# PLAGUE OUTBREAK — Madagascar

**External Situation Report 07** 



Date of issue: 31 October 2017

1. Situation update

Grade 2

Cases 1 801

eaths C

**7**%

WHO continues to support the Ministry of Public Health and other national authorities in Madagascar to monitor and respond to the outbreak of plague. The number of new cases of pulmonary plague is declining across the country. While progress has been made in response to the plague outbreak in Madagascar, sustainability of ongoing operations (during the outbreak and through the plague season usually from September to April) remains critical.

From 1 August to 30 October 2017, a total of 1 801 suspected cases of plague, including 127 deaths (case fatality rate 7%), were reported. Of these, 1 111 (62%) were clinically classified as pulmonary plague, 261 (15%) were bubonic plague, one was septicaemic, and 428 were unspecified (further classification of cases is in process). Since the beginning of the outbreak, 71 healthcare workers (with no deaths) have been affected.

Of the 1 111 clinical cases of pneumonic plague, 257 (23%) have been confirmed, 374 (34%) are probable and 480 (43%) remain suspected (additional laboratory results are in process). Fourteen strains of *Yersinia pestis* have been isolated and are sensitive to antibiotics recommended by the National Program for the Control of Plague.

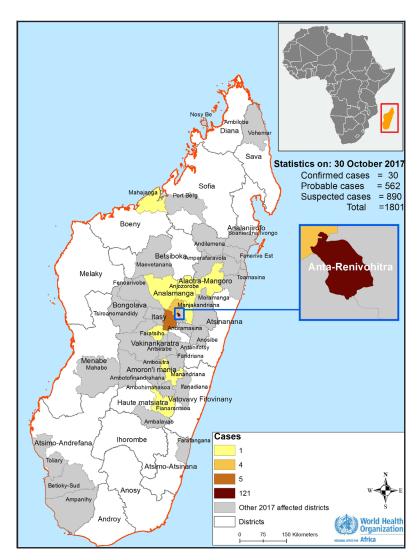
Overall, 51 of 114 (45%) districts in 16 of 22 (73%) regions of Madagascar have been affected. Analamanga Region has been the most affected, with 64% (1 149) of all recorded cases.

About 83% (5 357) of 6 492 contacts identified thus far have completed their 7-day follow up and a course of prophylactic antibiotics. A total of nine contacts developed symptoms and became suspected cases. On 30 October 2017, 925 out of 972 (95%) contacts under follow-up were reached and provided with prophylactic antibiotics.

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

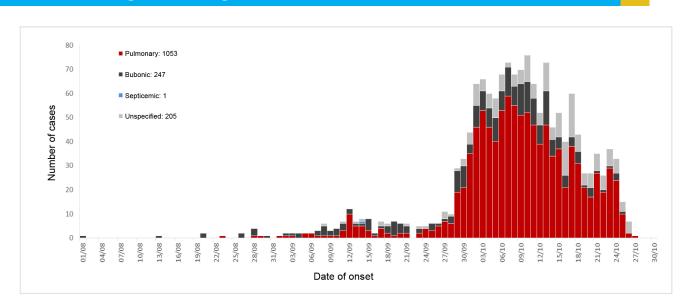
There are three forms of plague, depending on the route of infection: bubonic, septicaemic and pneumonic (for more information, see the link http://www.who.int/mediacentre/factsheets/fs267/en/).

Figure 1. Geographical distribution of cases of plague in Madagascar as of 30 October 2017



NB: The figures in the External Situation report are subject to change due to continuous data consolidation, cleaning and reclassification, and ongoing laboratory investigations. The data reported are based on best available information reported by the Ministry of Public Health.

Figure 2. Distribution of the total number of plague cases reported in Madagascar, 1 August - 30 October 2017



## **Current risk assessment**

The risk assessment is in the process of being reviewed based on the evolving situation. 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 in the central highlands and Toamasina on the east coast of Madagascar. 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 a limited number of cases observed in travellers. This risk of international spread is mitigated by the short incubation period of pneumonic plague, implementation of exit screening measures and advice to traveller to 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 inter-Ministerial coordination forum, chaired by the Prime Minister, has been established to provide strategic and policy directions to the plague outbreak response. 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 engagement and education, (iii) case management, and (v) communication; with the logistics committee crosscutting all committees.
- Ocordination 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. The 4W matrix is being updated.
- Cross sectoral non-Health actors (media, transport, defence, education, etc.) are being coordinated by the National Risk and Disaster Management Office (BNGRC).
- 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), and has repurposed internal resources and mobilized 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, and will be implemented and strengthened based on the epidemiological situation.
- The Minister of Public Health, accompanied by the WHO Incident Manager, conducted a field visit to Tamatave between 28 and 29 October 2017 to review the response measures being implemented and encourage the response teams to continue their efforts in the field.

# Surveillance, contact identification and follow-up

- An emergency and death alert system, known as Emergency PESTE 910, has been set up, with the support of UNICEF, PSI and WHO. Between 13 and 23 October 2017, 4 379 alert calls were recorded. Of these, 67 involved suspected plague cases and 12 were related to deaths. These alerts have/are being investigated.
- The Ministry of Public Health, in close collaboration with the Institut Pasteur Madagascar and WHO, continues with collection, compilation, updating, and cleaning of the plague database, and preparation of situation and epidemiological reports.
- An automated data collection tool (VOOZANOO), which transmits district data to the central level, is being implemented in all relevant regions.
- 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.

