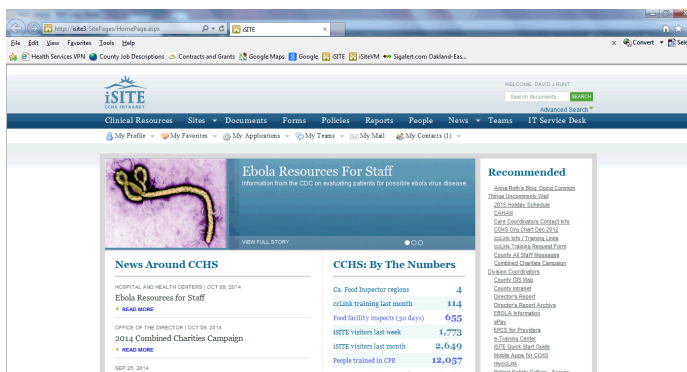


## DETECTION - PROTECTION - ISOLATION - TREATMENT

### EBOLA READINESS AT CCRMC, HEALTH CENTERS & DETENTION

As many of you are aware, there has been an increasing concern around the Ebola Virus Disease (Ebola) epidemic that is taking place in West Africa. We are working closely with our local public health department and area health providers to ensure that our health system is prepared in the event a person with suspected or confirmed Ebola arrives at our delivery system.

We are disseminating all communication from the Centers for Disease Control (CDC) and the California Department of Public Health (CDPH) as well as all local tools we have developed as part of a comprehensive response. We have created a page on our intranet site dedicated to Ebola that includes links to the CDC workflow and checklist as well as the CDPH Ebola information website. You can find these and other important updated tools and policies on the iSite landing page at



<http://isite3/SitePages/NewsAndEvents.aspx?INTERIORNAVPAGE=News&ITEMID=546>

We began preparing in our organization in August through a series of educational discussions and planning with our infection control department. In the recent weeks we have been working closely with service managers from all areas of our operation to implement our plan across our delivery system. We are actively training staff on use of personal protective equipment (PPE). We have also designated educators to review all known and emerging best practices on detection, protection, isolation and treatment for Ebola. Additionally, we are

coordinating with area hospitals on standard approaches to PPE and workflows related to suspected or confirmed Ebola.

Below is a summary of our current plan. This plan will be updated regularly as new information is received. We will use multiple modes of communication to ensure staff is aware of all current practices. If at any time you feel you have any questions or would like further training please let your immediate supervisor or their designee for that day know and we will ensure you are provided the support you need.

We are currently focused in four areas:

## **DETECTION - PROTECTION - ISOLATION –TREATMENT**

### **DETECTION**

- We are educating our front-line care providers and non-clinical staff on how to identify people at risk for Ebola using a specified travel and symptom criteria.
- We have placed important travel screening questions (Attachment A) in all potential patient entry points including detention areas and registration areas.
- We have placed the travel screen questions on every screen saver and eBoard (digital boards in all public areas) in our system.
- You can find the travel questions in poster for print on iSite as well.
- These screening questions will appear in our EHR, ccLink, clinical documentation workflows next week.
  - Important reminder: if someone is presenting to our system for service and answers

**YES TO TRAVEL** screening questions please **STOP AND TALK** to your team

members immediately. Documentation in ccLink (EHR) is not a replacement for **HUMAN HAND-OFF.**

- Our ccLink team is developing workflows related to detection, alerts and best practices in the form of a banner at the top of the screen to indicate when a patient is deemed at risk for Ebola.
  - Visual cues, screening, best practice alerts and guidelines will be previewed in ccLink Monday October 13<sup>th</sup> with planned implementation in the days after.
- We have incorporated the CDC guidelines and recommendations into existing Sepsis workflow to ensure that travel risk factors are identified for patients presenting with positive sepsis screen.
- We have adopted the use of the CDC Ebola Screening Checklist (Attachment B) – can be found on your unit and on iSite.

