

ASPR Information Paper on Reported Plague Death in Irkutsk Anti-Plague Institute Employee

BLUF: ASPR assesses the risk of a near-term U.S. public health emergency stemming from a suspected pneumonic plague death at Russia's Irkutsk Anti-Plague Research Institute as extremely low, with no operational deployment of personnel, equipment, or medical countermeasure assets required at this time. The United States maintains robust national-level preparedness and response capabilities against *Y. pestis*, including Strategic National Stockpile holdings sufficient for large-scale post-exposure prophylaxis and treatment. ASPR continues to monitor the situation in coordination with CDC and federal interagency partners, with priority attention to strain characterization and evidence of secondary transmission.

Situation Report

Media reporting indicates that a 28-year-old laboratory worker at the Irkutsk Anti-Plague Research Institute was hospitalized on September 29 with rapidly progressive severe pneumonia and died approximately two days later. The case is being reported as pneumonic plague, although Irkutsk authorities have publicly referred more generally to a suspected “particularly dangerous infection.” Approximately 189 contacts were reportedly quarantined or placed under medical observation. As of October 3, authorities report no symptoms among identified contacts, negative laboratory testing, and no confirmed secondary cases.

The source of exposure remains under investigation. The most consistently reported scenario is an occupational laboratory exposure involving the accidental breakage of a tube containing live *Yersinia pestis*. Other reporting has raised possible exposure during recent field work in areas near the Russia-Mongolia border where natural plague foci are present. Available public reporting does not establish an active human plague outbreak in that area or confirm the source of this case.

Plague Overview

Plague is caused by the bacterium *Yersinia pestis*. Pneumonic plague is the most rapidly progressive form of the disease and the only form capable of person-to-person transmission, generally through close exposure to respiratory droplets. Primary pneumonic plague can develop within one to three days of exposure and is almost invariably fatal if untreated, but outcomes are substantially improved when appropriate antibiotics are started early.

Domestic Preparedness and Response

The United States has robust national level preparedness and response capabilities against *Y. pestis*. *Y. pestis* is designated by CDC as a Category A bioterrorism agent and regulated as a Tier 1 Select Agent. Clinical diagnostic specimens can generally be handled using BSL-2 practices with appropriate biosafety precautions, while higher-risk work involving viable cultures, concentrated

organisms, or aerosol-generating procedures requires additional containment and may be conducted under BSL-3 conditions depending on the activity and risk assessment. CDC's Laboratory Response Network for Biological Threats (LRN-B) is equipped to test for *Y. pestis* nationwide.

Current CDC guidance identifies fluoroquinolones, gentamicin, streptomycin, and other agents, including doxycycline, as effective treatment options.

ASPR's Strategic National Stockpile has significant holdings of medical countermeasures appropriate for large-scale post-exposure prophylaxis and treatment for symptomatic plague patients should this be needed in the United States.

Additionally, ASPR's National Special Pathogen System (NSPS) provides a coordinated, tiered national infrastructure that supports rapid detection, patient transport coordination, clinical management, infection prevention and control, workforce training, and operational readiness for emerging infectious disease threats, such as *Y. pestis*. The NSPS includes the National Emerging Special Pathogens Training and Education Center (NETEC), 13 Regional Emerging Special Pathogen Treatment Centers (RESPTCs), and additional Level 2 Special Pathogen Treatment Centers (SPTCs) that expand treatment and preparedness capacity across the United States.

ASPR Assessment and Next Steps

ASPR is engaged and stands ready to support leadership and partners across HHS, the federal interagency, state, local, tribal, and territorial governments, and the private sector as this situation develops.