Module 5: Hotlines

EBS Hotline refers to a specialised data capture service through telephone, SMS or other direct messaging platforms (WhatsApp, Facebook, Twitter, etc.) that provides an effective way to listen/ read and respond to public health emergencies. Within EBS, a hotline can be used to capture signals reported by the community or health facility. It provides a wide range of users to report unusual public health emergencies.

Module content:

This module contains the following sessions:
Session 1: Sources for hotlines
Session 2: Establishing hotline
Session 3: Steps for conducting hotline EBS
Session 4: Stakeholders roles and responsibilities
Session 5: Flow of Information in Hotline EBS

Module Duration: This module will take 20 minutes to complete

Learning objective.

By the end of this module you will be able to be able to:
- Describe the sources of EBS hotlines
- Understand how to establish EBS hotlines
- Understand the steps for conducting Hotline EBS
- Understand stakeholders' roles and responsibilities

Definition of Terms:
- **Event Based Surveillance** (EBS) is the organised approach to the detection and reporting of 'signals,' defined as information that may represent events of public health importance, often through channels outside of routine surveillance systems.
- **EBS Hotlines** is a platform for gathering information from the public whereby any community member can detect and report signals of public health emergence for early warning and rapid response via calls or direct SMS (WhatsApp, twitter) or in person.

Session 1: Sources of EBS Hotlines
This session is expected to cover different types of sources for EBS hotlines.

Session Content:

Information for EBS hotlines is gathered from the public whereby any community member can detect and report signals of public health emergence for early warning and rapid response. Dedicated number(s) and/or social media accounts should be

shared with the entire public and should be available all the time (24 hours a day, seven days a week) for the public to report signals. The sources include:

- Calls from the general public or health facilities.
- SMS from the general public or health facilities

Concise messages through social media platforms such as WhatsApp, Facebook, Twitter

Session Summary:

- Different sources for EBS hotline include calls and SMS from general public

Quiz:

Write T if the answer is True and F if the answer if False from the following statements:

- Which of the following are the sources of EBS hotlines?
  1. Text book   F
  2. SMS   T

Session 2: Establishing EBS hotline

In this session, establishment of EBS hotlines process will be covered.

Session Content

Setting up a hotline centre is a daunting task, there are a myriad of options for hotline centre technology. Whether a Member State wants to build or reassess its hotline centre requirements, technology considerations should include the core platform and workforce optimization software.

Minimum

a) Trained personnel inclusive of risk communication techniques. Note: the number depends on the level the hotline has been established and the catchment population.

b) Dedicated contact number and social media handle

c) Office space

d) Desktop Computers: Each agent should be equipped with a personal desktop for management of operations, data storage and customer references – even if everything is stored on the cloud

e) Telephone with landline

f) FAQ or reference book for operators to consult when communicating with callers

Additional (Recommended)

a) USB Headsets with in-built microphone component

b) Call recording software/device

c) Automatic call distribution system: technology automatically routes calls to phone agents based upon organisational rules

d) Hotline management information system: that will be used to track your calls and the services and advice provided to callers

e) Event management system (EMS): will be used to capture, track, analyse, and retrieve all signals and events detected

The following are requirements for establishing EBS hotlines:

- The number should be short and toll free (The cost of reporting signals to public health authorities should be zero).
- It is recommended to have a single number that can be used as a hotline to make reporting easy to remember. The same number can be used for hotline, Short Message Service (SMS) and social media platforms to avoid confusion. For example, if the hotline number is 199, messages sent by SMS or Facebook Messenger should also be sent to the same number.
- Community residents should be motivated to self-report events that may impact the public's health, including emerging public health events or outbreaks.
- Disseminate the hotline number by advocacy through health authorities, community health workers, non-governmental organizations, religious and other leaders, or schools and also advertise through messaging in local languages by TV, radio and newspapers.
- Develop partnership with communication companies that can spread the hotline number by test messages to their clients. The messages sent should include the purpose of the EBS, the importance of immediately reporting signals and how signals can be reported.
  Train a team of employees to operate the EBS hotline 24 hours to respond to calls or request information from the community.

The Call methodology:
- The responder to the call should start by greeting and thanking them for their proactivity to report to the ministry of health or relevant ministry hosting the hotline, concerning potential public health events.
- Then the responder should follow a prepared set of questions that directly reflect the questions posed in the alert logbook.
- The call should be ended by thanking the caller for their time, patience and proactivity.
- The responder should directly register in the signal logbook the signals that meet the pre-defined list of signals.

