: _____ Duration of most recent hospitalization (in days): _____

Hospital Name:_____ City:_____ State: _____

Physician Name 1:_____ E-mail (if avail): _____ Phone: _____

Physician Name 2:_____ E-mail (if avail): _____ Phone: _____

Other Recent Hospitalizations: ☐Yes ☐ No☐Unknown

Dates (from- to)	Diagnosis

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History of Present Illness:

Please provide a brief description of the patient's clinical course, prior to hospitalization:

Signs/Symptoms on Presentation (*most recent* hospitalization):

Vital Signs:

Temperature: _____ F / C P: _____ bpm R= _____breaths/min BP: _____mmHg

General:

	Duration (days)		Duration (days)
☐ Fever		☐ Myalgia	
☐ Nausea		☐ Back Pain	
☐ Vomiting		☐ Cough	
☐ Diarrhea		☐ Shortness of breath	
☐ Weight loss		☐ Sinus problems	
☐ Anorexia		☐ Abnormal reflexes	
☐ Headache		☐ Disorientation	
☐ Stiff neck		☐ Lethargy/fatigue	
☐ Other general symptom/sign, specify:_____			

Visual

	Duration (days)
☐ Blurred vision	
☐ Diplopia	
☐ Photophobia	
☐ Other visual changes, specify: _____	

Neurologic:

	Duration (days)		Duration (days)		Duration (days)
☐ Altered mental status		☐ Dysphagia		☐ Weakness	
☐ Aphasia		☐ Facial numbness		☐ Hemiparesis	
☐ Ataxia		☐ Hallucinations		☐ Altered sense of taste	
☐ Behavioral changes		☐ Combativeness		☐ Altered sense of smell	
☐ Coma		☐ Hyperreflexia		☐ Decerebrate posturing	
☐ Confusion		☐ Loss of balance		☐ Decorticate posturing	
☐ Cranial nerve VI deficit		☐ Numbness		☐ Fixed, reactive pupils	
☐ Cranial nerve VII deficit		☐ Seizures		☐ Dilated pupils	
☐ Cranial nerve XII deficit		☐ Upgoing toes		☐ Nystagmus	

☐ Other cranial nerve deficit, specify: _____ Duration: _____

☐ Other neurologic deficit, specify: _____ Duration: _____

Skin Lesions: ☐ Yes ☐ No ☐ Unknown *If yes, please specify in table below*:

Lesion type	Anatomic location	Size	Number	Duration (days)
Ulcers				
Plaques				
Erythematous nodules				
Other				

Other Symptoms/Signs:

☐ Other, specify:_____

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Signs/Symptoms developed while in hospital:

General:

- ☐ Fever
- ☐ Nausea
- ☐ Vomiting
- ☐ Diarrhea
- ☐ Weight loss
- ☐ Anorexia
- ☐ Headache
- ☐ Stiff neck
- ☐ Myalgia
- ☐ Back Pain
- ☐ Cough
- ☐ Shortness of breath
- ☐ Sinus problems
- ☐ Abnormal Reflexes
- ☐ Disorientation
- ☐ Lethargy/fatigue
- ☐ Other general symptom/sign, specify:_____

Visual :

- ☐ Blurred vision
- ☐ Diplopia
- ☐ Photophobia
- ☐ Other visual changes, specify:_____

Neurologic:

☐ Altered mental status	☐ Dysphagia	☐ Altered sense of taste
☐ Aphasia	☐ Facial numbness	☐ Altered sense of smell
☐ Ataxia	☐ Hallucinations	☐ Decerebrate posturing
☐ Behavioral changes	☐ Hemiparesis	☐ Decorticate posturing
☐ Coma	☐ Hyperreflexia	☐ Fixed, reactive pupils
☐ Combativeness	☐ Loss of balance	☐ Dilated pupils
☐ Confusion	☐ Numbness	☐ Nystagmus
☐ Cranial nerve VI deficit	☐ Seizures	
☐ Cranial nerve VII deficit	☐ Upgoing toes	
☐ Cranial nerve XII deficit	☐ Weakness	
☐ Other Cranial nerve deficit, specify: _____	☐ Other neurologic deficit, specify: _____	