### **PROTECTION**

- We are currently ensuring staff is trained in the use of personal protective equipment (PPE).
- We are developing “PPE go kits” which will be deployed in the ambulatory and detention settings or settings with no anteroom
- Special Isolation carts are being implemented in the ED and CCU.
- We are beginning drills with a “buddy system” throughout our system effectively immediately on the use of PPE.
- Our professional development department is working with our infection control department and service managers to implement site specific PPE training.

## **ISOLATION**

- We have used the CDC guidelines to work with managers and staff to design work-flows to quickly identify and appropriately isolate persons with suspected or confirmed Ebola rapidly upon presentation to the system. (Attachment C)
- We have identified treatment space in the Emergency Department and Critical Care Unit.
- Starting on October 10 we are using simulation/scenario training in a dedicated patient isolation room on unit 4D.
  - Simulation will be used to train staff using active scenarios on the safe use of PPE and how to provide care to persons suspected or confirmed to have Ebola.
- We have begun designing work flows for our Health Centers that will identify and facilitate those people needing transport to a more appropriately healthcare setting.

## **TREATMENT**

- Clinical work teams as well as support staff are developing work-flows and workforce needs to safely delivery high quality care to persons with suspected or confirmed Ebola.  
(See Attachment C : example of ED site specific workflow)
  - Care areas have been identified with anteroom capability within medical center
  - Transport routes into and within the medical center
  - Work flows that address all aspects of care for patients in need of advanced life support
  - Support personnel workflows for ancillary service
  - Handling of bio-hazardous materials

- Special Isolation carts are being implemented in the ED and CCU.

We are developing and implementing a specific communication plan that will include messaging to staff and patients that encourage concise and timely communication of symptoms or concerns and that ensures that all employees know where and how to find our updated resources. We are informing staff via email, iSite and staff meetings of our current work in progress and any updates as we receive them.

We will continue working closely with CCHS Public Health Division Communicable Disease Program as well as area providers for consultation and guidance regarding possible testing. 8am-5pm Monday-Friday: (925) 313-6740. After hours: contact the On-Call Health Officer at (925) 646-2441. We continue to monitor and incorporate the latest recommendations into our current processes as new recommendations are made.

You are an essential component of our safety, infection control and treatment team. Please take the time to review the information on the iSite, attend training sessions in your areas, and ask questions as we work together to ensure safe and high quality care.

## Attachment A

# ATTENTION ALL PATIENTS

**IF IN THE LAST 3 WEEKS YOU:**

- ✓ Traveled to West Africa: Guinea, Liberia, Sierra Leone, or other countries where Ebola is present, or
- ✓ Had close contact with someone who recently traveled to West Africa and was ill, or
- ✓ Had close contact with bats, rodents, or primates from West Africa

**AND IF YOU HAVE HAD A FEVER,**



## PLEASE TELL STAFF IMMEDIATELY!

## Attachment B



U.S. Department of  
Health and Human Services  
Centers for Disease  
Control and Prevention

## Checklist for Patients Being Evaluated for Ebola Virus Disease (EVD) in the United States

### Upon arrival to clinical setting/triage

- ☐ Does patient have fever (subjective or  $\geq 101.5^{\circ}\text{F}$ )?
- ☐ Does patient have compatible EVD symptoms such as headache, weakness, muscle pain, vomiting, diarrhea, abdominal pain or hemorrhage?
- ☐ Has the patient traveled to an Ebola-affected area in the 21 days before illness onset?

