Standard Operating Procedure for Community Event-Based Surveillance for Ebola Virus Disease in Sierra Leone
I. Introduction

a. Background

Community event-based surveillance (CEBS) is the organized and rapid capture of information from the community about events that are a potential risk to public health. Event-based surveillance is a demonstrated tool that has been employed in previous infectious disease outbreaks in a variety of settings. Community event-based surveillance has been identified as a surveillance tool that has potential to improve early Ebola Virus Disease (EVD) case identification, reduce Ebola transmission in the community and enhance response efforts in Sierra Leone. *Information generated from this system both informs reporting on emerging Ebola hotspots while simultaneously feeding back information to communities.* It is also a tool that can be used to improve community sensitization and enhance the rapid Ebola response at the local level. CEBS should be implemented in areas with both high and low transmission and can serve not only to decrease the Ebola outbreak but also to move toward eradication, preventing Ebola from slipping into the role of an endemic pathogen in Sierra Leone.

b. Purpose

This standard operating procedure (SOP) describes the structure and implementation of an effective community event-based surveillance system for Ebola in Sierra Leone. The SOP provides standardized instruction and protocols for all districts that engage in CEBS.

c. Scope

This SOP applies to the district Community Surveillance Supervisors (CSS), Community Health Monitors (CHMs), Chiefdom Health Officers (CHO), CEBS implementation team, MoHS surveillance officers, DHMT, and other key participants at the district and chiefdom level.

d. Responsibilities

**Community Health Monitors** remain in the community, identify Ebola suspicious event triggers as they occur and report them to their supervisor.

**Community Surveillance Supervisors** receive alert notifications from CHMs, facilitate flow of information throughout reporting structure, screens alerts alongside the CHO at the chiefdom level, and assist the CHO with rapid response at the chiefdom level.
Chiefdom Health Officers work with the CSS to screen alerts at the chiefdom level, escalate alerts to the district response team if necessary and immediately respond to alerts with safe isolation and administration of oral rehydration solution (ORS) when required.

Community Event-Based Surveillance Implementation Team consists of MoHS, DHMT and partner representatives and is responsible for the initial implementation and rollout of CEBS in their respective district. The CEBS implementation team is also responsible for the systematic collection, analysis and reporting of data generated by the CEBS system.

e. Authorities (as needed). Community health monitors and community surveillance supervisors, regardless of affiliation, fall under the authority of MoHS but work collaboratively with CDC, WHO, ERC, DHMT and other partners engaged in the Ebola response.

II. Objectives

a. To establish a system for identifying emerging clusters of EVD transmission at the earliest possible stage

b. To feedback information both to District Ebola Response Command Centers (DERC) and local communities to adapt and intensify real-time EVD responses

c. To identify and stop all chains of EVD transmission in the community and to empower communities to take action to stop chains of transmission.

d. To improve health outcomes by increasing the timeliness in which EVD suspected cases are identified and receive care

III. Ebola-related Event Triggers

The following six triggers have been identified as events that are suspicious of EVD and should be identified by the community health monitor and reported immediately:

1. Two or more family or household members become sick or die within a short period of time (less than seven days)

2. Anyone becomes sick or dies within three weeks of taking part in an unsafe burial or washing/touching a corpse

3. Any healthcare worker or traditional healer becomes sick or dies of an unknown cause
4. Any traveler (or recently returned traveler who is from that village) becomes sick or dies.

5. Anyone who was a contact of a suspect EVD case (whether or not they were being contact traced) becomes sick or dies.

6. Any unsafe burial or washing of dead body that took place in the village or surrounding community.

IV. Planning and Implementation

a. Formation of the CEBS Implementation Team

The CEBS implementation team is responsible for the planning, implementation and ongoing maintenance of community event-based surveillance in each district. The CEBS implementation team should consist of at least one representative from DHMT and representatives of the partners that will be supporting the DHMT with implementation of CEBS. Once formed, the CEBS team will refer to documents in the CEBS implementation toolkit to guide the initial implementation and rollout of CEBS in that district.

b. Introduction and Endorsement at the District Level

The CEBS implementation team will refer to the CEBS Introduction District Level document (Attachment 1) for an outline that will guide the initial introduction and discussion at the district level. The objectives of the discussion at the district level are to introduce the CEBS model, determine the number and distribution of CSS in each chiefdom, assign tasks of CSS identification, initiate the establishment of a system for routine data collection and analysis and ensure endorsement for the CEBS system from district leadership.

c. Introduction and Endorsement at the Chiefdom Level

The CEBS implementation team will refer to the CEBS Introduction Chiefdom Level document in the CEBS toolkit (Attachment 2) for an outline that will guide the initial introduction and discussion at the chiefdom level. The objectives of this discussion at the chiefdom level are to introduce the CEBS model, determine the number and distribution of CHMs in communities, assign task of CHM identification and ensure endorsement of the CEBS system from chiefdom leadership.

d. Identification and Training of CSS in each district
The CEBS implementation team will work with the DHMT and other partners operating in that district to identify potential CSS candidates in that district. The CEBS implementation team should refer to the Key Principles for Identification of CSS document in the CEBS toolkit (Attachment 3). Once CSS candidates have been identified, they will be trained by the CEBS implementation team with help from district partners according to the Guidelines for CSS Training document in the CEBS toolkit (Attachment 6). This training will cover the reporting structure for CEBS, the event triggers and a training of trainers (TOT) lesson since the CSS will assist in the training of CHMs.

