

PLAGUE OUTBREAK

Madagascar

External Situation Report 04



Date of issue: 17 October 2017

1. Situation update

Grade

2

Cases

849

Deaths

67

CFR

7.9%

Madagascar is experiencing a large outbreak of plague affecting major cities and other non-endemic areas since August 2017. Between 1 August and 15 October 2017, a total of 849 cases (suspected, probable and confirmed) including 67 deaths (case fatality rate 7.9%) have been reported from 37 (32.5%) out of 114 districts in the country. Of these, 568 cases (67%) were clinically classified as pneumonic plague, 155 (18.3%) were bubonic plague, one case was septicaemic plague, and 125 cases were unspecified. At least 39 healthcare workers have contracted plague since the beginning of the outbreak.

Of the 849 reported cases, 78 (9.2%) were confirmed, 304 (35.8%) were classified as probable after testing positive on rapid diagnostic tests (RDT) and 467 (55%) remain suspected. Eleven strains of *Yersinia pestis* have been isolated and were sensitive to antibiotics recommended by the National Program for the Control of Plague.

Eighteen (81.2%) out of 22 regions in the country, including traditionally non-endemic areas, have been affected. The district of Antananarivo Renivohitra has been the most affected, accounting for 57.1% of the reported cases. As of 16 October 2017, a total of 3745 contacts were identified, 79.2% (2 967) of them were followed up on the day of reporting.

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/>).

A probable case of plague in Seychelles

On 10 October 2017, the Seychelles Ministry of Health notified WHO of a probable case of pneumonic plague. The probable case is a 34-year-old man who had visited Madagascar and returned to Seychelles on 6 October 2017. He developed symptoms on 9 October 2017 and went to a local health centre. Based on a medical examination and reported history of recent travel to Madagascar, pneumonic plague infection was suspected and he was immediately referred to hospital where he was isolated and treated.

A rapid diagnostic test (RDT) performed within the country on 11 October 2017 on a sputum sample was weakly positive. The specimen was sent to the WHO Collaborating Center for Plague at the Institut Pasteur in Paris, France.

Between 9 and 11 October 2017, eight of his contacts developed mild symptoms and were isolated and treated. Two other suspected cases, without any established epidemiological link to the probable case, were identified, isolated and treated.

In total, 10 laboratory specimens were collected from the probable case, his contacts and the two suspected cases, and shipped to the Institut Pasteur in France for testing. Laboratory results released by the Institut Pasteur in France on 17 October 2017 showed that all 10 specimens were negative for plague. All the suspected cases have now been discharged after completing their course of treatment.

