

PLAGUE OUTBREAK

Madagascar

External Situation Report 05



Date of issue: 20 October 2017

1. Situation update

Grade	Cases	Deaths	CFR
2	1 297	102	7.9%

Madagascar has been experiencing a large outbreak of plague affecting major cities and other non-endemic areas since August 2017. Between 1 August and 19 October 2017, a total of 1 297 cases (suspected, probable and confirmed) including 102 deaths (case fatality rate 7.9%) have been reported. Of these, 846 cases (65.2%) were clinically classified as pneumonic plague, 270 (20.8%) were bubonic plague, one case was septicaemic plague, and 180 cases were unspecified (further classification of cases is in process). Of the 846 cases of pulmonary plague, 91 (10.8%) have been confirmed and 407 (48.1%) were probable.

Between 1 August and 15 October 2017, a total of 793 specimens were analysed by the Institut Pasteur de Madagascar (IPM). Of these, 126 (15.9%) have been confirmed either by polymerase chain reaction (PCR) or bacteriological culture, 242 (30.5%) were probable after testing positive on rapid diagnostic tests (RDT) and 425 (53.6%) remain suspected (additional laboratory results are in process). Eleven strains of *Yersinia pestis* have been isolated and were sensitive to antibiotics recommended by the National Program for the Control of Plague.

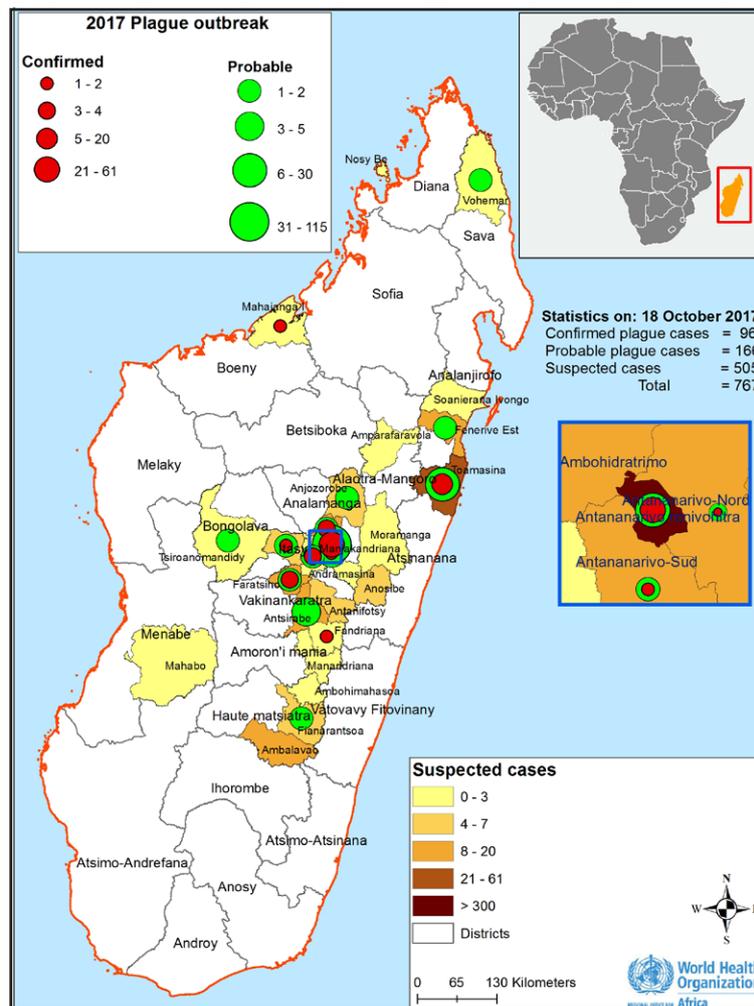
Overall, 33 out of 114 (30%) districts in 14 of 22 (63.6%) regions in the country have been affected by pulmonary plague. The district of Antananarivo Renivohitra has reported the largest number of pulmonary plague cases, accounting for 63.6% of all the cases.

On 19 October 2017, 1 621 out of 2 470 (65.6%) contacts were followed up and provided with prophylactic antibiotics. A total of 372 contacts completed the 7-day follow up without developing symptoms.