### Upon initial assessment

- ☐ Isolate patient in single room with a private bathroom and with the door to hallway closed
- ☐ Implement standard, contact, & droplet precautions
- ☐ Notify the hospital Infection Control Program at \_\_\_\_\_
- ☐ Report to the health department at \_\_\_\_\_

### Conduct a risk assessment for:

#### High-risk exposures

- ☐ Percutaneous (e.g., needle stick) or mucous membrane exposure to blood or body fluids from an EVD patient
- ☐ Direct skin contact with skin, blood or body fluids from an EVD patient
- ☐ Processing blood or body fluids from an EVD patient without appropriate PPE
- ☐ Direct contact with a dead body in an Ebola-affected area without appropriate PPE

#### Low-risk exposures

- ☐ Household members of an EVD patient or others who had brief direct contact (e.g., shaking hands) with an EVD patient without appropriate PPE
- ☐ Healthcare personnel in facilities with EVD patients who have been in care areas of EVD patients without recommended PPE

### Use of personal protective equipment (PPE)

- ☐ Use a buddy system to ensure that PPE is put on and removed safely

#### Before entering patient room, wear:

- ☐ Gown (fluid resistant or impermeable)
- ☐ Facemask
- ☐ Eye protection (goggles or face shield)
- ☐ Gloves

#### If likely to be exposed to blood or body fluids, additional PPE may include but isn't limited to:

- ☐ Double gloving
- ☐ Disposable shoe covers
- ☐ Leg coverings

### Upon exiting patient room

- ☐ PPE should be carefully removed without contaminating one's eyes, mucous membranes, or clothing with potentially infectious materials
- ☐ Discard disposable PPE
- ☐ Re-useable PPE should be cleaned and disinfected per the manufacturer's reprocessing instructions
- ☐ Hand hygiene should be performed immediately after removal of PPE

### During aerosol-generating procedures

- ☐ Limit number of personnel present
- ☐ Conduct in an airborne infection isolation room
- ☐ Don PPE as described above except use a NIOSH certified fit-tested N95 filtering facepiece respirator for respiratory protection or alternative (e.g., PAPR) instead of a facemask

### Patient placement and care considerations

- ☐ Maintain log of all persons entering patient's room
- ☐ Use dedicated disposable medical equipment (if possible)
- ☐ Limit the use of needles and other sharps
- ☐ Limit phlebotomy and laboratory testing to those procedures essential for diagnostics and medical care
- ☐ Carefully dispose of all needles and sharps in puncture-proof sealed containers
- ☐ Avoid aerosol-generating procedures if possible
- ☐ Wear PPE (detailed in center box) during environmental cleaning and use an EPA-registered hospital disinfectant with a label claim for non-enveloped viruses\*

