

**REPORT ON THE TRAINING OF NURSES ON THE PREVENTION  
AND CARE OF VIRAL HAEMORRHAGIC FEVERS DISEASES IN BO,  
KENEMA, KAILAHUN, KONO, BOMBALI, KOINADUGU AND  
KAMBIA DISTRICTS AND WESTERN AREA**



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**SUBMITTED**

**BY**

**SIERRA LEONE NURSES ASSOCIATION**

## REPORT ON THE TRAINING OF NURSES ON THE PREVENTION AND CARE OF EBOLA PATIENTS

### Background

The Sierra Leone Nurses Association is the umbrella organisation for all nurses in Sierra Leone, with its main goal to seek the interest and welfare of all nurses in both public and private sectors so that they can deliver quality health care to the public. These nurses mentioned above work in all health facilities in the country and render nursing care to patients. In addition, they also implement community-based health programmes at district and peripheral levels.

With the outbreak of Ebola in May 2014, Nurses have been the frontline workers providing care and with a disease that is new in the country. They have been frequently infected and some even die while treating patients with suspected or confirmed Ebola cases. This occurred through close contact with patients when infection control precautions were not strictly practiced. They become infected through close contact with infected patients or contaminated hospital materials and medical waste.

These risks for infection can however be significantly reduced through the appropriate use of infection control precautions and adequate and strict barrier nursing procedures which can be achieved through training. This prompted the Association to request for funding from the Ministry of Health and Sanitation to train colleagues especially those working in the disease prone areas, the boarder districts and the capital city taking into consideration daily movement of people. Training commenced after funding was available with pre training preparation as the association has structure in all the fourteen (14) political districts and 568 nurses were trained. The training was conducted in Bo, Kenema, Kailahun, Kono, Bombali, Koinadugu, Kambia and Western area.

#### Participants Expectations

- Identify and report cases at their respective health facilities
- Take the necessary infection control measures when caring for suspected or probable or confirmed cases
- Understand how to safely dispose of waste and safe burial
- Ready to work in isolation unit should there be a confirm case in their district.



Pre training assessment with staff in Kenema

## GOAL

To train Nurses on how to implement appropriate nursing interventions including care for Ebola patients in accordance with accepted nursing procedures.

## SPECIFIC OBJECTIVES

- Train Participants in identifying suspected Ebola cases.
- Train in Patient Management & Nursing care of VHF
- Train participants in practicing universal precaution
- Introduce Infection Prevention & control practices in VHF
- Introduce disposal of infectious waste and safe burial
- Supportive care for care givers



**Official opening by president  
S L Nurses Association in Bo**



**Practical demonstration, on the use of PPE in Bo**

## Training Programme

The training was in the form of sessional presentations rotating among the facilitators; each one moving in at the end of the allotted time of the other. It was a **day** facilitators- mediated programme employing the following teaching techniques;

- Teaching
- Brainstorming
- Energisers
- Group discussions
- **Demonstration and practices (especially the use of PPEs)**

## Assessment

The trainees had a baseline and summative evaluations information. The baseline assessment provided basis for modifying the training to suit the level of participants' knowledge in caring out nursing care procedures. Overall course evaluation form was used to assess the training. The training participants were unanimous in reporting that they enjoyed the topics. A regular refresher course to at least one course per year and to cover all nursing staff was recommended.



**Some participants in Kenema**



**WHO Researcher on Ebola David in Kenema responding to key questions asked by participants**

**Training contents and allotted time**

- 08:30: Registration of Participants
- 09:00 Opening
  - Objectives and expected outcome
  - Introduction of VHF
- 10:00 Coffee/Tea break
- 10:20
  - Clinical Management of VHF
  - Infection Control of VHF in Health settings
  - Nursing a patient with Ebola Viral Disease
  - Safe care of the dead
- 13:30: Lunch break
- 14:00: Supportive care for the caregiver
- 15:00: Practical training on PPEs and working in an Isolation unit
- 17:00: Post training assessment
- 18: 00: End of the training session

