# **EMERGENCY GUIDELINE**

# Implementation and management of contact tracing for Ebola virus disease

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# List of Abbreviations

CDC	United States Centers for Disease Control and Prevention
ETU	Ebola Treatment Unit
ETC	Ebola Treatment Centre
EVD	Ebola Virus Disease
FIMS	Field Information Management System
PPE	Personal Protective Equipment
RT-PCR	Reverse transcriptase polymerase chain reaction
WHO	World Health Organization
WHO AFRO	World Health Organization Regional Office for Africa
VHF	Viral Haemorrhagic Fever

# Acknowledgements

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The following individuals contributed to the development of this guideline:

- Dr Benedetta Allegranzi<sup>1</sup>
- Dr Kristina Angelo<sup>2</sup>
- Dr Frederick Angulo<sup>2</sup>
- Dr Philippe Barboza<sup>1</sup>
- Dr Eric Bertherat<sup>1</sup>
- Dr Pierre Formenty<sup>1</sup>
- Dr Peter Gaturuku<sup>3</sup>
- Dr Ashley Greiner<sup>2</sup>
- Dr Stéphane Hugonnet<sup>1</sup>
- Dr Benido Impouma<sup>3</sup>
- Dr Kamara Kande-Bure O'Bai<sup>1</sup>
- Dr Francis Chisaka Kasolo<sup>3</sup>
- Dr Asheena Khalakdina<sup>1</sup>
- Dr Margaret Lamunu<sup>1</sup>
- Dr Charles Okot Lukoya<sup>4</sup>
- Dr Jean-Bosco Ndihokubwayo<sup>3</sup>
- Dr Refaya Ndyamuba<sup>4</sup>
- Dr Patrick Nguku<sup>5</sup>
- Dr Edith Nyangoma<sup>2</sup>
- Dr Mikiko Senga<sup>1</sup>
- Dr Catherine Smallwood<sup>1</sup>
- Dr Julie Storr<sup>1</sup>
- Dr Constanza Villenas<sup>1</sup>
- Dr Joseph Francis Wamala<sup>6</sup>
- Ms Joyce Witherspoon<sup>1</sup>
- Dr Yahaya Ali Ahmed<sup>3</sup>
- 1. World Health Organization, HQ
- 2. United States Centers for Disease Control and Prevention
- 3. World Health Organization, AFRO
- 4. World Health Organization, Uganda
- 5. Nigeria Field Epidemiology and Laboratory Training Program
- 6. Ministry of Health, Uganda

# 1. Introduction

## **1.1 Purpose of the document**

The scale, duration, and complexity of the Ebola virus disease (EVD) outbreak in West Africa have underscored the need for prompt and effective preparation for and implementation of containment measures. A person with EVD can spread the disease to others as soon as he or she begins to have symptoms; therefore, it is crucially important to identify and isolate symptomatic persons immediately to stop the disease from spreading. Contact tracing is one of the critical tools available to effectively break chains of transmission and control EVD outbreaks.

Contact tracing is the process of identifying, assessing, and managing people who have been exposed to a disease to prevent onward transmission. People who may have been exposed to EVD are systematically followed for 21 days (the maximum incubation period for the disease) from the date of the most recent exposure. This process allows for the rapid identification of people who become symptomatic. Identifying people at the onset of symptoms and promptly isolating them reduces exposure to other persons, preventing subsequent EVD infections. Additionally, prompt isolation and admission of the symptomatic person to a treatment facility decreases the delay to supportive treatment, which improves the likelihood of survival.

Experience from previous EVD outbreaks has demonstrated contact tracing's efficacy in stopping ongoing EVD transmission. During the 2014 EVD outbreak in West Africa, however, contact tracing has posed serious challenges. Factors include the wide geographical expanse of the EVD outbreak (involving urban and rural areas), insufficient resources (human, financial and logistical), community resistance, and to some extent, limited access to affected communities. The procedures for setting up contact tracing have varied significantly among the stakeholders involved, with no standardized approach. The absence of systematic implementation and management methods of contact tracing has led to delayed and often ineffective contact tracing, contributing to ongoing transmission.

In order to provide a practical tool to implement effective, context-specific contact tracing, WHO Headquarters, WHO Regional Office for Africa (AFRO), and the U.S Centers for Disease Control and Prevention (CDC) have partnered to develop a revised version of the existing WHO AFRO Contact Tracing Guidelines (September 2014).<sup>1-3</sup> This operational document has been prepared to guide the implementation and management of contact tracing in all countries preparing for and managing EVD outbreaks. In addition to discussing potential solutions to common contact tracing process. The guide also provides direction regarding the monitoring and evaluation of the contact tracing previous EVD outbreaks as well as the most recent 2014 EVD outbreak in West Africa.

### 1.2 Target audience

This guide is intended for all countries preparing to implement contact tracing. Additionally, this guide can be used by countries currently engaged in contact tracing activities. National and sub-national emergency management committees, epidemiologists, surveillance officers and volunteer organizations involved in EVD preparedness and response activities may use this document to plan, implement and manage contact tracing. The guide should be adapted to the local context in its application.

### 1.3 Contact tracing in the overall EVD response

Contact tracing is a critical tool for controlling an EVD outbreak, but represents only one aspect of a multifaceted control strategy for EVD outbreaks (Figure 1). Contact tracing is intricately connected to case finding (surveillance) and case investigation processes; the detection of an EVD case activates the case investigation process, at which time contacts are identified, initiating the contact tracing process. These efforts further rely on other concurrent aspects of the EVD response such as social mobilization, logistics, case management, and laboratory capacity.