# Laboratory

- Diagnostic capacity for plague is provided at the Institut Pasteur de Madagascar (IPM). All the samples collected are analyzed at IPM and the results are shared regularly.
- Since 27 September 2017, IPM distributed 2 074 rapid diagnostic tests (RDTs) to Toamasina (205), the Centre 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.
- USAID has provided six mobile clinics to transport patients to hospitals within Antananarivo.

# Infection prevention and control

- The partners supporting water, sanitation and hygiene (WASH) and infection prevention and control (IPC) activities during the plague outbreak include UNICEF, WHO, ACF, MSF, USAID RANOWASH, CDC, OCHA, and others.
- UNICEF supported distribution of WASH and IPC supplies, materials and equipment to three new treatment centres in Ambalavao, Antsirabe and Fianarantsoa. Some of the materials include handwash facilities, garbage cans, laundry soap, chlorine powder, hydroalcoholic solutions, sprays, and personal protective equipment.
- Action Against Hunger installed a bladder tank.
- Additional healthcare workers from the three plague treatment centres in Ambalavao, Antsirabe and Fianarantsoa were trained on IPC measures.
- A total of 198 staff comprising of hygienists, guards, launderers, coordinators, and logisticians have been hired in the six treatment centres in Antananarivo and 70 additional staff for treatment centres in Tamatave and Fenerive East.
- WHO engaged the Malagasy Red Cross to take responsibility for dignified and safe burial, based on a protocol that is being validated. Training of trainers for the burial teams is ongoing, targeting 2 660 volunteers for the 22 regions.

# Social mobilization, community engagement and risk communications

- Social mobilization and community engagement training modules in French and Malagasy have been developed. Training of trainers using the new modules started on 30 October 2017 in Tamatave and Antananarivo. Eventually, a total of 768 volunteers and 192 Fonkontany leaders in Tana and 548 volunteers and 137 supervisors in Tamatave will be trained.
- Training of hospital receptionists, intended to improve communication with and provide a cordial welcome to patients, medical staff and families of patients, has been planned.

- The dignified and safe burial protocol has been finalized and submitted to the national authorities for validation. Implementation of this protocol is expected to reduce reluctance and encourage communities to report all cases of deaths. A report of pretests of the protocol conducted in Antanarivo Ville and Tamatave shows that 90% of the population consulted were in favour of the sensitive measures proposed in the protocol.
- A series of recommendations have been developed to guide medical staff handle patients and their families in care centres and hospitals in a sensitive manner.
- The WHO risk communication team are managing a message bank to ensure that the technical content of all messages is appropriate and validated by specialists from each pillar. The message bank allows harmonization of all messages used by the various communication media. The messages are reviewed by the national teams in Antananarivo and Tamatave to facilitate customization to the regional context.
- UNICEF supported production of field-tested public awareness/education materials (posters, brochures, radio/television spots). A total of 69 000 posters and brochures have been produced and distributed, including to partners in the Ministries of Transport and Tourism, church groups and other key influencers.

# **Logistics**

- The logistics team carried out a supervisory visit along the southern axis (Antsirabe Ambusitra Fianarantsoa) to assess logistics needs at regional and district levels.
- The logistics team recruited and deployed 15 hygienists to various treatment centres and hospitals in Tana.
- The Logistics Committee is conducting regular meetings to improve supply management chain.
- UNICEF donated 23 tents, 50 beds, 150 adult body bags, 64 children's mortuary bags, 300 boxes of 100 pairs of gloves, 12 000 surgical masks, 400 masks, and three inter-agency emergency health kits.
- A total of 1.2 million doses of antibiotics donated by WHO have been delivered to the national authorities in the country.
- 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. As of 19 October 2017, only 26% of the US\$ 9.5 million joint response plan budget has been funded.
- 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. The funds received to date, have been largely consumed.
- Ontributions from the private sector are increasing: the Oilers Group donated US\$ 16 000, Canal+ offered free message broadcasting, DHL offered storage facilities, and Ambatovy, the Orange Solidarity of Madagascar Foundation and the BFV Bank Société Générale have donated personal protective equipment (PPE).

#### **Partnership**

- 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 of 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 and manage potential 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 three epidemiologists, and a risk communication officer to support Seychelles to strengthen in-country preparedness and response to potential imported cases.
- 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<sup>1</sup>.
- As of 8 October 2017, WHO and Ministry of Public Health of Madagascar initiated measures at points of entry to mitigate 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 under 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 screening protocol with the airport and Points of Entry authorities, and to implement an evaluation of the exit screening protocol.
- On 27 October 2017, a media report that Kenya had added Seychelles to the list of countries with plague together with Madagascar has been denied by the Kenyan health authorities.
- Several countries have put in place health measures that do not interfere significantly with international traffic (media reports). Some of the health measures include:
  - Travel advice to exercise a high degree of caution: Australia, Portugal, South Africa, and United Kingdom
  - Travel advice to avoid unnecessary travel to Madagascar: Ireland, Kenya, Mauritius, Seychelles, and United Arab Emirates
  - Accelerate preparedness at airports/ports: Comoros, Hong Kong, Kenya, Mauritius, Mozambique, Reunion, and South Africa
  - Entry screening: Hong Kong (thermal screening), Kuwait (health inspection report) and Mozambique

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