Skin Lesions: ☐ Yes ☐ No *If yes, please specify in table below:*

Lesion type	Anatomic location	Size	Number
Ulcers			
Plaques			
Erythematous nodules			
Other			

Other Symptoms/Signs:

☐ Other, specify:_____

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Diagnostic Tests: Note please provide dates when possible. If date not available, provide hospital day (i.e. CSF tap on Hosp. Day 2)

LABORATORY TESTING

CSF	Date_____	Date_____	Date_____
	Results	**Results**	**Results**
Opening pressure (mmH2O)			
WBC count (per mm^3)			
RBC count (per mm^3)			
Neutrophil %			
Monocyte %			
Lymphocyte %			
Bands %			
Eosinophil %			
Protein (mg/100ml)			
Glucose (mg/100ml)			
CSF Culture: *			
CSF PCR: *			
CSF latex agglutination: *			
CSF mount: *Please indicate preparation type and findings, if any*	☐ Centrifuged ☐ Stained ☐ Wet Amebae present? Y☐ N☐	☐ Centrifuged ☐ Stained ☐ Wet Amebae present? Y☐ N☐	☐ Centrifuged ☐ Stained ☐ Wet Amebae present? Y☐ N☐

*** Please provide results for all bacteria, viral and/or parasitic testing.**

Presenting Lab Values: **Date:____**

	Results
RBC count (per mm^3)	
Hematocrit %	
WBC count (per mm^3)	
Neutrophil %	
Lymphocyte %	
Monocyte %	
Eosinophil %	
Bands %	
CD4 count (per mm^3)	
Protein (mg/100ml)	
Sodium (mEq/L)	
Potassium (mEq/L)	
Chloride (mEq/L)	
Bicarbonate (mEq/L)	
BUN (mg/100ml)	
Creatinine (mg/100ml)	
Glucose (mg/100ml)	

Serology:

Date	**Result**

Cultures for Free Living Amebae:

Source	**Date**	**Result**
☐ Blood		☐ Negative ☐ + Balamuthia ☐ + Naegleria ☐ + Acanthamoeba
☐ Skin		☐ Negative ☐ + Balamuthia ☐ + Naegleria ☐ + Acanthamoeba
☐ Brain		☐ Negative ☐ + Balamuthia ☐ + Naegleria ☐ + Acanthamoeba
☐ Abscess		☐ Negative ☐ + Balamuthia ☐ + Naegleria ☐ + Acanthamoeba
☐ Other, specify: _____		☐ Negative ☐ + Balamuthia ☐ + Naegleria ☐ + Acanthamoeba

PCR for Free Living Amebae:

Source	**Date**	**Result**
☐ Blood		☐ Negative ☐ + Balamuthia ☐ + Naegleria ☐ + Acanthamoeba
☐ Skin		☐ Negative ☐ + Balamuthia ☐ + Naegleria ☐ + Acanthamoeba
☐ Brain		☐ Negative ☐ + Balamuthia ☐ + Naegleria ☐ + Acanthamoeba
☐ Abscess		☐ Negative ☐ + Balamuthia ☐ + Naegleria ☐ + Acanthamoeba
☐ Other, specify: _____		☐ Negative ☐ + Balamuthia ☐ + Naegleria ☐ + Acanthamoeba