- Calls should be returned as soon as possible in situations where a call is interrupted or disconnected or if calls are received while the responder is busy; this will ensure that all signals are collected.

The Messaging methodology:
- Once an SMS or a social media message is received, an instant automated message should greet the sender, thank them and state that an operator will contact them.
- Automated questions or responders can collect information from the sender.
- Data should be registered directly in the alert logbook according to the pre-defined list of signals for the country.
- Information about the sender should be collected for further communication and details about the signals reported. A direct call to the sender may be needed if more information is required.

NB: Hotlines should be established at the national, regional/provincial and district levels.
- At the national level: The hotline with the call respondents can be established at the National Public Health Emergency Operation Centre (PHEOC) to capture and register signals from the entire country.
- At the regional/provincial and district levels: The hotline can be established at the Regional/Provincial Health Authorities premises or at the Regional/Provincial PHEOC if available to capture and register signals from the region/province.

At the district level: The hotline can be established at the District Health Authorities premises to capture and register signals from the district including the health facilities and community focal persons.

Session Summary:
- How to establish and operate EBS hotlines
- Effective communication in management of EBS hotline
- In this session you have learnt:
- Minimum requirements for establishing a hotline include an office, trained personnel, dedicated contact number

Quiz:
Please write T if the answer is True and F if the answer if False from the following statements:

The following are requirement for establishing hotlines:

- Having adequate number of staffs to operate hotlines 24/7-**T**
- To self-report signals, communities should be motivated to report using hotline number-**T**
- The hotline number should be short and Toll-free number-**T**

Session 3: Steps for conducting EBS hotline

Introduction: In this session, steps for conducting EBS Hotlines will be covered.

Session content: Information is initially captured as a signal through calls, SMS or direct messaging, which represents a potential acute risk to human health, such as an outbreak. Not all signals may necessarily become real events, as such, they all need to be triaged, verified and risk assessed before a response is initiated. Figure 3 illustrates key steps in Hotline EBS.
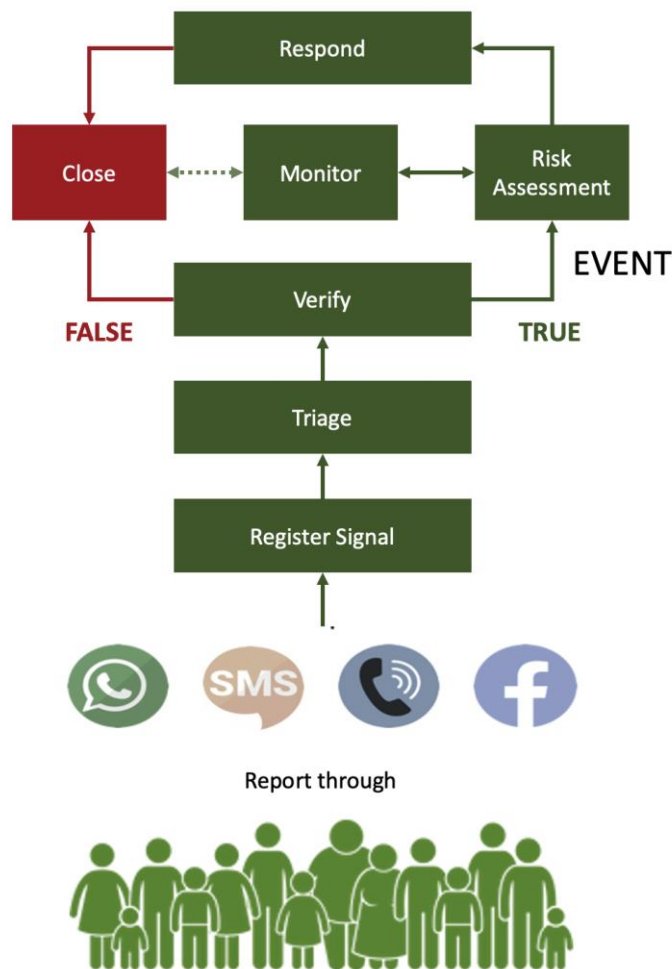

Figure 3 illustrates key steps in Hotline EBS

Step 1: Signal Detection

Detecting a signal means identifying the occurrence of one of the predetermined signals designated by national public health authorities. Signals that are captured from hotlines and correspond to the predefined list of signals, should be registered in a signal logbook or register.