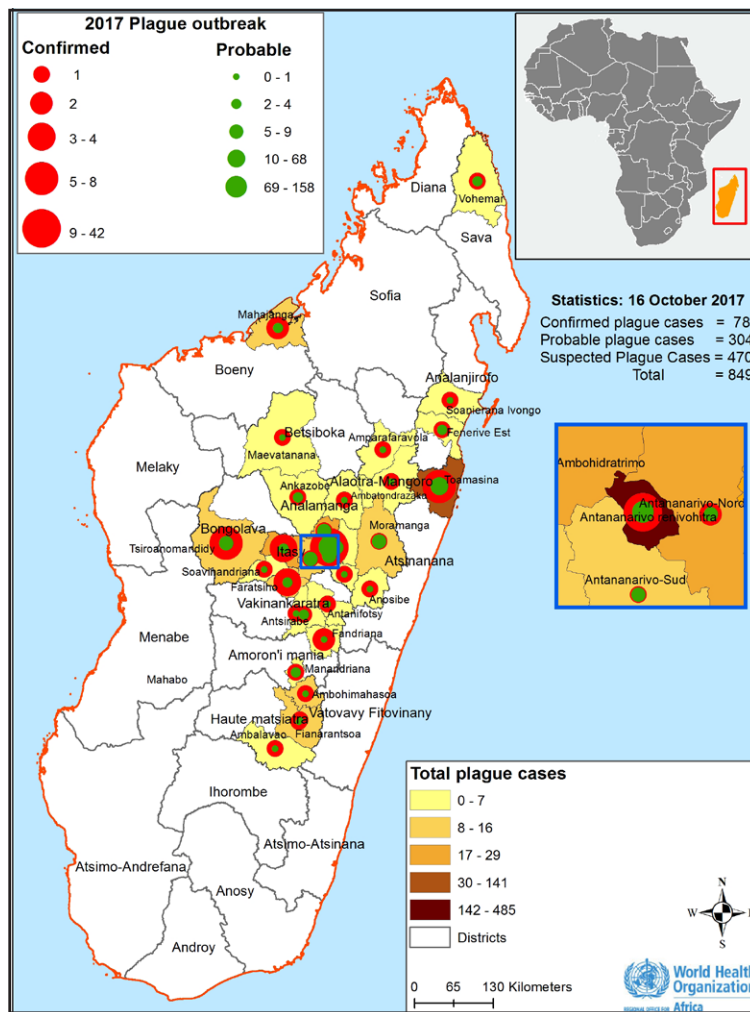
Over 320 contact persons of the probable case, including 41 passengers and seven crew from the flight, 12 close family members, and 18 staff and patients from the health centre visited by the probable case, completed follow up and monitoring on 13 October 2017. All were provided with a prophylactic course of antibiotics to prevent the disease.

Overall, a total of 1 223 contacts have been registered and are being followed up. Of these, 833 contacts were given prophylactic antibiotics. Four suspected cases have been identified from among contacts and are being monitored.

To date, no plague cases have been confirmed in Seychelles.

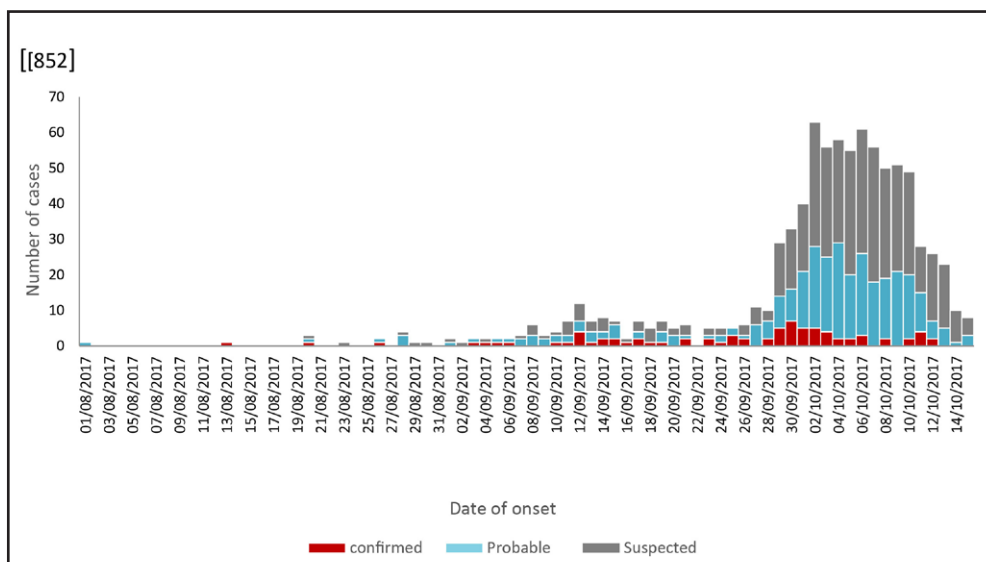
WHO is working with the Seychelles health authorities to reduce the risk of plague spreading from neighbouring Madagascar, which is experiencing an unprecedented outbreak since August 2017.