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HISTOPATHOLOGY

Brain biopsy: ☐ Yes ☐ No ☐ Unknown

	Date:	Date:
Location		
Timing	☐ Antemortem ☐ Postmortem ☐ Unknown	☐ Antemortem ☐ Postmortem ☐ Unknown
Results (check all that apply)	☐ Amebic trophozoites	☐ Amebic trophozoites
	☐ Amebic cysts	☐ Amebic cysts
	☐ Ameba, not specified	☐ Ameba, not specified
	☐ Hemorrhage ☐ Necrosis	☐ Hemorrhage ☐ Necrosis
	☐ Encephalomalacia ☐ Edema	☐ Encephalomalacia ☐ Edema
	☐ Abscess ☐ Vasculitis	☐ Abscess ☐ Vasculitis
	☐ Perivascular Inflammation	☐ Perivascular Inflammation
	☐ Thrombosis	☐ Thrombosis
	☐ Neovascularization	☐ Neovascularization
	☐ Neutrophillic inflammation / infiltrate	☐ Neutrophillic inflammation / infiltrate
	☐ Lymphocytic inflammation / infiltrate	☐ Lymphocytic inflammation / infiltrate
	☐ Granulomatous inflammation	☐ Granulomatous inflammation
	☐ Granuloma	☐ Granuloma
	☐ Meningitis ☐ Encephalitis	☐ Meningitis ☐ Encephalitis
	☐ Meningoencephalitis	☐ Meningoencephalitis
Other Results/ Comments		

Skin biopsy: ☐ Yes ☐ No ☐ Unknown

	Date:	Date:
Location		
Timing	☐ Antemortem ☐ Postmortem ☐ Unknown	☐ Antemortem ☐ Postmortem ☐ Unknown
Results	☐ No amebae seen ☐ Amebic trophozoites ☐ Amebic cysts ☐ Amebae, not specified	☐ No amebae seen ☐ Amebic trophozoites ☐ Amebic cysts ☐ Amebae, not specified
Other Results/ Comments		

Sinus biopsy: ☐ Yes ☐ No ☐ Unknown

	Date:	Date:
Location		
Timing	☐ Antemortem ☐ Postmortem ☐ Unknown	☐ Antemortem ☐ Postmortem ☐ Unknown
Results	☐ No amebae seen ☐ Amebic trophozoites ☐ Amebic cysts ☐ Amebae, not specified	☐ No amebae seen ☐ Amebic trophozoites ☐ Amebic cysts ☐ Amebae, not specified
Other Results/ Comments		

Other biopsy results:

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DIAGNOSTIC IMAGING

CT: Date of First CT: _____

Lesion location: (please check all that apply)

- ☐ Basal Ganglia
- ☐ Brainstem
- ☐ Right Cerebellum
- ☐ Left Cerebellum
- ☐ Left Frontal
- ☐ Right Frontal
- ☐ Left Occipital
- ☐ Right Occipital
- ☐ Left Parietal
- ☐ Right Parietal
- ☐ Pons
- ☐ Spinal Cord
- ☐ Left Temporal
- ☐ Right Temporal
- ☐ Thalamus
- ☐ Other, specify:_____

Lesion: (please check all that apply)

- ☐ Abscess
- ☐ Edema
- ☐ Erosion
- ☐ Hemorrhage
- ☐ Herniation
- ☐ Hyperdense
- ☐ Hypodense
- ☐ Infarcts
- ☐ Mass
- ☐ Multifocal lesions
- ☐ Enhancing
- ☐ Ring enhancing
- ☐ Sinusitis
- ☐ Ventriculomegaly
- ☐ Other, specify: _____

Additional Description, if needed: _____

Please list dates of subsequent CT scans and changes noted:

Date	Findings

MRI: Date of First MRI: _____

Lesion location: (please check all that apply)

- ☐ Basal Ganglia
- ☐ Brainstem
- ☐ Right Cerebellum
- ☐ Left Cerebellum
- ☐ Left Frontal
- ☐ Right Frontal
- ☐ Left Occipital
- ☐ Right Occipital
- ☐ Left Parietal
- ☐ Right Parietal
- ☐ Pons
- ☐ Spinal Cord
- ☐ Left Temporal
- ☐ Right Temporal
- ☐ Thalamus
- ☐ Other, specify:_____

Lesion: (please check all that apply)

- ☐ Abscess
- ☐ Edema
- ☐ Erosion
- ☐ Hemorrhage
- ☐ Herniation
- ☐ Hyperdense
- ☐ Hypodense
- ☐ Infarcts
- ☐ Mass
- ☐ Multifocal lesions
- ☐ Enhancing
- ☐ Ring enhancing
- ☐ Sinusitis
- ☐ Ventriculomegaly
- ☐ Other, specify: _____