Plague is endemic on the Plateaux of Madagascar, including Ankazobe District where the current outbreak originated. There is a seasonal upsurge, predominantly of the bubonic form, which occurs every year, usually between September and April. The plague season began earlier this year and the current outbreak is predominantly pneumonic and is affecting non-endemic areas including major urban centres such as Antananarivo (the capital city) and Toamasina (the port city).

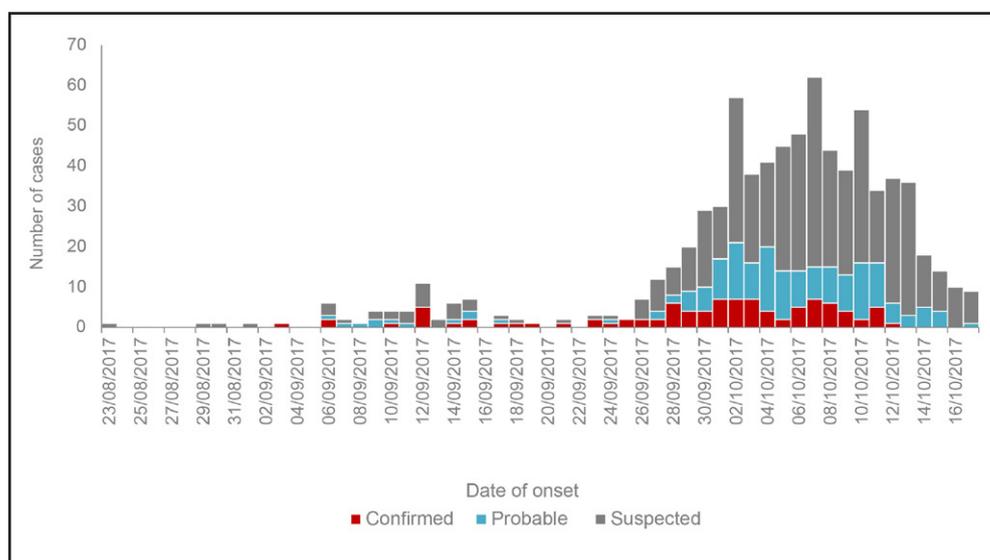
There are three forms of plague, depending on the route of infection: bubonic, septicaemic and pneumonic (for more information, see the link <http://www.who.int/mediacentre/factsheets/fs267/en/>).

Figure 1. Geographical distribution of cases of plague in Madagascar as of 18 October 2017



As this is a rapidly changing situation, the reported number of cases and deaths, contacts being monitored and the laboratory results are subject to change due to enhanced surveillance, contact tracing activities, ongoing laboratory investigations, reclassification, and case, contact and laboratory data consolidation.

Figure 2. Evolution of confirmed, probable and suspected cases of pulmonary plague in Madagascar, 1 August - 18 October 2017



Current risk assessment

While the current outbreak began with one large epidemiologically linked cluster, cases of pneumonic plague without apparent epidemiologic links have since been detected in regions across Madagascar, including the densely populated cities of Antananarivo and Toamasina. Due to the increased risk of further spread and the severe nature of the disease, the overall risk at the national level is considered very high. The risk of regional spread is moderate due to the occurrence of frequent travel by air and sea to neighbouring Indian Ocean islands and other southern and east African countries, and the observation of a limited number of cases in travellers. This risk is mitigated by the short incubation period of pneumonic plague, implementation of exit screening measures in Madagascar and scaling up of preparedness and operational readiness activities in neighbouring Indian Ocean islands and other southern and east African countries. The overall global risk is considered to be low.

The risk assessment will be re-evaluated by WHO based on the evolution of the situation and the available information.

Strategic approach to the prevention, detection and control of plague

WHO recommends the implementation of proven strategies for the prevention and control of plague. These strategies include (i) coordination of the response, (ii) enhanced surveillance, (iii) laboratory confirmation, (iv) contact identification and follow-up, (v) case management, (vi) infection prevention and control, (vii) safe and dignified burials, (viii) social mobilization and community engagement, (ix) logistics, (x) risk communication, (xi) vector control, (xii) partner engagement, (xiii) research and (xiv) resource mobilization.