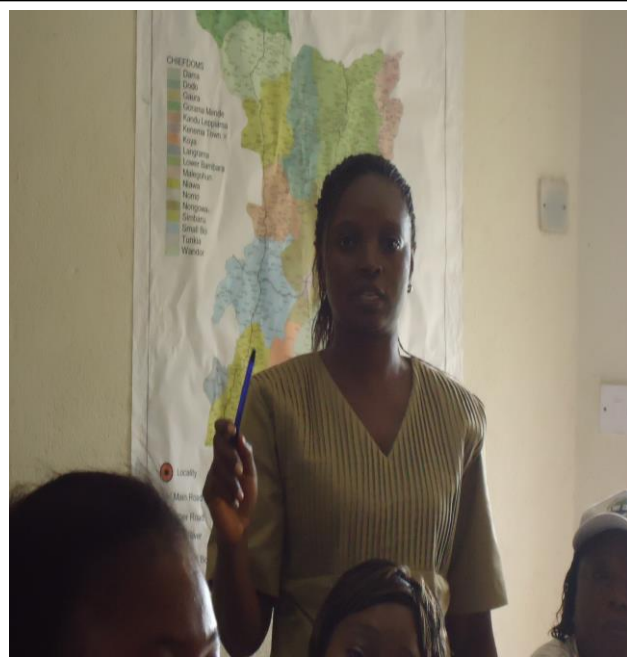
**DMO Kailahun and Musa Conteh of SLNA at the opening ceremony and Isata Mansaray of SLNA Presenting**



### Opening ceremony

As a culture in our society opening ceremony was done at all the training centers with relevant authorities making statements, common among were:

- The timeliness of the training
- Participants were selected to train to help disseminate the information to others and be prepared to care for Ebola suspected or confirmed cases
- Must be prepared to practice universal precautions
- Assist in facility infection prevention and control
- Proper disposal of waste and safe burial practices
- Be able to give supportive care to each other



**DHS in Kenema responding to a question asked by a participant on the use of chlorine.**

In summary, the overall concern was to interrupt direct human-to-human transmission through the early identification and systematic isolation of cases, timely contact-tracing, proper personal protection, safely conducted burials, and improved community awareness about risk factors of Ebola infection and individual protective measures. Quarantine of infected patients and suspects to effectively stop the spread of the disease.

### **The following areas were covered during the training at each district**

#### **Disease background**

The onset of Ebola Viral Disease (EVD) is sudden and early symptoms include flu-like illness, fever, muscle pain, fatigue (weakness), headache and sore throat. The next stage of the disease is characterised by symptoms and clinical manifestations from several organs and systems.

Symptoms can be gastrointestinal (vomiting, diarrhoea, anorexia and abdominal pain), neurological (headaches, confusion), vascular (conjunctival/pharyngeal infections), cutaneous (maculopapular rash), and respiratory (cough, chest pain, shortness of breath), and can include complete exhaustion. Some patients develop profuse internal and external haemorrhages and disseminated intravascular coagulation. Patients in the final stage of disease die in the clinical picture of tachypnoea, anuria, hypovolemic shock and multi-organ failure.

The incubation period is usually four to ten days but can vary from two to twenty one days. The case-fatality of ebola virus (EBOV) infection is estimated to be between 50% and 90%.

Ebola viruses are highly transmissible by direct contact with infected blood, secretions, tissues, organs or other bodily fluids of dead or living infected persons. Airborne transmission has not been documented and person-to-person transmission is considered the principal mode of transmission for human outbreaks regardless of how the index case was infected. Burial ceremonies are known to play a role in transmission. Transmission through sexual contact may occur up to seven weeks after clinical recovery.

## Treatment

### Supportive care

- This may include maintenance of appropriate fluid and electrolytes, oxygenation and blood pressure, and treating complications promptly.
- Immune plasma from convalescent patients has been used in some instances.

### Nursing considerations:

- Limit number of staff approaching patient, use mask, gown, gloves, goggles, leg coverings, and shoe coverings.
- Be sure health care staff understands the infection control procedures in use.
- Prevent other cases by preventing nosocomial transmission, including to health care staff.
- Appropriate infection control is critical.
- Should use immediate isolation of suspected case with airborne and contact precautions, as well as standard precautions and barrier nursing.
- Because of the severity of the disease, many practitioners in the field use double masks, gowns, gloves and so on in implementing precautions.
- Limit unnecessary blood draws and other invasive procedures. The patient should remain in their room with doors and windows closed.
- Use of strict barrier nursing for all suspected and or confirmed cases
- Prevent cases through education of family and community about methods of spread and how to avoid them and why these precautions are necessary.



District Health Sister Kono making statement at the opening ceremony



Participants during registration in Kono

### Prevention:

- Apply strict universal precautions and infection prevention and control procedures
- Prevent other cases by preventing nosocomial transmission including to health care staff.
- Prevent cases through education of the family and community about methods of spread and how to avoid them.
- The latter should include information that Ebola virus may be transmitted in semen up to 12 weeks after infection.