Effective communication is a key component to establishing a successful hotline. This includes that hotlines and hotline operators establish trust with callers; are service oriented, community led; exhibit emotional intelligence; and communication and recommendations are evidence-based.

- **Trust:** Hotlines require trust from both the community and public health institution. It is an important part of hotlines to build and maintain trust among responders and affected callers or reporters.
- **Response oriented, community-led:** The hotline should be community-led and response oriented. To ensure that the hotline meets the needs of the community, engage the community on a regular basis to circulate and share feedback on the service's usefulness.
- **Emotional intelligence:** Hotline operators are expected to respond to calls from the community who are feeling strong emotions like fear, anger, or stress. They should have the expertise and emotional intelligence needed to effectively manage these situations by modelling empathy, active listening, and a non-judgemental attitude.
- **Evidence-based:** Hotline operators should be knowledgeable about the various disease-related and other public health events that they may be asked about in order to accurately address the public's concerns. This includes being familiar with case definitions, transmission routes, prevention measures and other relevant recommendations.

Signal information for the hotline can be received through telephone calls, text messaging and in-person reports. Here we describe the key sources for signal detection based on means of collection i.e. (a) Calls (b) Messaging and (c) In person reports

A. Calls

1. Start by greeting and thanking the caller for being proactive to report to the hotline, concerning potential public health events.

   E.g., Welcome to the Public Health Emergency Call Centre/National emergency Call Centre. My name is [INSERT NAME]. How can I help you?"

2. Obtain the name of the caller, and where they are calling from

3. Allow the caller to introduce the report (the call may be recorded where possible)

4. Engage the caller and follow a prepared set of questions that directly reflect the questions posed in the signal logbook. A signal registration should include enquiries for the following data set for tracking the signals:

   - Date and Time of signal/ event
   - Place of occurrence (geographical area) – where it starts and spread
   - Nature of event (description)
   - Magnitude of the event – who is affected (number of cases and/or deaths)
   - Date and time of the call/detection.
   - Date of reporting the event to the next level

- Source for event identification; informant: Name, contact phone

5. Briefly summarise what has been accomplished on the call (The set of people involved (children, adults, males or females) or animals must be documented. Place of event and time noticed must be clearly documented)

6. Let the caller know what happens next (and include a timescale)[6].

7. Ask the caller if there is anything else they wish to report or add to the report

8. End by thanking the caller for their time, patience and proactiveness.

9. Return the call as soon as possible in situations where a call is interrupted or disconnected or if calls are received while the responder is busy; this will ensure that all signals are collected

10. There may be an automated response (BOT[7]), if calls are received while the responder is busy. The automated message should tell the caller to leave the message, or that the responder is busy, and the call will be returned immediately. In addition to an automated response, some hotlines can be equipped with a push-button menu (serving as a triage mechanism) to direct callers to the appropriate topic or contact.

11. Record the message for future reference (where possible)

B. Messaging

1. Once an SMS or a social media message (direct message) is received, an instant automated message is sent to greet the sender, thanking them and stating that an operator will contact them.

2. **Note:** Automated questions (BOTs) or responders can collect information from the sender.

3. Hotline operator registers in the signal logbook according to the pre-defined list of signals for the country.

4. Collect information about the sender for further communication and details about the signals reported. A direct call to the sender may be needed if more information is required.

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[6] Some hotlines can be equipped with a push-button menu to direct callers to the appropriate topic or contact
[7] **BOT**, is a software application that runs automated tasks (scripts) over the Internet/communication channel

C. In Person Reports

People who are conversant with the physical location of the call centre may opt to walk in and make in-person reports of public health threats. However, it is not advisable to come in contact with these persons, they might be carriers of an infectious disease.

Note: Signals that are captured from hotlines are to be registered in a signal logbook/register (Annex 1). Signal registration should include the minimum data set for tracking the signals.

Step 2: Triaging

The objective of triaging raw information is to minimise analysis of duplicate or irrelevant signals and limit unnecessary verification of irrelevant signals, as well as to ensure that genuine events will elicit an effective response. The triage of raw EBS information can be divided into two steps: **filtering** and **selection**.

1. **Filter** the information to screen out duplicates (the same signal reported by the same or different sources that have been registered and processed)

2. Identify and discard the information which is not relevant or does not relate to EWAR such as a single snake bite, injuries etc. depending on the nature of its occurrence and country priority. and select the information that corresponds to one of the pre-defined lists of signals.

3. Register signals that are not duplicates and correspond to one of the pre-defined signals and proceed to verification.