2. Actions to date

Coordination of the response

- A high level coordination forum to provide strategic and policy directions to the plague outbreak response has been established, chaired by the Prime Minister. Similarly, the Country Humanitarian Team of the United Nations System established a strategic coordination platform for partners, chaired by the Resident Coordinator.
- The health response is coordinated by the Ministry of Public Health, co-led by WHO and supported by agencies and partners directly involved in the health response. The health sector response is organized into four major committees: (i) surveillance, (ii) community response, (iii) case management, and (v) communication; with the logistics committee crosscutting all committees.
- Coordination of partners in the Health cluster has been strengthened to ensure effectiveness, avoid duplication in the field and ensure efficient coverage of the affected areas. The Health cluster is having weekly meetings, with some partners participating in the national coordination platforms.
- Since the declaration of the outbreak, WHO (Country Office, Regional Office for Africa (AFRO) and Headquarters (HQ) are providing direct technical and operational support to the country, and collaborating closely with partners, including partners in the Global Outbreak Alert and Response Network (GOARN) to ensure rapid and effective international assistance to this outbreak response.
- WHO has classified the event as a Grade 2 emergency, based on its internal Emergency Response Framework. Accordingly, WHO has established its Incident Management System (IMS), as well as repurposed/mobilized internal and external resources.
- The regional emergency operations centres (EOC) are fully operational in five hotspots areas, including Antananarivo, Tamatave, Mahajunga, Fionarantsoa, and Fenerive. Other sub-national coordination capacities are being assessed, depending of the epidemiological situation.

Surveillance, contact identification and follow-up

- A total of 1 800 community health workers in Antananarivo and 2 632 from other affected regions are carrying out contact tracing activities, being supervised by 340 medical doctors and students.
- Surveillance activities at the points of entry (airports and ports) are being strengthened.
- Plans are underway to train community health workers to detect and investigate community deaths.

Laboratory

- Diagnostic capacity for plague is provided at the Institut Pasteur de Madagascar (IPM). Since 27 September 2017, IPM distributed 2 074 rapid diagnostic tests (RDTs) to Toamasina (205), the Centers Hospitaliers d'Antananarivo (719) and the Plague Department of Ministry of Public Health (367).

Case management

- Nine plague treatment centres have been established, of which six are in Antananarivo. The treatment centres are supported by IFRC, MSF, MdM, UNICEF, and WHO.
- Treatment protocol has been updated to cover a large number of respiratory diseases.

Infection prevention and control

- A total of 300 water, sanitation and hygiene (WASH) specialists have been trained and are now working in hospitals.
- Training of healthcare workers on infection prevention and control (IPC) started on 19 October 2017, with 45 staff trained. The training will continue on 20 and 21 October 2017.

Social mobilization, community engagement and risk communications

- A telephone line number 910, referred to as a green line, has been set up and is functional for reporting of alerts and rumours. The line is also used to request ambulance services.
- Journalists were trained on how and what to communicate about plague.
- Religious leaders have been engaged to disseminate appropriate preventive messages.
- A rumour-monitoring unit has been established, to inform development of health education messages for the public.
- A protocol for safe and dignified burials has been tested with success in the community in Antananarivo and Tamatave.
- Social mobilizers have joined contact tracing teams in order to reduce resistance from the community.

Logistics

- A total of 1.2 million doses of antibiotics have been delivered to the national authorities in the country.
- Coordination of partners is ongoing to map needs and ensure better distribution of resources.
- USAID has donated 18 000 respirator masks, 100 000 simple masks and 10 vehicles to support operations of the Department of Public Health.

Resources mobilization

- The joint response plan between the Government of Madagascar and its partners has been adjusted to US\$ 9.5 million, in view of the multisectoral response to the urban plague outbreak.
- To date, WHO has provided US\$ 1.5 million, UNICEF US\$ 500 000, the International Federation of the Red Cross US\$ 250 000, UNDP US\$ 300 000, and UNFPA US\$ 331 000. In addition, other organizations have provided assistance in kind: China has provided medicines worth US\$ 200 000.

Partnership

- In support of the Ministry of Public Health and the other national authorities, WHO and the GOARN partners deployed emergency response teams. By 16 October 2017, 114 experts (43 through WHO external recruitment, 17 CDC Polio Stop Team, 11 GOARN, and 43 internal WHO staff) have been deployed.

- WHO and the GOARN continue to mobilize partners to provide technical, personnel and logistical support to the country, and are working closely with the United Nations Clusters, stakeholders and donors to ensure appropriate support to the outbreak response.