Additional Description, if needed: _____

Please list dates of subsequent MRI scans and changes noted:

Date	Findings

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Diagnosis:

Admitting diagnosis: Date of Diagnosis: _____

☐ Encephalitis ☐ Meningoencephalitis
☐ Meningitis ☐ Other, Specify _____

Final diagnosis: Date of Diagnosis: _____

☐ GAE (Acanthamoeba spp.) ☐ GAE (Balamuthia mandillaris) ☐ PAM (Naegleria fowleri)
☐ Disseminated Acanthamoebiasis ☐ Disseminated Balamuthiasis ☐ Other, specify: _____
☐ Acanthamoeba rhinosinusitis ☐ Balamuthia rhinosinusitis
☐ Cutaneous acanthamoebiasis ☐ Cutaneous balamuthiasis

Diagnosis Method:

Indirect Immunofluorescence (IIF) ☐	Antemortem ☐	Postmortem ☐	Unknown ☐
PCR ☐	Antemortem ☐	Postmortem ☐	Unknown ☐
Histopathology ☐	Antemortem ☐	Postmortem ☐	Unknown ☐
CSF Wet Mount ☐	Antemortem ☐	Postmortem ☐	Unknown ☐
Culture ☐	Antemortem ☐	Postmortem ☐	Unknown ☐
Other, Specify:	Antemortem ☐	Postmortem ☐	Unknown ☐

Treatment:

Surgical resection: ☐ Yes ☐ No

Medications: (please check all that apply**)**

☐ Acyclovir	☐ **Fluconazole**	☐ Rifampin
☐ Albendazole	☐ **Flucytosine**	☐ **Steroid, specify_____**
☐ **Amphotericin B**	☐ Isoniazid	☐ Streptomycin
☐ **Amphotericin B lipid**	☐ **Itraconazole**	☐ **Sulfonamide, specify_____**
☐ **Amphotericin B liposomal**	☐ **Ketoconazole**	☐ **Sulfadiazine**
☐ Azithromycin	☐ Mannitol	☐ Topical Chlorhexidine
☐ Ceftriaxone	☐ Metronidazole	☐ Trimethoprim/sulfa
☐ Ciprofloxacin	☐ Miconazole	☐ **Voriconazole**
☐ Chloramphenicol	☐ Miltefosine	☐ Other, specify_____
☐ **Clarithromycin**	☐ Ornidazole	☐ Other, specify_____
☐ Dexamethasone	☐ **Pentamidine**	☐ Other, specify_____
☐ Ethambutol	☐ Pyrimethamine	☐ Other, specify_____

If you checked any of the medications listed above, please list below with the start and stop dates, dosages, and route of administration.

Medication	Start date:	Stop date:	Dose Range	Route of Administration

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Other therapies: (please check all that apply)

	Start date:	Stop date:
☐ IV fluids		
☐ Total Parenteral Nutrition (TPN)		
☐ Dialysis for renal failure		
☐ Other, specify_____		
☐ Other, specify_____		
☐ Other, specify_____		

Outcome:

Survived? ☐ Yes ☐ No ☐ Unknown

If survived: Residual neurologic deficits? ☐ Yes ☐ No ☐ Unknown

If Yes, Please describe neurologic deficits: _____

Date of discharge: _____ OR Date of death: _____

If died: Cause of death:

☐ Brain death
☐ Cardiorespiratory failure
☐ Herniation
☐ Removed life support
☐ Other, specify:_____

If died: Organs transplanted? ☐ Yes ☐ No

If yes, which ones:_____

Please provide a brief description of the patient's clinical course, complications, and any additional comments:

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1st DASH #	
2nd DASH #	
3rd DASH #	
4th DASH #	
5th DASH #	
List additional DASH #s:	

Case report citation 1	
Case report citation 2	
List additional case citations	

Calculated durations:
Incubation period (days): _____
Illness Onset to Admission (days): _____
Illness Onset to Death (days): _____
Exposure to Death (days): _____
Clinical Stage at presentation: _____