### Initial patient management

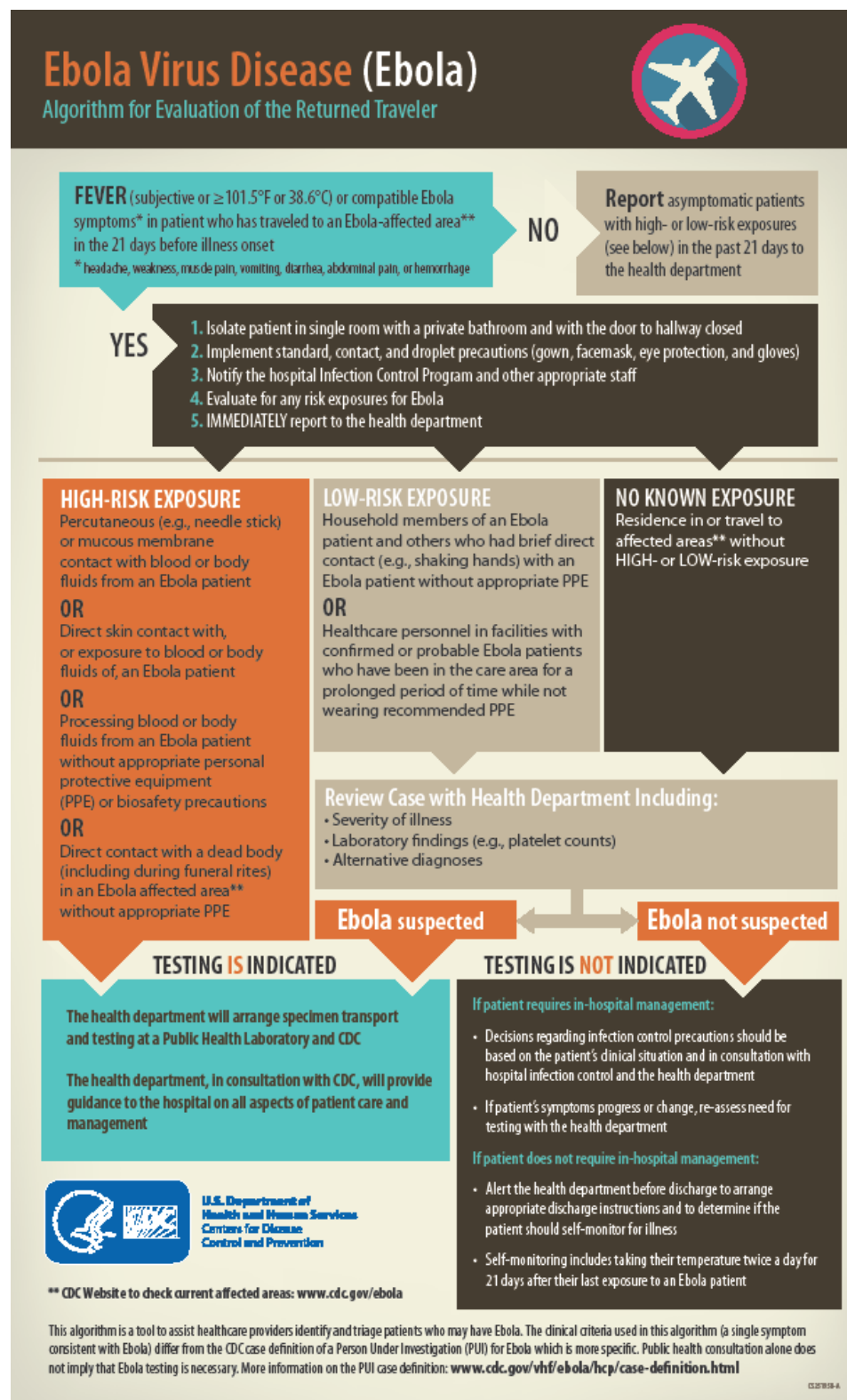
- ☐ Consult with health department about diagnostic EVD RT-PCR testing\*\*
- ☐ Consider, test for, and treat (when appropriate) other possible infectious causes of symptoms (e.g., malaria, bacterial infections)
- ☐ Provide aggressive supportive care including aggressive IV fluid resuscitation if warranted
- ☐ Assess for electrolyte abnormalities and replete
- ☐ Evaluate for evidence of bleeding and assess hematologic and coagulation parameters
- ☐ Symptomatic management of fever, nausea, vomiting, diarrhea, and abdominal pain
- ☐ Consult health department regarding other treatment options

**This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.**

\* see <http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html> for more information

\*\* see <http://www.cdc.gov/vhf/ebola/hcp/interim-guidance-specimen-collection-submission-patients-suspected-infection-ebola.html>

## Attachment C



## Attachment C

### EBOLA - QUICK REFERENCE – 10/06/14

This document will be updated as new information and guidance is received from the Centers for Disease Control and/or California Department of Public Health

**MUST BE TREATED AS A PUBLIC HEALTH EMERGENCY**

*Contra Costa Public Health Department 313-6740; after hours, weekends and holidays call Sheriff's Dispatch 646-2441 (ask for Communicable Disease Officer on call.) Report to Infection Prevention and Control 370-5079 24-hr pager 603-4263*

