Approach to patient with febrile illness amidst Ebola outbreak – what to look for?

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Learning Objectives

1. Use epidemiological and clinical criteria to recognize and screen febrile patients
2. Appreciate the need for appropriate IPC measures when assessing and managing febrile patients.
3. Outline the initial assessment and management of a patient with febrile illness
4. Appreciate the need for timely supportive care and appropriate treatment for suspected or confirmed febrile illnesses while awaiting diagnostic results.
5. Identify patients who require isolation, testing, referral, or escalation of care.
6. Describe the importance of continuity of essential communicable disease services during an Ebola outbreak.
7. Referrals pathways for suspected EVD
8. CASE VINETTES

Role ; Aimed at equipping healthcare workers with the knowledge and skills to safely

✓**Assess**

✓**Triage**

✓**Investigate**

✓**Manage**

patients with febrile illness during an Ebola outbreak

while ensuring

continuity of essential health services and preventing transmission

Over view

- VHFs include a spectrum of relatively mild to severe life-threatening diseases characterized by sudden onset of feverish syndrome, bleeding and shock from loss of blood.

- There are multiple modes of transmission for viral hemorrhagic fevers

Management of a patient with febrile illness requires a balance for

early recognition of Ebola

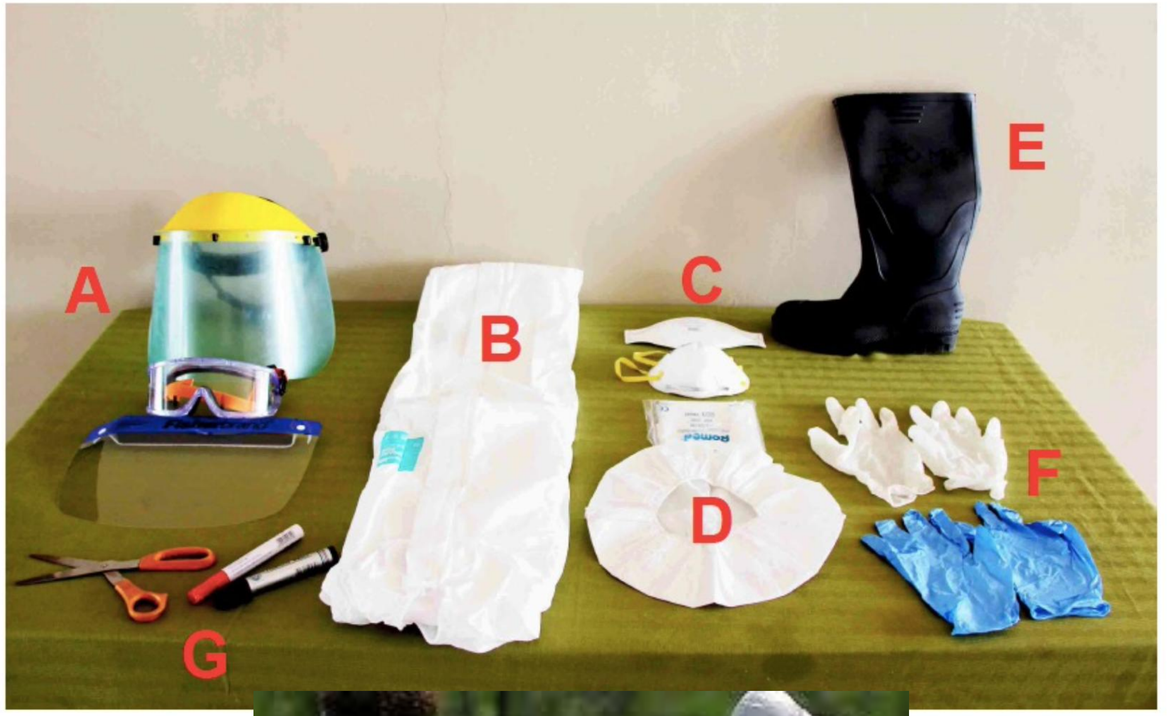
VS

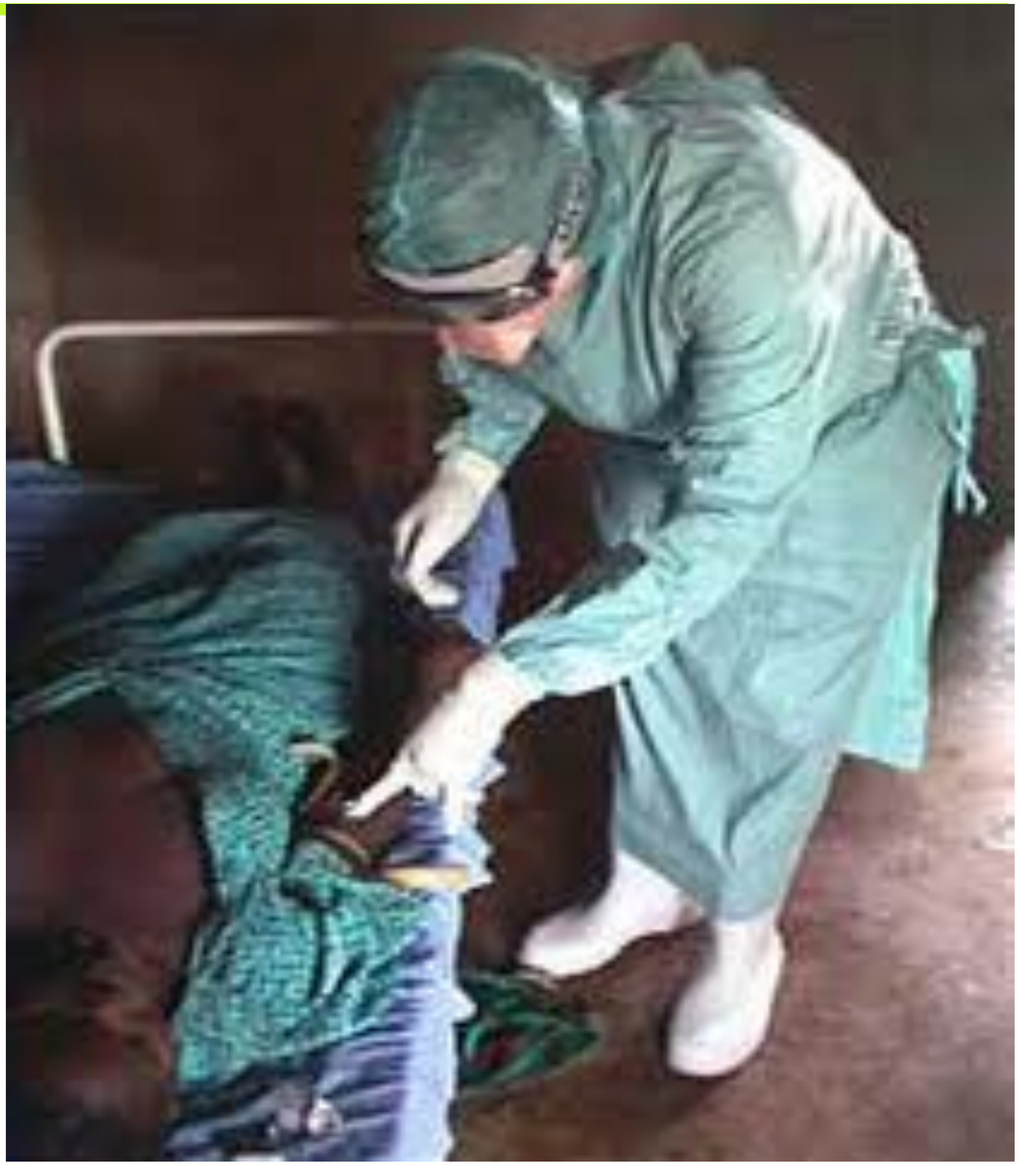
continued care for other common causes of fever (e.g malaria, bacterial infections, or respiratory illnesses)

Patient screening, Triaging and immediate infection prevention measures

Ensure strict infection prevention and control (IPC):

- ✓ Hand hygiene.
- ✓ Appropriate PPE according to risk assessment.
- ✓ Maintain physical distancing from other patients.
- ✓ Limit unnecessary procedures and contacts.
- ✓ Special attention to referrals





Does my patient have EVD? Assess epidemiological risk

Ask about:

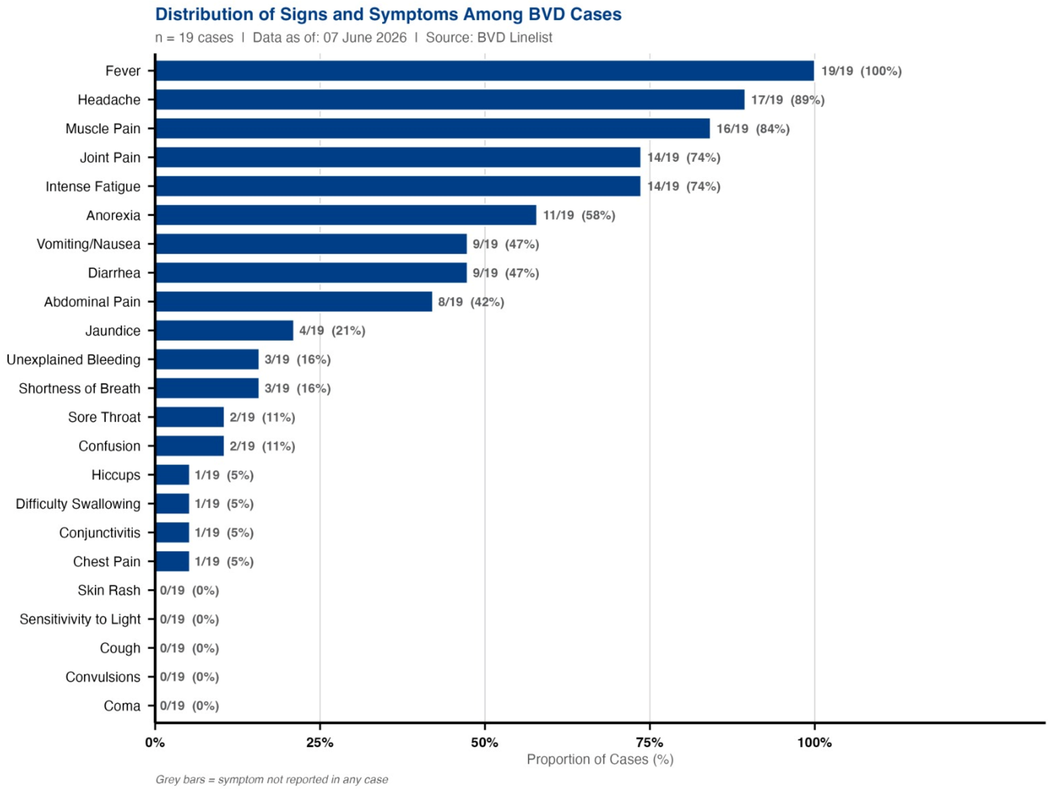
1. Contact with a confirmed or probable Ebola case within the last 21 days.
2. Attendance at funerals or contact with bodies.
3. Residence in or travel to an affected area.
4. Contact with sick persons with unexplained illness
5. Occupational exposure (health worker, laboratory staff, burial teams).

CONTACT
+
ANY SIGN/ SYMPTOM

3. Assess clinical features

Look for symptoms suggestive of Ebola:

- Fever.
- Severe weakness or fatigue.
- Headache.
- Muscle and joint pains.
- Sore throat.
- Vomiting.
- Diarrhea.
- Abdominal pain.
- Unexplained bleeding.
- Hiccups, confusion, or shock in severe disease.



Remember that early Ebola symptoms are non-specific and overlap with many other infections.

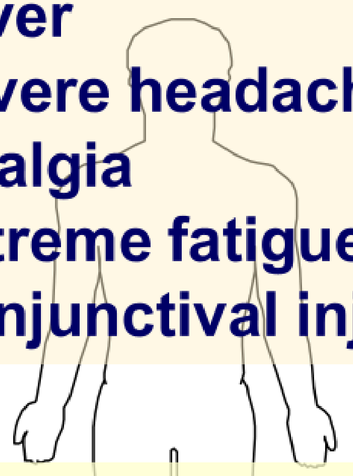
Natural history of EVD/ MVD

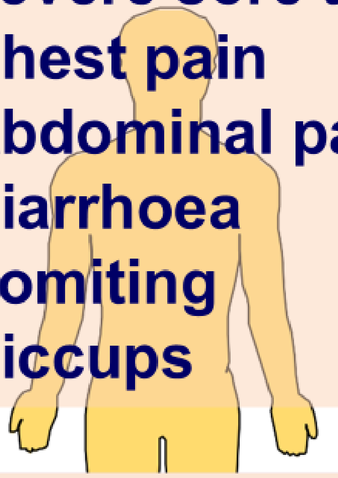
Symptoms

Fever
Severe headache
Myalgia
Extreme fatigue
Conjunctival injection

Severe sore throat
Chest pain
Abdominal pain
Diarrhoea
Vomiting
Hiccups

Haemorrhage (any site)
Skin rash
Respiratory distress
Shock / multiorgan failure
Somnolence, delirium, Coma, seizures





