

## MLS Laboratory Update: Source Implicated in Fatal Case in Georgia: Multistate Outbreak of *Burkholderia pseudomallei* Infections

**October 25, 2021**

**Action Items:** Review standard procedures for referring isolates for rule out or confirmation of potential *Burkholderia pseudomallei* at MDH-PHL.

**Purpose of this Message:** To update MLS laboratories about the multistate outbreak of *B. pseudomallei* and the discovery of an implicated source in a fatal case in Georgia.

### Recommendations for Laboratorians

- If your laboratory suspects or cannot rule out *B. pseudomallei*, please refer isolate to MDH-PHL for confirmation per established bioterrorism organism rule-out procedures
- Laboratory testing involving automated identification algorithms (e.g., MALDI-TOF, 16s, VITEK-2) may misidentify *B. pseudomallei* as another bacterium. The isolate from the Texas case was initially misidentified as *B. thailandensis* by MALDI-TOF. Consider re-evaluating patients with isolates identified on automated systems as *Burkholderia* spp. (specifically *B. cepacia* and *B. thailandensis*), *Chromobacterium violaceum*, *Ochrobactrum anthropi*; and, possibly, *Pseudomonas* spp., *Acinetobacter* spp., and *Aeromonas* spp.
- Report Melioidosis (<https://www.health.state.mn.us/diseases/melioidosis/report.html>) to MDH by phone to 651-201-5414 or 877-676-5414.

### Summary:

Testing at the Centers for Disease Control and Prevention (CDC) has identified the bacterial DNA of *Burkholderia pseudomallei* in an aromatherapy room spray in the home of the Georgia resident who was infected with and died from *B. pseudomallei* infection (melioidosis) in July 2021. This Georgia patient was the fourth melioidosis case in a cluster since March 2021 that involved three other patients in Kansas, Minnesota and Texas, as described previously in [HAN Health Update 448: New Case Identified: Multistate Investigation of Non-travel Associated \*Burkholderia pseudomallei\* Infections \(Melioidosis\) in Four Patients: Georgia, Kansas, Minnesota, and Texas — 2021](#) that CDC issued on August 9, 2021.

Based on genomic analysis, the four cases in Georgia, Kansas, Minnesota, and Texas in 2021 closely match, indicating they all most likely share a common source of exposure. Genomic analysis of the four patient isolates grouped closely with strains from South Asia. None of these cases had a history of traveling outside of the continental United States. The four cases include both children and adults; two are female, and two are male. The first case, which was fatal, was identified in March 2021 in Kansas. The second and third cases, identified in May 2021 in Minnesota and Texas, were hospitalized for extended periods before being discharged to transitional care facilities. The most recent case this July, in Georgia, involved a patient who died in the hospital. Post-mortem testing in late July 2021 identified melioidosis as a cause of death. Symptoms of melioidosis are varied and nonspecific, and may include

pneumonia, abscess formation, blood infections, and neurological involvement. Due to its nonspecific symptoms, melioidosis can initially be mistaken for other diseases such as tuberculosis, which can delay proper treatment. *Burkholderia pseudomallei* may also be misidentified by some automated identification methods in laboratory settings.

The contaminated product associated with the Georgia case and identified by a positive PCR assay is the Better Homes & Gardens-branded Essential Oil Infused Aromatherapy Room Spray with Gemstones “Lavender & Chamomile” scent, manufactured in India. The spray was sold at Walmart between February and October 21, 2021, and was distributed in a limited number of stores and online nationwide. Whole genome sequencing results from the positive product sample are pending. This product was removed from stores and online marketplaces on October 21, 2021, and out of abundance of caution, the five other scents under the same brand were removed from Walmart marketplaces as well (Lemon & Mandarin, Lavender, Peppermint, Lime & Eucalyptus, and Sandalwood & Vanilla). Testing will be conducted on these additional scents as well. Recalls are being initiated by the Consumer Product Safety Commission and Walmart. CDC is working with the Kansas Department of Health and Environment, the Texas Department of State Health Services, the Minnesota Department of Health, the Georgia Department of Public Health, and federal partners to learn whether the other patients used the implicated product and if other products need to be further investigated. This investigation and response are ongoing, and CDC will share more information as it becomes available.

*Burkholderia pseudomallei*, the causative agent of melioidosis, is a Tier 1 select agent (<https://www.selectagents.gov/compliance/guidance/security-plan/section11f.htm>) that can infect animals and humans. Cases are most common in areas of the world with tropical and sub-tropical climates. The approximately one dozen cases reported to CDC annually predominantly occur in people returning from a country where the disease is endemic.

**Questions:**

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Thank you,

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**\*\*Please forward this to all appropriate personnel within your institution and Health System\*\***

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