#### Epidemiology

- Severe often fatal disease (death rate up to 90% current 2014 outbreak 60%)
- Transmission Person-to-Person - direct contact via broken skin or mucous membranes with blood and infected human fluids (blood, saliva, vomitus, stool, semen, breast milk, tears etc.) This includes unprotected contact with soiled clothing or linen.
- Patients are not infectious prior to the onset of viremia. Viremia onset with fever, viremia usually peaks around day 7. People remain infectious as long as their blood and body fluids/secretions contain virus
- Risk of transmission may be greater during later stages of illness when viral loads are higher
- Patients who survive to day 14 will generally survive the illness, In surviving patients, the convalescent phase is long

#### Incubation Period

- Incubation period is 2 to 21 days (most commonly 5-7 days)

#### Clinical Presentation

- Abrupt onset of fever, chills, myalgias, malaise. This is followed by GI symptoms (nausea, vomiting, diarrhea, abdominal pain) cough, headache and conjunctival hemorrhages.
- Hemorrhagic symptom (approximately 50% of cases) usually occur at the peak of the illness and include maculopapular rash, petechiae, bruising, bleeding from venipuncture sites, GI bleeding
- Later stage of the disease is manifested by shock, capillary leak syndrome, seizures, delirium, coma, bleeding and anuria

#### Consider / Suspect Ebola if:

- Onset of illness within 21 days of residence in or travel to outbreak area (2014 outbreak Guinea, Sierra Leone, Liberia, Nigeria). Include close contact with a person who has traveled to West Africa in prior 21 days  
AND

- **Fever greater than 101.5°F other non-specific symptoms rash, severe headache, muscle pain, vomiting, diarrhea, abdominal pain and unexplained hemorrhage (nosebleed, hematemesis, hemoptysis, hematochezia) and rash.**

### Diagnosis

- Presumptive based on clinical signs and symptoms differential includes Malaria
- Specific test is Ebola PCR (ELISA). Order in CCLink as PCR miscellaneous Viral Hemorrhagic Fever. 4ml of blood in Purple plastic tube. Wipe off tube with bleach wipe, then affix label, place in plastic biohazard bag- patient label on outside of bag, then place in second plastic biohazard bag- patient label on outside of bag, wipe off outside of bag with bleach wipe and hand carry to CCRMC laboratory. (CCRMC lab will send the blood to Public Health who will route to CDC). All testing will be done at CDC.
- Collect blood for Malaria thin smear at same time, use purple top tube and handle tube and double bag as outlined above (package separately from Ebola PCR specimen.
- Because CCRMC clinical lab does not have appropriate biosafety hoods, available testing for labs other than PCR and malaria screen outlined above will be performed as point of care tests in the patient's room

### Prophylaxis

- At this time there is no available vaccine or prophylaxis

### Treatment

- Supportive Care
  - Maintain circulatory function
  - Fluid and electrolyte replacement
  - Fever and pain control
  - Correct severe coagulopathy
  - Treat secondary infections and complications
- Frequent check of CDC websites for information on experimental medication or treatments.

### Decontamination

- Clean and disinfect environmental surfaces with EPA approved hospital disinfectant. Follow label for appropriate contact time and allow all surfaces to air dry.
- Red bag trash used for disposable items soiled with blood or other potentially infectious body fluids or secretions.
- Red Bag trash will be double bagged and bags wiped down for removal from room. It will be autoclaved prior to disposal by our usual waste haulers.

### Infection Control SEE **Infection Control Policy IC 316 –Ebola Isolation Guidelines**

- **Place patient in Negative Pressure private room. Standard Precautions, Droplet and Contact Precautions** for all suspected or confirmed cases
- **Must use PPE for room entry and all contact with patients and items soiled by blood and body fluids.**
  - ✓ Strict adherence to hand hygiene – before donning gloves **and especially immediately after removing gloves**
  - ✓ Conscientious use of PPE – gloves, gown, mask and eyewear required for room entry
  - ✓ Careful attention to donning and doffing technique and sequence. Remove PPE in the room and discard in appropriate container. Hand Hygiene immediately

