

**Surveillance Data Collections for Ebola Virus Disease in West Africa**

**NEW**

**Request for OMB Approval**

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**Supporting Statement B  
Collections of Information Employing Statistical Methods**

**Program Official**

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# Surveillance Data Collections for Ebola Virus Disease in West Africa

## **B. Collections of Information Employing Statistical Methods**

### **1. Respondent Universe and Sampling Methods**

#### 1.1 Respondent Universe

Respondents will be the general population, healthcare workers, and their proxies in any of 21 West African countries<sup>1</sup>, detailed in **Appendix D**. In any given outbreak, we assume that half of the countries (n=8) will be Ebola-affected per year.

#### 1.2 Sampling Methods

No statistical sampling methods are used in the ICRs, as outlined below:

The investigations will follow a case series study design. Respondents are selected based on case definition criteria which may vary slightly by country and/or location. An example of previously used case definitions are as follows: suspected (alive or dead person with fever and at least three additional symptoms, or fever and a history of contact with a person with hemorrhagic fever or a dead or sick animal, or unexplained bleeding); probable (meets the suspected case definition and has an epidemiologic link to a confirmed or probable case); confirmed (suspected or probable case that also has laboratory confirmation). Respondents will also include any contacts identified through the case investigation process. Appropriate representatives of health facilities may be included as respondents for the health facility assessment.

### **2. Procedures for the Collection of Information**

The Viral Hemorrhagic Fever Case Investigation Forms will be collected for every patient meeting the suspect case definition criteria (**Attachments 1-8**). If diagnostic testing confirms that this patient has EVD, a separate Viral Hemorrhagic Fever Contact Listing Form is completed to collect information of people who had direct unprotected contact with the patient while they were ill and prior to treatment in a facility with barrier nursing (**Attachments 9-12**). These contacts are then monitored daily using the Viral Hemorrhagic Fever Contact Tracing Follow-Up Form to monitor for onset of fever and other EVD symptoms and will be investigated as cases and treated under barrier nursing precautions if they develop illness (**Attachments 13-16**). The Ebola Virus Disease Case Contact Questionnaire may also be used to assess the risk of exposure in identified contacts which can further inform the need for monitoring and movement restrictions in identified contacts (**Attachments 17-20**). The Ebola Outbreak Response Sexual Transmission Adult Case Investigation Form is a new case investigation form for gathering information about an Ebola case where it is suspected that the exposure was from sexual contact with a person who has recovered (e.g., a survivor). The need for this new form was identified in the first year of the 2014 Ebola Virus Response when active surveillance in various countries noted cases with sexual contact with EVD survivors (**Attachments 21-24**). This form would be used in combination with the Viral Hemorrhagic Fever case investigation short or long form in use to investigate Ebola cases (**Attachments 1-8**). The purpose of these forms is to investigate cases of Ebola virus disease in health care workers to determine what facility-based risk factors may have led to their infection, to allow for corrective changes

<sup>1</sup> By official language, the 21 countries in West Africa are:

- French - Benin, Burkina Faso, Cameroon, Côte D'Ivoire, Equatorial Africa, Gabon, Guinea, Mali, Niger, Senegal, and Togo.
- English – The Gambia, Ghana, Liberia, Nigeria, and Sierra Leone.
- Portuguese - Cape Verde, Guinea-Bissau, Sao Tome and Principe.
- Arabic – Chad and Mauritania.

in health care facility infection prevention practices and to contribute to epidemiologic understanding of the Ebola epidemic in order to combat it more effectively (**Attachments 25-30**). The Health Facility Assessment and Case Finding Survey will be used to assess the cases found through use of the tracing form and Contact Questionnaire and the capacity of health facilities to triage such cases safely and properly (**Attachments 31-34**). The information will be collected through direct oral interviews or through requests to complete written surveys or questionnaires by public health personnel and healthcare providers.

### **3. Methods to Maximize Response Rates and Deal with Nonresponse**

Following a case series design, it is important that active surveillance for EVD requires every effort to work in West Africa with the goal of getting to zero new cases in the affected countries and keeping them at zero. As long as there are still EVD cases, there remains the possibility of unexplained chains of transmission, which means that some cases have not yet been identified. As long as there is a single case of Ebola in West Africa, it remains a threat everywhere. CDC strives to help affected countries get to zero new cases for every outbreak to which it responds.

### **4. Tests of Procedures or Methods to be Undertaken**

CDC has used its experience to gauge the feasibility of the proposed forms. Several GenICs were approved under “*Emergency Epidemic Investigation Data Collections*” (OMB Control No. 0920-1011, expiration date 03/31/2017 through 12/31/2014) that covered the Viral Hemorrhagic Fever Case Investigation Forms and the Viral Hemorrhagic Fever Contact Listing Forms for several West African countries. In addition, “*2014 Emergency Response to Ebola in West Africa*” (OMB Control No. 0920-1033, expiration date: 04/30/2015) extended the use of these forms for an additional 180 days under emergency processing. These ICRs served as tests of procedures and methods. A significant effort was made to limit questions the number of questions.

### **5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data**

For the 2014 Ebola Virus Response, CDC has activated its EOC to help coordinate technical assistance and control activities with partners, including West African Ministries of Health (MoHs), the World Health Organization (WHO), and other key partners. CDC has deployed several teams of public health experts to the West Africa region and plans to send additional public health experts to the affected countries to expand current response activities. Due to the scale of the outbreak, there is a cross agency response in place for the 2014 Ebola outbreak under the EOC.

## References

1. Centers for Disease Control and Prevention (CDC). 2014 Ebola Outbreak in West Africa - Case Counts, January 4, 2015 (updated January 6, 2015). Accessed January 6, 2015 at <http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/case-counts.html>.
2. Karwowski M, Meites E, Fullerton K, Stroher U, Lowe L, Rayfield M, Blau D, Knust B, Gindler J, Van Beneden C, Bialek S, Mead P, Oster A. Clinical inquiries regarding ebola virus disease received by CDC — United States, July 9–November 15, 2014. *MMWR*. 2014; 63(49):1175-1179. Accessed February 18, 2015 at [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6349a8.htm?s\\_cid=mm6349a8\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6349a8.htm?s_cid=mm6349a8_w).

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