Step 3: Verification

Verification is an essential step in establishing the validity of the signal. Verification should be done at the local level nearest to the location of the signal. The following are the steps for verification:

1. Hotline operator contacts the Disease Surveillance Focal Person at the District level for verification and notifies the National Disease Surveillance Focal Person for this information

2. The Disease Surveillance Focal Person at the district level reports signal to the health facility focal point, CHW's supervisor (with adequate capacity) or responsible person in the animal health or environment sector (depending on the origin of signal) who verifies the signal at the site of occurrence using the verification tool (Annex 2).

3. If the signal is true, it becomes an event and if not, it is discarded, and recorded accordingly in the event register (Annex 3).

4. Once the signal becomes an event, the district team is notified to conduct a risk assessment

5. Feedback is also provided to the national team (hotline desk, disease surveillance focal point and other relevant offices)

Step 4: Risk Assessment

Risk Assessment is a systematic process for gathering, assessing, and documenting information to assign a risk level to a public health event. Risk assessment is conducted after the validation of a signal as an event. **This should take place within 48 hours of the detection of the signal.** It is conducted by the district, provincial and/or national levels depending on capacity, after receiving the report of an event. The Africa CDC human (Annex 4) and animal health (Annex 5) risk algorithm can be adapted for this purpose. Additionally ECDC and WHO have also developed rapid risk assessment tools that can be referenced as well. Key steps for conducting rapid risk assessment are:

1. The Disease Surveillance Focal Person at District level/District medical officer convenes a multi-disciplinary team.

2. The team then conducts rapid risk assessment, based on pre-defined risk questions, by considering Hazard, Exposure and Context.

A. Hazard Assessment

This refers to the identification of the characteristics of a public health hazard and the associated adverse health effects. Hazards can include biological, chemical, radiological and nuclear events. The assessment process includes:

Use available clinical and epidemiological features for laboratory confirmed agents, when available. In all other cases, start with listing possible causes based on:

a) The initial description of the event.
b) Known burden of diseases in the affected community; and
c) Type and distribution of existing hazards (e.g., the number and location of chemical plants and the chemicals they use).

Possible questions to ask:

a) Is this threat unusual or unexpected?

b) Is this event new in the country?
c) Is this occurring in an unusual or unexpected setting, mode of transmission, and/or population group?
d) Are there novel clinical manifestations that result in severe illness, disability, and/or death?
e) Is the threat likely to cause severe disease in this population/group?

Considering the pathogen, exposed population, and availability of treatment where the event is occurring, will more than 20% of people infected develop severe illness, severe disability, and/or die?

B. Exposure Assessment

This refers to the evaluation of the exposure of individuals and populations to likely hazards. The key output of the assessment is an estimate of the: (a) number of people or groups known or likely to have been exposed, and (b) number of exposed people or groups who are likely to be susceptible (not immune).

Information required to evaluate exposure includes:

a) Mode of transmission/exposure (e.g., direct contact, droplet, sexual, occupational).
b) Incubation period (known or suspected).
c) Estimation of the potential for transmission (e.g., R0 basic reproduction number); Immune status of the exposed population.
d) Disease burden in and distribution of vector or animal hosts/reservoirs for vector-borne and zoonotic diseases.
e) Dose (e.g. amount ingested/absorbed/inhaled) and duration of exposure

Possible questions to ask:

a) What is the probability of spread within and beyond the MS?
b) Is exposure geographically widespread or limited to specific sub-groups (e.g., immunodeficient, comorbidities, socially/economically vulnerable, location)?
c) Does infection/exposure occur from a low dose?
d) Is this readily transmitted person-to-person (e.g., by airborne)?
e) If an animal event, is there a potential for the pathogen to spread from animals to humans?
f) Are treatment or prevention measures available for animals or people?
g) Does the event/pathogen cause severe morbidity or mortality in humans?

h) Does the agent have the potential for person-to-person transmission?

Context Assessment

This refers to the evaluation of the environment in which the event is taking place. This may include: (a) The physical environment such as climate, vegetation, land use (e.g., farming, industry) and water systems/sources (b) Health of the population (e.g., nutritional status, disease burden and previous outbreaks), (c) Infrastructure (e.g., transport links, healthcare, public health infrastructure), (d) Cultural practices and beliefs and/or (e) Political environment (civil wars, terrorist attacks)

Context assessment should consider all factors that can affect the risk level of the event including social, ethical, technical, scientific, economic, environmental and political. For example:

a) For measles, outbreak spread depends upon factors like the current immunisation coverage in the population, the capacity to quickly organise mass vaccination campaigns if coverage is low, general hygiene and access to health care, the MS surveillance capacity to rapidly detect and isolate cases, and population movement and behaviour.
b) For water contamination events by chemical agent, the risk of human intoxication will depend on factors like local water use practices, seasonality (cold or hot, rainy or dry), the flow of the water source, capacity to quickly broadcast risk and prevention messages to the public, and public acceptability of control measures.