Figure 1. Geographical distribution of cases of plague in Madagascar as of 16 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. Distribution of confirmed, probable and suspected cases of plague in Madagascar, 1 August - 16 October 2017



Current risk assessment

While the current outbreak was triggered by the occurrence of 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 eastern 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 and scaling up of preparedness and operational readiness activities in neighbouring Indian Ocean islands and other southern and eastern 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.
- 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 emergency operations centre (EOC) in Tamatave is fully operational. Other sub-national coordination capacities are being investigated.

Surveillance

- A total of 1 800 community health workers have been trained to strengthen early warning and surveillance. In addition, 340 medical doctors and students have been trained as supervisors.

Laboratory

- Diagnostic capacity for plague is provided at the Institut Pasteur de Madagascar (IPM). Since 27 September 2017, IPM distributed 1 918 rapid diagnostic tests (RDTs) to Toamasina (205), the Centers Hospitaliers d'Antananarivo (619) and the Plague Department of Ministry of Public Health (282).

Contact identification and follow-up

- A total of 1 779 community health workers and 122 supervisors have been trained in the city of Antananarivo, with the support of WHO, to carry out contact tracing activities. Contact tracing and follow-up activities effectively started on 12 October 2017.

Case management

- Four plague treatment centres are operational, including three in the city of Antananarivo and one in Tamatave, established with the support of Médecins du Monde, MSF, UNICEF, and WHO.
- Response teams are being deployed to affected cities to ensure proper organization of services, quality of care and implementation of measures to prevent the spread of the disease in the treatment centres.

Infection prevention and control

- The Ministry of Water, Energy and Hydrocarbons and its decentralized regional directorates, in collaboration with UNICEF, have distributed hygiene and disinfection equipment to 260 health centres, 869 schools in Tamatave and to other places including public transport stations and prisons in Antananarivo.
- UNICEF and Action contre la Faim had a working session to harmonize protocol and training materials for hygienists working in plague treatment centres and hospital triage.
- The healthcare workers in the plague treatment centres were oriented on the correct use of personal protective equipment (PPE), pending formal training.

Social mobilization, community engagement and risk communications

- Risk communication, community engagement and social mobilization activities are ongoing. A total of 27 000 posters and brochures have been produced for communication and community mobilization. Health education messages are being disseminated through short message service (SMS), radios and televisions.
- A total of 194 community leaders have been trained to facilitate community mobilization.
- A telephone line number 910, referred to as a green line, has been set up and functional for reporting of alerts and rumours.

Logistics

- WHO has supplied more than 150 000 sets of personal protective equipment (PPE) to Madagascar, UNICEF is sending 100 000 masks and France is organizing the supply of 300 000 examination gloves.
- Following the distribution plan, 38 most affected districts have received medicines, disinfectants and personal protective equipment (PPE).
- Ambulances have been distributed to treatment centres in Antananarivo, to facilitate transportation of patients.
- About 4 000 pieces of infrared thermometer are being shipped to Madagascar. About 400 dusters for anti-vector control are also being shipped.

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\$ 0.5 million, 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, human and logistical support to the country, and work 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 high risk for plague outbreak by virtue of having trade and travel links to Madagascar. These priority countries include Comoros, Ethiopia, Kenya, Mauritius, Mozambique, Reunion, 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. Additional WHO deployments to support preparedness are planned in the next 72 hours.

IHR Travel measures

- On 3 October 2017, WHO issued advice for international travellers to Madagascar¹.
- As of 8 October 2017, WHO and the Ministry of Public Health initiated measures to avoid international spread of plague. These measures include exit screening of departing passengers at the International Airport through temperature screening, interview with and provision of treatment to symptomatic passengers and prophylactic antibiotics to passengers at risk.
- 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.
- 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 high risk 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 Seychellois Ministry of Health announced (in a press release on its website) several measures against pneumonic plague. As many of these measures significantly interfere with 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).

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

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.
- Providing adequate supplies of personal protective equipment and rapid diagnostic test kits to 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