Contact tracing can only be effective if it is immediately implemented after case finding and efficiently managed, thus, all aspects of the response need to be addressed when preparing for, implementing, and managing contact tracing.



Figure 1: Structure of the different committees involved in EVD outbreak control activities

### 1.4 General considerations for contact tracing

Contact tracing relies on active participation and cooperation from the affected communities to be effective. To develop a relationship of trust between public health officials and the community, every effort should be made to engage communities Involving key local community members, stakeholders and volunteers very early in response planning and preparation is important to cultivate community ownership and trust in the health system. Communities should have the confidence to cooperate with teams that are conducting case investigation and contact tracing and support the referral of symptomatic contacts to designated isolation and treatment facilities.

Social mobilization and community engagement efforts are critical. Contact tracing is best undertaken in settings where appropriate, accurate and culturally sensitive communication and messaging exist. Insensitive and inappropriate messaging and practices during outbreaks can be counterproductive. For example, enrolment of contacts relies on their willingness to be followed; they may be more or less willing to be followed based on their understanding of EVD, the stigma associated with being a contact (from peers, family, or the community), and how they feel about the overall EVD response. They also may not want to be

identified or found if prohibitions from work or school are likely, and they may not want to report other contacts because of this stigma and potential retaliation. Public misinterpretations and perceptions of contact lists as a list of people who are likely to die may lead to community resistance and impede contact tracing. Therefore, the health communication and messaging as well as psycho-social support provided to the community are critical. The following measures may enhance community engagement and avoid stigma:

- Engage and educate community leaders regarding EVD infection, transmission, and the steps communities can take to combat it.
- Engage religious centres, such as churches and mosques, to provide accurate messaging to the community.
- Use early health communication and education efforts, if possible, before the first introduction of EVD.
- Use early psychosocial support to overcome the fear associated with EVD.
- Educate the media on the importance of confidentiality for cases and contacts.

Successful contact tracing requires skills in the assessment of EVD symptoms, interviewing techniques and counselling. Persons who conduct contact tracing should have investigative skills to find and track all potential contact, and the ability to analyse the evidence. They also need to be flexible and empathic with the cases, contacts and their families in order to build trust and good community relations. Contact tracing that is undertaken without sufficient expertise and due consideration to individual, community, social, cultural and religious sensitivities can alienate individuals and communities and thus, deter contact tracing efforts. Contact tracing activities may provide opportunities to establish strong partnerships with the community.

In EVD outbreaks, the implementation of contact tracing activities may vary with the burden of disease and the local context. The number of EVD cases and contacts traced daily may cover wide geographical areas and extend into defined pockets such as densely populated urban areas, posing logistical challenges to locating and tracing all those who have been in contact with an EVD case. In such instances, comprehensive and systematic contact tracing activities need to be enhanced through robust community engagement and intensified social mobilization. Active case finding activities to detect other symptomatic individuals in the defined areas should also be undertaken in conjunction with contact tracing activities.

### **1.5 Definitions**

Effective contact tracing requires the strict application of definitions for what defines a "contact" and an EVD "case" in order to promptly identify all contacts and EVD cases. Failure to apply correct definitions can result in ongoing transmission.

Although not required, it may be helpful to develop a local definition of an EVD "alert". An alert should have less stringent criteria than an EVD case, so there is a lower threshold for detecting people infected with EVD. Such an alert case definition could include a history of travel to an area with on-going EVD transmission. All alerts should be investigated to determine whether or not the alert meets an EVD case definition.

#### 1.5.1 Case definitions

For the purpose of this document the case definitions in Box 1 are used.<sup>4, 5</sup> Please see the WHO website (<u>www.who.int</u>) for the most up-to-date case definitions. Case definitions may be adapted considering the local context.

#### Box 1. Case definitions

#### **Suspected EVD Case**

- Any person, alive or dead, suffering or having suffered from a sudden onset of high fever and having had contact with a suspected, probable or confirmed Ebola case, or a dead or sick animal, **OR**
- Any person with sudden onset of high fever and at least three of the following symptoms: headache, vomiting, diarrhoea, anorexia/loss of appetite, lethargy, stomach pain, aching muscles or joints, difficulty swallowing, breathing difficulties, or hiccups; **OR**
- Any person with unexplained bleeding/haemorrhaging; OR
- · Any person with sudden, unexplained death

#### **Probable EVD Case**

- Any suspected case evaluated by a clinician, OR
- Any person who died from 'suspected' EVD and had an epidemiological link to a confirmed case but was not tested and did not have laboratory confirmation of the disease

#### **Confirmed EVD Case**

• Any suspected or probable cases with a positive laboratory result

#### 1.5.2 Contact definition

For the purpose of this document the contact definition in Box 2 is used.<sup>4, 5</sup> Please see the WHO website (<u>www.who.int</u>) for the most up-to-date contact definition. Contact definitions may be adapted considering the local context.

#### Box 2. Contact definition

Any person who has been exposed to a suspected, probable, or confirmed case of EVD in at least one of the following ways:

- has slept in the same household as a case
- has had direct physical contact with the case (alive or dead) during the illness
- has had direct physical contact with the (deceased) case at a funeral or during burial preparation rituals
- has touched the blood or body fluids (including urine, faeces, vomit, tears, or sweat) of a case during their illness
- has touched the clothes or linens of a case
- a baby who has been breastfed by the case

Note: This should include health workers (including those involved in cleaning, waste management, laboratory technicians, healthcare workers, etc.)

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