## What are Universal Precautions?

- Usual and ordinary steps all health staff need to take in order to reduce their risk of infection from: Blood Borne Pathogens (Hepatitis B, Hepatitis C, Ebola, HIV)
- Infectious Organisms that cause illness



Participants during and after the training in Makeni, Bombali district

## Body fluids that can have infectious pathogens

Blood, Vomit, Saliva, Stool (feces), Urine, Drainage from nose or sinuses, Drainage from cuts, scrapes, wounds or sores, Secretions from mucous membranes, Sputum (mucus from lungs), Vaginal secretions, Semen etc

The following universal precaution steps were explained in detail

- Correct use of personal protective equipment
- Decontamination
- Hand Washing
- Waste Disposal
- *Universally*, treat every one's body fluid as if it were infected.
- *Precaution* – Use foresight and plan ahead to avoid exposure

## Infection prevention and control

Infection prevention and control is vital to the reduction of spread of infection from patients to health workers, health workers to health workers, and from the patient to the rest of the community. Evidence from outbreaks strongly indicates that the main routes of transmission of VHF infection are direct contact (through broken skin or mucous membrane) with blood or body fluids, and indirect contact with environments contaminated with splashes or droplets of blood or body fluids. Avoiding transmission dictates strict adherence to standard precautions as well as droplet and contact precautions for health care workers.

**All health workers (clinical and non-clinical) should use standard precautions in caring for all patients, in all health facilities. These include:**

- Hand hygiene
- Appropriate personal protective equipment (PPE) based on risk assessment at the point of care
- Respiratory hygiene
- Prevention of injuries from needles and other sharp instruments
- Safe waste disposal
- Cleaning and disinfection of the environment
- Safe handling of contaminated linens
- Cleaning and disinfection of patient-care equipment



**Some participants in Kabala during session**

### **SUPPORTIVE CARE FOR CARE GIVERS**

The Ebola epidemic and other health needs have created much hardship and stress in many homes, health units and communities. The impact is no longer individualistic but that of the whole family & community. The affected are sometimes more frustrated than even the infected.

The Nurses are stressed sometimes even more than the infected or affected and therefore may lead to burnouts which will have social, psychological, and emotional effects on them.



**Matron Yainkain Kambia at the opening**



**some participants in Kambia**

However some strategies for minimising or preventing burnout syndrome were explained as

- Seeking support from others.
- Taking care of yourself.
- Engaging in restorative activities, such as reading and exercising. This may reduce or minimise burnout syndrome



- Search out a mentor—someone who can confidentially support you, listen to you, and guide you.
- Take structured breaks during work hours and making time for yourself & your family.
- Find or establish a peer support group.
- Read or listen to tapes that provide strategies for coping with stress.
- Take a course to learn about a subject relevant to your work (or take a refresher course on a previously-studied subject).
- Complete change of activity for some time.



**Western area participant making contribution**



**Sr. Macauley doing presentation**

Supportive care can be achieved with support from employers, colleagues and family and the community.

Demonstration and practices regarding the use of PPEs was done and participants practices as it was vital for infection prevention and control.

Post training assessment and administrative arrangement climax all the sessions of the trainings.



**Participants after training session in Freetown**

The following challenges and recommendations go across the training districts that were raised and recommend by participants.

#### **CHALLENGES**

- Inadequate protective gears for nurses
- Poor working condition and environment
- Inadequate knowledge on Ebola disease prevention and care
- Lack of isolation materials
- Hostilities against nurses especially in Kailahun and Kenema, Makeni and Western Area
- Poor communication network
- No risk allowance
- Accommodation for newly posted nurses
- Delay in releasing laboratory result of suspected cases

#### **RECOMMENDATION**

- To provide adequate protective gears for all health facilities
- Improve working conditions and environment
- Provide continuing education for all nurses especially in infection prevention and control
- To equip all identified isolation units around the country
- Raise public awareness and provide security for nurses against hostilities
- Improve communication among health service providers
- Provide risk allowance for nurses.
- To work with the Local Councils to provide accommodation for nurses
- Prompt release of Laboratory results or establishment of mobile Labs
- Improve on the ambulance services

#### **CONCLUSIONS**

The training was generally very successful. This was because the district participation was very good. The participants were satisfied with the mode of delivery of materials, quality and informative material and comportment of both participants and facilitators. Each district was given time to practice the use of personal protective materials which includes wearing and removal of gears as its key in infection prevention and control especially in caring for viral haemorrhagic fever patients. Above all this training provided a real opportunity to raise awareness among nurses on the challenges and prevention procedures of viral haemorrhagic fevers, and provide them with the knowledge and skills necessary to influence, inform, educate and support their clients, colleagues and the local communities in preventing further spread of Ebola.