Investigation of Pneumonic Plague, Madagascar

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To the Editor: In an investigation of a pneumonic plague outbreak in Madagascar, Ramasindrazana et al. reported isolation of *Yersinia pestis* from 2 patients and seroconversion in 2 additional patients; these data indicated 4 (28.7%) of 14 diagnosed cases among described cases (*1*). The risk for overestimation of pneumonic plague contagion was illustrated by an outbreak in the Democratic Republic of the Congo that included cases of leptospirosis (*2*). In fact, thorough investigations in Uganda indicated that 2 index patients transmitted *Y. pestis* to only 1 caregiver each and none to 23 additional untreated close contacts (*3*). Another investigation in China showed that 3 index patients exposed 214 contacts during 3–13 days; all contacts were quarantined, and no secondary cases were reported (*4*). Transmission of *Y. pestis* by respiratory droplets requires face-to-face exposure with a coughing patient, as can occur during funerals by close contact with coughing persons who may have been exposed to the pathogen while visiting or attending the patient before he or she died. Therefore, the threat for plague epidemics fueled by pneumonic plague can be reduced by measures such as isolating patients and wearing a mask when exposure is likely (*5*).

We propose the hypothesis that only the transmission of *Y. pestis* by ectoparasites, such as lice and fleas, by close contact with infected humans can sustain outbreaks and epidemics. In plague-endemic regions, to support the appropriate management of patients and provide a rapid and accurate microbiological diagnosis, we recommend point of care laboratories, some of which are now operating in a few remote regions of Africa. In addition to direct diagnosis of disease in humans, direct detection of *Y. pestis* at the point-of-care in potential sources and vectors would facilitate understanding of how plague epidemics sustain.

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Increasing Virulence in Leprosy Indicated by Global *Mycobacterium* spp.

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To the Editor: The November 2017 issue of *Emerging Infectious Diseases* had 3 articles about leprosy, including these topics: a United States–born patient who tested positive for *Mycobacterium lepromatosis* (*1*); a lethal case of *Mycobacterium leprae* manifested as Lucio's phenomenon in Peru (*2*); and pointing out that leprosy is an emerging disease in the eastern United States, including autochthonous cases without exposure to armadillos (*3*), which were previously shown to be a zoonotic source of transmission in the United States (*4*). Not only is leprosy not disappearing in the United States and globally, but the signs are pointing to a more virulent mycobacterial infection that is likely to be a microbial adaptation to the global use of multidrug therapy, as previously reported (*5*).

Lucio's phenomenon is fortunately rare; there is no proven effective therapy for this type 3 reaction in leprosy patients. Historically, Lucio's phenomenon was confined to Mexico, mostly in cases of diffuse lepromatous leprosy, also referred to as "Leprosy bonita." In recent years, it has