Possible questions to ask:

a) Are effective treatments and control measures available in the Member State?
b) Even if treatment and control measures exist somewhere in the world, answer "no" if they are not immediately and widely available in the specific setting where the event is occurring.
c) Is there an ongoing socio-political crisis that could hinder mobilisation of resources or possible interventions?
d) Are the affected areas accessible to responders? (Free of hostility)

Once the team has carried out the hazard, exposure and context assessments, a level of risk should be assigned. This process is called risk characterization. The hazard, exposure and context assessments help to estimate the potential consequences of the event. All types of consequences should be considered in

addition to the expected morbidity and mortality, long-term health consequences, and social, economic, environmental and policy consequences (Tables 1).

Table 1 Risk Assessment, Consequences, Response/Action Mapping

Risk Assessment	Consequences	What to Do
Low	• Minor impact for a small population or at-risk group; agent has low potential to cause morbidity/mortality • Limited disruption to normal activities and services • A small number of additional control measures will be needed that require minimal resources • Low increase in costs for authorities and stakeholders.	Continue to monitor; repeat risk assessment if situation changes
Moderate	• Moderate impact as a large population or at-risk group is affected; agent has moderate potential to cause morbidity/mortality • Moderate disruption to normal activities and services • Some additional control measures will be needed and some of these require resources to implement • Moderate increase in costs for authorities and stakeholders	Discuss with affected health facilities and relevant communities about needs
High	• Major impact for a small population or at-risk group; agent has potential to be highly pathogenic, highly transmittable, or has significant potential to disrupt travel/trade • Major disruption to normal activities and services • A significant number of additional control measures will be needed and some of these require significant resources to implement • Significant increase in costs for authorities and stakeholders	Consider deployment (as requested) in consultation with affected health centre and relevant communities.
Very High	• Severe impact for a large population or at-risk group; agent is highly pathogenic, highly transmittable, new or emerging, or has significant potential to disrupt travel/trade	Consider deployment and need for National support

	- Severe disruption to normal activities and services - A significant number of additional control measures will be needed and most of these require significant resources to implement - Serious increase in costs for authorities and stakeholders	

Session Summary:

In this session you have covered the following sub sessions:

Steps for EBS hotlines involves:

- Detection
- Triaging
- Verification
- Risk assessment

Risk characterization involves:

- Risk Assessment
- Consequences
- Response
- Action Mapping

Quiz

Please write T if the answer is True and F if the answer if False from the following statements:

1. Information for the hotline can be received through telephone calls, text messaging and in-person reports T
2. Duplicates means, the same signal reported by the same or different sources that have been registered and processed T
3. Effective communication in EBS Hotlines should be:
   a. Service oriented
   b. Community led
   c. Exhibit emotional intelligence
   d. Delayed responses

Session 4: Stakeholders' roles and responsibilities

Session Introduction: In this session, roles of EBS stakeholders' roles and responsibilities in EBS hotlines will be covered.

Session Content: The success of the hotline is based on the early detection and immediate notification of signals. The key stakeholders and respective roles within

the hotline workflow are shown in Table 3 Roles and Responsibilities for Hotline workforce

Table 3: Roles and responsibilities of the hotline event-based surveillance workforce

Workforce	Primary roles	Supportive roles
Hotline operators (may be located at the district, regional/province or national levels)	Use signals to identify possible public health threats Records signal Conducts triage Report the signal to Disease Surveillance Focal Person at the District level	Provide information needed Support risk assessment, investigation and response Participate in the sensitization meetings Participate in the review meetings
Disease Surveillance Focal Person at District level	Records signal received from the Data Analyst Triages and verifies the signal Records and reports the event to a higher level (e.g., District, Sub- County, National). Convene a multi-disciplinary team for risk assessment Provide feedback to the reporting party	Provide additional information for verification Provide additional information to the Risk Assessment team Mobilise community members to action Referral of community members and sick animals Supports district/national team during Risk Assessment Supports district/national team during response
Community, CHW supervisors, health facility surveillance focal person, district surveillance focal person, call centre operators	Support verification and provide feedback	Work with district team to assist risk assessment

Session summary:
- Key stakeholders for EBS hotline are hotlines operators, disease surveillance officers and the community
- There are primary and supportive roles for each EBS hotlines stakeholders

Quiz:
Tick the correct answers

Select the main roles of the hotline operators:
a. Records signal√
b. Conduct investigation of events
c. Conducts triage √
d. Conduct verification of signals
e. Report the signal to Disease Surveillance Focal Person at the District level√

Session 5: Flow of Information in Hotline EBS

Session Introduction: This session is expected to covers flow of information for EBS hotlines.

