



## Department of Health

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July 8, 2019

**TO: Healthcare Providers, Hospitals, Local Health Departments (LHDs), Clinical Laboratories**

**FROM: NYSDOH Division of Epidemiology**

**HEALTH ADVISORY: Blastomycosis emerging in Upstate New York**

*Please distribute to the Infectious Disease, Pulmonology, Intensive Care, Laboratory Service including Microbiology and Pathology Services, Internal Medicine, Family Medicine, Emergency Department, Pediatrics, Dermatology, Obstetrics/Gynecology and Orthopedics Services, and the Director of Nursing and Medical Director*

The purpose of this advisory is to alert clinicians and laboratorians to the emergence of Blastomycosis in Upstate New York.

### **SUMMARY**

- **Increases in blastomycosis cases have been noted in upstate New York.**
- **Healthcare providers, microbiologists, and pathologists should consider the diagnosis in a patient with compatible signs and symptoms.**
- **Blastomycosis should be reported to the local health department where the patient resides.**

### **INTRODUCTION**

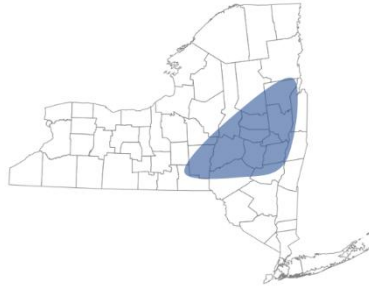
Blastomycosis is an uncommon and underdiagnosed disease typically caused by inhalation of *Blastomyces* spp. fungi, which grow in moist soil and decomposing organic matter. *Blastomyces* spp. are most prominent in the US states and in Canada along the Great Lakes and the Ohio, Mississippi, and Saint Lawrence River valleys. Humans and dogs are typically exposed to microscopic fungal spores from the air when participating in, or are near, activities that disturb soil. Not all who are exposed become sick, some may have flu-like symptoms while others present with severe illness.

### **BLASTOMYCOSIS IN UPSTATE NY**

- NYS Capital District and Central NY Region healthcare providers reported patients with blastomycosis to the NYSDOH. Some infections have been identified clustering around the Mohawk, Susquehanna, and other rivers valleys (see map of counties with reported cases below).
- Of 20 patients with available epidemiologic and clinical information from 2016-present, nearly all lacked travel history to any known endemic areas, including the Saint Lawrence River valley. The majority of patients presented with pulmonary blastomycosis, six presented with disseminated disease, and two with cutaneous blastomycosis. Culture, histopathology, or

PCR confirmed all but one case. Males have accounted for 90% of patients. Median age was 49 years (range: 15–73). There have been 6 deaths among these reported cases.

- Confirmed cases have been identified within the shaded area of this map. Additional potential cases identified by discharge diagnoses (not yet confirmed) have been identified across Upstate NY:



### **CLINICAL INFORMATION**

- While uncommon, Blastomycosis should be considered in individuals with compatible signs and symptoms from Upstate New York, particularly in those who are not responding to treatment for bacterial or viral pneumonia.
  - Approximately half of blastomycosis infections can be asymptomatic
  - Pneumonia is the most common manifestation of blastomycosis
  - Some disease is self-limited
  - Skin infections and osteomyelitis are also seen
  - Severe infections can lead to severe outcomes including death, often from respiratory failure.
  - Blastomycosis can be treated with antifungal medications
- A delay in diagnosis is common and can negatively impact patient outcome.
- *Blastomyces* spp. in clinical specimens can be seen by fungal staining, and confirmed by fungal culture or histopathology.
  - Confer with laboratory and pathology teams when blastomycosis is suspected so the appropriate staining and identification can be initiated
  - The NYSDOH Wadsworth Center Laboratory has developed a confirmatory PCR for culture isolates or fixed specimen identified as possible *Blastomyces*.
    - For further details, please contact [mycology@health.ny.gov](mailto:mycology@health.ny.gov)

### **REPORTING DISEASE**

- *Blastomyces* is considered an emerging pathogen in upstate New York. As such, cases of blastomycosis are reportable to the LHD where the patient resides. Providers who cannot reach their LHD can access 24/7/365 public health consultation from NYSDOH at **518.473.4439** during business hours and **866.881.2809** evenings, weekends, and holidays.

### **ADDITIONAL INFORMATION**

- Additional information on Blastomycosis can be found at <https://www.cdc.gov/fungal/diseases/blastomycosis/index.html>
- Link to Morbidity and Mortality Weekly Report (MMWR) [Notes from the Field: Blastomycosis Cases Occurring Outside of Regions with Known Endemicity — New York, 2007–2017.](#)
- Link to information on Wadsworth’s [Real-Time PCR Assay for Identification of Blastomyces dermatitidis in Culture and in Tissue](#)

If you have any questions, please contact the [LHD](#) or the NYSDOH Bureau of Communicable Disease Control at [bcdc@health.ny.gov](mailto:bcdc@health.ny.gov)