- after removing
  - ✓ If performing invasive procedures, aerosol generating procedures or exposure to large amounts of blood, vomit or other body fluids anticipated (e.g. clean-up) double glove and use of leg and shoe covers, PAPR
- *If possible avoid aerosol generating procedures (BiPap, Bronchoscopy, sputum induction, intubation, extubation, open suctioning of airways. If these procedures are necessary*
  - *Limit the number of persons in room during procedure*
  - *PPE and PAPRs are required*
- **Safety engineered sharps and safe work practices – no recapping- ACTIVATE SAFETY Devices. All sharps will be disposed of at the point of use. Limit procedures that involve the use of sharps unless absolutely necessary.**
- **Dedicated or disposable equipment, *if not possible anyone equipment taken in to the room must be cleaned and disinfected with EPA approved product and according to the manufacturer's recommendations. Person cleaning must wear full PPE and double glove.***
- **Special handling of the deceased body – see IC Policy 316 prior to post-mortem care**

#### Environment of Care

- Environmental Service personnel are to wear all PPE recommended to protect against splatters or splashes
- Careful attention to donning and doffing sequence of PPE.
- Use appropriately prepared EPA registered hospital disinfectants with label claim for non-enveloped virus (e.g. norovirus, rotavirus, adenovirus) to disinfect environmental surfaces in the room of a patient with suspected or confirmed Ebola virus.
- Floors should be cleaned using a single bucket procedure of wet mopping. Disposable mop heads and cleaning cloths should be used. Keep the mop handle and bucket in the patient's bathroom.
- Blood and body fluid spills must be confined and contained with a biohazard fluid solidification treatment when possible. Following the removal of the solid waste, decontaminate the area with an EPA approved disinfectant.
- Containerized blood, gastric and pulmonary secretions must be treated with a solidification/treatment product prior to disposal. Empty bodily waste carefully into toilet.
- Avoid contamination of reusable porous surfaces – use only mattress and pillows with plastic or other covering that fluids cannot get through.
  - Disposable linen and privacy curtains

More information

[www.cdc.gov/ebol](http://www.cdc.gov/ebol)

## EBOLA VIRUS

## Attachment D

### CONTRA COSTA REGIONAL MEDICAL CENTER

#### ED VISIT WORKFLOW EBOLA WALK-IN PATIENT

##### **Triage Nurse**

Gels Hands Dons Gloves  
Brings patient in Room 17  
Any equipment used to transport patient will be left in room  
Alerts Charge RN to Patient's presence



##### **Charge Nurse**

Special Precautions Isolation Cart outside of room  
Places "Special Precautions" Isolation Sign on the door  
Places phone on top of cart  
Alerts nurse assigned to Room 17 and briefly reviews precautions  
Notifies ED NPM pager 998 (346-4998)  
Notifies Infection Prevention and Control pager 263 (346-4263)



##### **Assigned Nurse**

Change into disposable Scrubs  
Dons all necessary Personal Protective Equipment (PPE)  
Accesses supplemental screening questionnaire  
Asks patient supplemental screening questions  
Prints the completed questionnaire to nurses station  
Assesses patient's immediate needs  
Using phone in room to call Charge Nurse when patient ready to see provider  
Stays in room with provider



##### **Assigned Clinician**

Dons scrubs and all necessary PPE  
Examines and Assesses patient  
Using phone in Room Contacts "Communicable Disease Officer On Call"  
646-2441 ask for "Communicable Disease Officer On Call"  
After consultation with Communicable Disease Officer orders Ebola PCR in CCLink  
And Malaria thin smear  
Writes other orders  
Notifies Charge Nurse via phone patient to be admitted  
If patient condition allows, assigned will remove all PPE and exit room  
Telephone ICU Care Team of patient's Admission



##### **Charge Nurse**

Calls Medical Center Supervisor to arrange Admission

## Attachment D

CONTRA COSTA REGIONAL MEDICAL CENTER

### EBOLA

#### EMERGENCY DEPARTMENT TRIAGE GUIDELINES/FLOW