Session content: This refers to the movement of public health data between the different levels of EBS. Timely, efficient, and secure information flows are a central factor in the performance of the decision-making process to respond to events. In Hotlines information initiates from community direct national/regional level (depending on level the hotline centre is located) and flows down to lower levels with a feedback loop in the reverse directions. Figure 4 illustrates information Flow through levels in Hotline EBS.
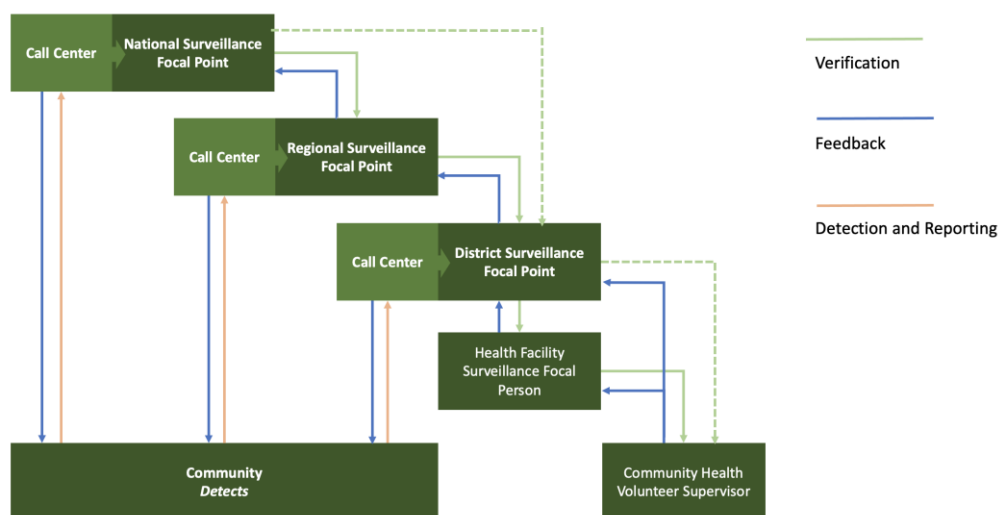

Figure 4 illustrates information Flow through levels in Hotline EBS

The health facility nearby, in collaboration with the intermediate team, sent a National response team to investigate. On further investigation it was determined that one of the young adults was not a resident of the village, but was being nursed at his uncle's place after a terminal diagnosis of oesophageal cancer. The other person was suspected to have peptic ulcers, which was confirmed after inspection of the medications that the patient used.

Session Summary:

In this session you have learnt:

- EBS flow of information refers to the movement of public health data between the different levels of EBS.

Post Quiz:
Tick all the right answers

A central factor in the performance of the decision-making process to respond to events involves:

- Timely reporting √
- Efficient responding √
- Secure information flows √
- Late detection

Pre and Post Knowledge Check Questions EBS Hotlines
Please write T if the answer is True and F if the answer if False from the following statements:

1. EBS Hotline refers to platform for reporting signals using direct messages (sms, whatssapp, twitter), calls and in person reporting **T**
2. EBS Hotline operator should triage, verify and record all signals detected **F**
3. Detecting a signal means identifying the occurrence of one of the predetermined signals designated by national public health authorities **T**
4. The proper methodology for messaging instructs the EBS hotline operator to greet the sender **T**.
5. Which of the following are the sources of EBS hotlines?

a. IDSR report   **F**
b. Calls from the general public or health facility   **T**

6. The following are requirement for establishing hotlines:
    a. Motivation of communities to report using hotline number **T**
    b. The hotline number should be long Toll-free number -**F**
    c. The Hotlines responder should start by greeting and thanking the callers - **T**
    d. For the purpose of confidentiality, calls should not be recorded-**F**
    e. Automated questions or responders can collect information from the sender-**T**
    f. Information about the sender should not be collected for further communication-**F**