Labs

Early lab abnormalities:
↓K ↓Na ↓Mg↓HCO3

Shock and multi-organ failure:
↑creatinine ↑BUN ↑lactic acid ↕K ↕Na ↓Mg ↓HCO3
↑AST/ALT ↓glucose ↑PTT ↑INR

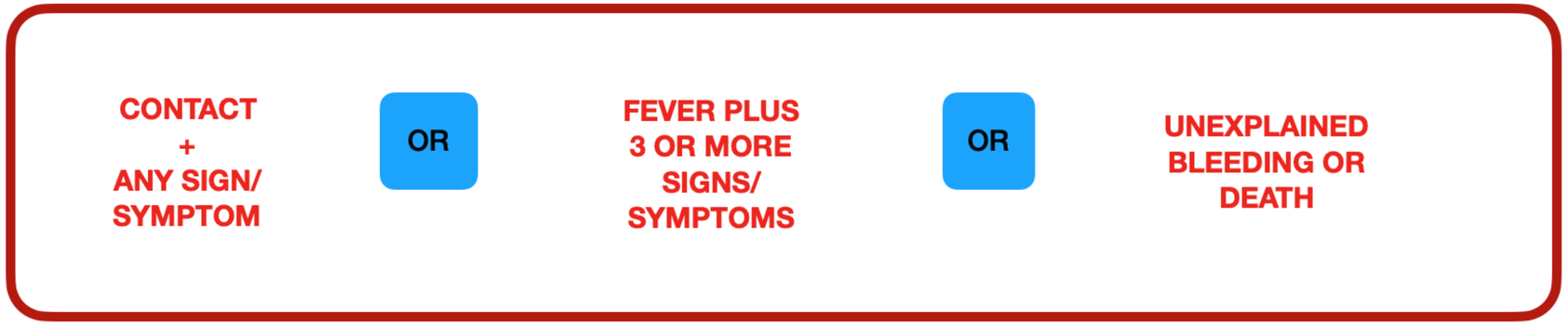
Infectivity

CFR 25-90%

0 1 2 3 4 5 6 7 8 9 days

Metabolic abnormalities can be life-threatening and may cause sudden death if untreated.

4. Determine whether the patient meets the suspect case definition



- ✓ **A patient who meets the suspect case definition should:**
- ✓ **Be Immediately placed in an appropriate isolation area**
- ✓ **Have relevant public health authorities notified.**
- ✓ **Undergo testing for Ebola according to national protocols.**
- ✓ **Continue receiving supportive care while awaiting results.**

- **Patients who do not meet suspect case definition should be allowed to proceed to the routine facility care.**
- **Routine screening should be done for all healthcare worker-patient interactions**

Evaluate for alternative COMMON diagnoses

Do not assume all fever is Ebola. Common causes include:

- Malaria (Fever, chills and rigors, headaches muscle pains and body aches, abdominal pain, diarrhoea etc..)
- Typhoid fevers (stepwise fever, headache, malaise, anorexia, abd. pain, diarrhoea or constipation etc…)
- Pneumonia (Fever with cough, chest pain, DIB, fatigue, malaise sweating poor appetite)
- Urinary Tract Infection (Fever with LAP, frequent & burning micturition)
- Meningitis (Fever with Headache, neck pain, photophobia etc)
- TB (Evening fevers with cough, sweats wasting, nausea, D+V, poor appetite etc)
- COVID-19 (Anosmia, Ageusia,Runny or blocked nose, myalgia, sore throat etc…)
- HUS

Very important……

Suspected other viral hemorrhagic fevers.

- Investigations should be performed using appropriate biosafety precautions

Initial clinical management

If the patient is stable:

- ✓ Assess vital signs and hydration status.
- ✓ Give oral fluids.
- ✓ Administer antipyretics
- ✓ Treat likely alternative diagnoses according to guidelines

Initial clinical management cont’d

If the patient is severely ill:

Apply the ABCDE approach:

A – Airway: Ensure airway patency.

B – Breathing: Provide oxygen if hypoxic.

C – Circulation:

- Establish IV access using safe procedures.
- Correct dehydration with oral or IV fluids.
- Treat shock promptly.