e. Identification and Training of CHM in each chiefdom

The CEBS implementation team will work with the paramount chiefs, other chiefdom leadership as well as other partners operating in that district to identify potential CHM candidates in each chiefdom. The CEBS implementation team should refer to the Key Principles for Identification of CHM document in the CEBS toolkit (Attachment 4). Once CHM candidates have been identified, they will be trained by the CHO and CSS with support from the CEBS implementation team according to the Guidelines for CHM Training document in the CEBS toolkit (Attachment 7). This training will cover the reporting structure for CEBS, the event triggers as well as basic information on Ebola epidemiology, transmission and risk factors.

f. Establish system for data collection, analysis and reporting

The CEBS implementation team will establish a small (2-3 member) team to be responsible for the ongoing data analysis and reporting. The CEBS data analysis team will receive information collected by the CSS and the alert call center, perform appropriate data analysis and report findings back to the CEBS implementation. The CEBS data analysis team will identify any steps that need to be taken and any other parties that should be informed as they create a plan for ongoing data collection, analysis and reporting. All data collection, analysis and reporting should take place according to the Strategy for Data Collection and M&E System document in the CEBS toolkit (Attachment 5). These procedures will serve to evaluate both the process and the outputs of the CEBS system. The CEBS implementation team can then use the reported findings to help maintain or improve the CEBS model (if necessary).

V. Procedures

a. Community Health Monitoring
The CHM will remain (live and work) in the community and stay connected to sources of information in that community. The CHM is free to serve other roles in that community so long as they remained connected and informed of local current events. If the CHM becomes aware of an Ebola suspicious situation in their community that matches one of the event triggers, they will immediately report to their supervisor (CSS) via mobile phone. If no event triggers have taken place in the community, the CHM will still report to the CSS to keep them informed that no triggers have been identified. This is known as ‘zero reporting’ and should happen twice per week. The CHM is also responsible to feedback information regarding specific cases or general key messages to community members.

b. Community Health Monitoring Supervision

The CSS will answer alert calls from the CHM as they occur in real-time. The CSS will also establish days and times (twice a week) when the CHM is expected to call in to confirm that there are no alerts. If a CHM fails to check-in by the regular interval, the CSS will attempt to contact that CHM. The CSS will also keep track of reports (including zero reporting) that they will submit weekly to the CEBS data analysis team. In addition, the CSS will refer to the CEBS data analysis team any issues raised by the CHMs or experienced themselves.

Once an alert is received by the CSS, they will determine if that alert should be dismissed (doesn’t fit an alert trigger, not a concern) or if they should notify the CHO. If the CSS brings an alert to the CHO, they will work together to triage the alert and enact a chiefdom level rapid response.

The CSS can distribute important information about specific alerts and/or general key messages back to the CHM who will, in turn, pass the information throughout the community. The CSS will also stay actively engaged with the chiefs and local leadership ensuring that community sensitization is taking place, key messages are being delivered and that information or important issues are being feedback from the village level to the district and CEBS implementation team.

c. Chiefdom Level Rapid Response

Using their discretion and knowledge of the situation, the CSS and the CHO will work together to determine if the alert should be dismissed, further assessed or escalated. If the alert needs to be escalated, they (either CSS or CHO) will immediately notify the district command center response team via the district Ebola alert hotline. They will give any relevant information as well as communicate that the alert was notified through the CEBS reporting structure.
As they wait for the district response team to arrive, the CHO (with support from the CSS) will issue a chiefdom level rapid response to further address the situation, administering ORS or temporary safe isolation if necessary. This chiefdom level rapid response is important as the district response team may sometimes take a long time to arrive due to geographical, logistical and other challenges. By rapidly isolating suspect cases and administering ORS while awaiting the district response team, this chiefdom level rapid response can prevent further Ebola transmission and contribute to improved health outcomes for Ebola cases.

The CHO and CSS will also use their discretion to determine if additional community sensitization or Ebola education is necessary for that community. If so, they may notify the appropriate local leaders (chiefs, elders, ward supervisors, etc.) as well as social mobilizers and psychosocial counselors that are operating in that area.

d. Measurement and Evaluation

Based on the information received from the call center (which alerts came through the CEBS system), the CEBS data analysis team will follow up with those alerts to record eventual case identifications. They will also receive and compile information gathered and submitted by the CSSs. They will then analyze and report the data according to the *Strategy for Data Collection and M&E System* document in the CEBS toolkit (Attachment 5). For CEBS process, the team will report the proportion of CHMs reporting each week and any issues that the CSS/CHM has raised that concern the CEBS analysis team. For CEBS outputs, the analysis team will report the proportion of alerts that are escalated to the district level and the proportion of those escalated alerts that result in Ebola case identification.

VI. Reporting Structure
VII. Community Event-Based Surveillance Implementation Toolkit

The following documents have been created to assist the CEBS implementation team and all key participants with the planning, implementation, conduct and analysis of CEBS in each district.

Attachment 1. CEBS Introduction District Level

Attachment 2. CEBS Introduction Chiefdom Level

Attachment 3. Key Principles for Identification of CSS

Attachment 4. Key Principles for Identification of CHM

Attachment 5. Strategy for Data Collection and M&E System