Preparedness/operations readiness

- Nine countries and overseas territories have been identified as priority countries in the African region for plague preparedness and readiness by virtue of having trade and travel links to Madagascar. These countries and overseas territories include Comoros, Ethiopia, Kenya, Mauritius, Mozambique, La Réunion (France), Seychelles, South Africa, and Tanzania.
- The key readiness actions being implemented in each priority country, in coordination and collaboration with major partners (UNICEF, CDC, ECDC, Red Cross/Red Crescent Societies etc.), include:
 - Increasing public awareness on plague and enhancing surveillance for the disease particularly at points of entry, such as air and sea ports;
 - Conducting specific contingency planning with all health sector partners;
 - Prepositioning of equipment and supplies, including PPE, antibiotics, and other equipment required to safely identify plague cases.
 - Providing in-country technical assistance in a range of areas, including surveillance, training on case detection, contact tracing, social mobilisation and risk communication.
- WHO has deployed two epidemiologists to support Seychelles to strengthen in-country preparedness and response to the probable cases. WHO is also deploying a risk communications expert to support the country.
- WHO is prepositioning equipment and supplies, including PPE, antibiotics and other equipment required to safely identify plague cases, in Comoros, Mauritius, Mozambique, Seychelles, and Tanzania.

IHR Travel measures

- On 3 October 2017, WHO issued advice for international travellers to Madagascar ¹.
- As of 8 October 2017, WHO and Ministry of Public Health of Madagascar initiated measures at points of entry to avoid international spread of plague. At the International Airport in Antananarivo, these measures include: filling a departure form at the airport (to identify passengers at risk); temperature screening of departing passengers and referring passengers with fever to airport physicians for further consultation; passengers with symptoms compatible with pneumonic plague are immediately isolated at the airport and investigated via rapid diagnostic test, and notified under standard alert protocol. Search for contacts would be done locally and close contacts would be placed on prophylactic treatment. Symptomatic individuals are not allowed to travel. A WHO GOARN team (CDC and INVS/SPF) is providing technical support at the airport to finalize the exit screen protocol with the airport and Points of Entry authorities, and to implement an evaluation of the exit screening protocol.
- Some of the neighbouring countries, namely Comoros, Mauritius and South Africa have put in place measures to protect their population, including entry screening, information provision to passengers on how to seek medical care in case of symptoms and other preparedness measures.
- On 17 October 2017, there were media reports of travel advisories being implemented by Ireland, Hong Kong and United Arab Emirates.
- Based on the available information to date, the risk of international spread of plague appears very low. WHO advises against any restriction on travel or trade on Madagascar based on the available information.
- International travellers arriving in Madagascar should be informed about the current plague outbreak and that plague is endemic in Madagascar (see WHO advice for travellers mentioned above).
- WHO has produced and shared with neighbouring countries a draft guidance note on International Health Regulation 2005 (IHR) requirements related to travel to support preparedness and readiness activities at points of entry, especially airports and seaports.
- On 11 October 2017, the Seychelles Ministry of Health announced (in a press release on its website) several measures against pneumonic plague. As many of these measures significantly interfere with

¹ <http://www.who.int/ith/updates/20171003/en/>

international traffic, on 13 October 2017, the Ministry of Health informed WHO that it will provide the scientific evidence and public health rationale for these measures, as required by Article 43.3 of the International Health Regulations (IHR, 2005).

3. Summary of public health risks, needs and gaps

While progress has been made, the main focus at this stage is to strengthen effectiveness and coverage of outbreak control measures, including investigation of new cases and contact tracing, provision of outbreak response logistics, enhancing infection prevention and control to mitigate exposure of healthcare workers, vector control, and targeted operational research. Effective risk communication, social mobilization and community engagement are critical. In addition, preparedness and readiness in neighbouring regions and countries, including at the points of entry, should be enhanced.

Proposed ways forward include:

- Continue strengthening response operations at the community level, especially case detection and referral.
- Providing adequate supplies of personal protective equipment and rapid diagnostic test kits at operational level.
- Improving community-based surveillance systems to facilitate early detection of cases.
- Enhance risk communication and social mobilization through the various communication channels.
- Continue with preparedness and readiness activities in the high risk countries.

Annex 1: Timeline of reported events during the plague outbreak in Madagascar, 11 September - 10 October 2017