D – Disability:

- Assess level of consciousness.
- Check blood glucose and treat hypoglycemia.

E – Exposure:

- Look for bleeding, rash, dehydration, or focal signs of infection.

7. Ongoing management while awaiting Ebola test results

- Continue supportive care.
- Reassess frequently.
- Monitor while maintaining appropriate IPC AT ALL TIMES
  - Temperature.
  - Pulse.
  - Blood pressure.
  - Respiratory rate.
  - Oxygen saturation.
  - Fluid balance.
  - Mental status.

- Supportive care should not be delayed while awaiting test results

Summarized approach to patient with febrile illness

Fever → Apply IPC measures → Screen for epidemiologic risk and symptoms → Determine if suspect Ebola case → Isolate and test if indicated → Simultaneously investigate and treat other likely causes of fever

Essential communicable disease services should continue even during outbreaks, because many febrile illnesses are not due to Ebola.

Continuity of Communicable Disease Services During an Ebola Outbreak

- **The concept of a holding place**
- **Why? It is important to maintain routine clinical services**
- **The may include**
  - ✓ Maternal and newborn care
  - ✓ Child health services
  - ✓ Non communicable diseases
  - ✓ surgery

Communicable Disease Services Indicators During an Ebola Outbreak

These determine the extent to which communicable disease services have been

- Maintained
- Disrupted
- Restored

During a particular disease outbreak

Communicable Disease Services Indicators During an Ebola Outbreak

Aimed at establishing whether;

1. **Patients are accessing communicable disease services**
2. **Diagnosis and treatment services are functioning normally**
3. **Surveillance and reporting systems are operational**
4. **Essential medicines and supplies are consistently available**
5. **Health facilities are safe for both patients and health care workers**

Communicable Disease Services Indicators During an Ebola Outbreak

Service Utilization Indicators

- Number of outpatient visits for communicable diseases compared with pre-outbreak levels.
- Number of consultations for febrile illnesses.
- Proportion of expected patients accessing care.
- Number of hospital admissions for communicable diseases.

Surveillance Indicators

- Timeliness and completeness of routine disease surveillance reporting.
- Number and proportion of priority diseases reported weekly.
- Number of alerts investigated within the recommended time.
- Proportion of suspected Ebola cases appropriately isolated and investigated.

Disease-Specific Servi

Communicable Disease Services Indicators During an Ebola Outbreak

Disease specific Service Indicators

Disease/Service	Key Indicators
Malaria	Number of suspected malaria cases tested; malaria test positivity rate; number of confirmed malaria cases treated
Tuberculosis (TB)	Number of presumptive TB cases identified; number of TB diagnoses made; TB treatment initiation and completion rates
HIV/AIDS	Number of people receiving ART; ART interruption rate; viral load monitoring coverage; retention in care
Immunization	Vaccination coverage rates; number of immunization sessions conducted; dropout rates
Sexually Transmitted Infections (STIs)	Number of STI consultations and treatments provided
COVID-19/Respiratory Diseases	Number of respiratory illness consultations; testing rates and case detection

Laboratory Service Indicators

- Availability of diagnostic tests for priority diseases.
- Number of malaria, TB, HIV, and other tests performed.
- Laboratory turnaround times.
- Stock-out rates for laboratory commodities.

Communicable Disease Services Indicators During an Ebola Outbreak

Infection Prevention and Control (IPC) Indicators

- Proportion of facilities implementing standard IPC measures.
- Availability of personal protective equipment (PPE).
- Percentage of health workers trained in IPC.
- Number of health facility-associated infections.

Commodity and Supply Chain Indicators

- Stock-out rates for essential medicines (antimalarials, TB drugs, ART, antibiotics).
- Availability of vaccines and laboratory supplies.
- Frequency and duration of stock-outs.

Human Resource Indicators

- Health worker availability and absenteeism rates.
- Number of staff redeployed to Ebola response activities.
- Proportion of staff trained in Ebola case detection and IPC.

Outcome Indicators

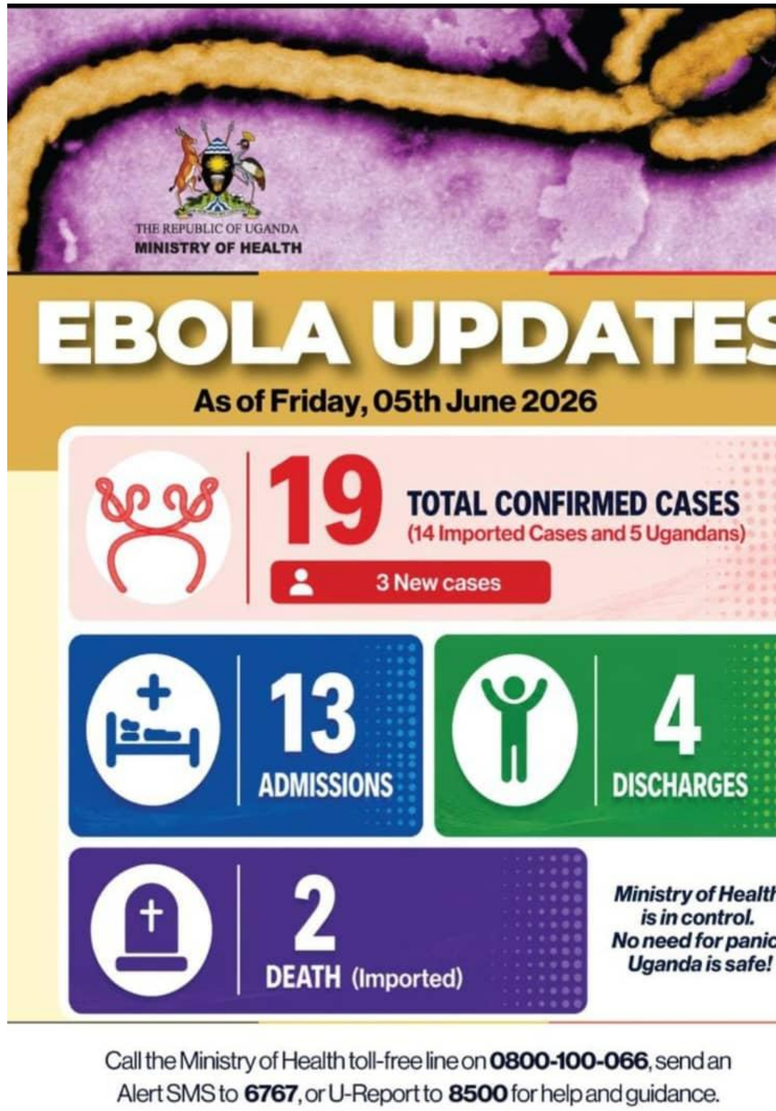
- Mortality rates from major communicable diseases.
- Case fatality rates for malaria, TB, and other priority conditions.
- Excess mortality compared with baseline periods.

Advantages of continued communicable disease service provision in an outbreak

- Prevents unnecessary deaths the arise due to failure to access routine care and treatments like malaria, HIV, TB, pneumonia and diarrhoeal diseases
- Improves outbreak control, quick identification of patients
- Prevents outbreaks of other communicable diseases
- Preservation of systems leading to a faster recovery
- Strengthens health system resilience, core functions are maintained
- People with chronic infections continue to get needed preventive and curative services

Referrals pathways for suspected EVD

- EVD is a national response team
- It is important to have a holding place for EVD suspects
- REGIONAL SURVEILLANCE OR MOH DIRECTELY



CASES

- 26 yr old . Mid wife, has been in Kajjansi, comes in with persistent non bloody diarrhea with on and off fevers

- 56 yr old, indian for the past 3 months, is brought as a referral with fevers, headache and slightly confusion. Bs- 500 mps/hfp, CBC- PLT 25, RFT- CREATINE-10mg/dl

- 10 yr old, referred from HCIV , (stays with parents who work with facility), on treatment for severe malaria, d-2 , has been referred because the nurse on the ward saw the biy urinating dark tea coloured urine.

- 26 yr old, bodaboda rider, his stage in garuga is found vomiting blood and profusely sweating. Prior he had complained of fevers and chills

Take home points

- **Every fever is <u>not Ebola, but every fever must be screened for Ebola</u>.**
- **Infection prevention and control (IPC) comes first.**
- **Do not delay essential care while waiting for Ebola test results.**
- **Use a risk-based approach. (Epi link + clinical feature = likelyhood)**
- **Holding place is very important**
- **EVD kills health workers & other patients at all times hence the need for appropriate IPC precautions**
- **EVD response is at the national level**

REFERENCES

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Thank you for your listening and attending

QUESTIONS