

Hospital Infection Prevention for EVD



ประชุมใหญ่ทางวิชาการประจำปี ครั้งที่ 40
สมาคมโรคติดเชื้อแห่งประเทศไทย

Transmission

- Close contact with an infected animal
 - Chimpanzees, gorillas, fruit bats, monkeys
- Human to human transmission
 - Direct contact through broken skin or mucous membranes with
 - Blood and body fluid (including but not limit to urine, saliva, feces, vomit, breast milk, and semen)
 - Objects e.g. needles and syringes, clothing that have been contaminated with the virus
 - Not spread through the air or by water

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<http://www.cdc.gov/vhf/ebola/transmission/index.html>

EVD in healthcare workers

Country	Case definition	Cases	Deaths
Guinea*	Confirmed	70	33
	Probable	8	8
	Suspected	0	0
	All	78	41
Liberia*	Confirmed	78	64
	Probable	109	34
	Suspected	35	5
	All	222	103
Nigeria**	Confirmed	11	5
	Probable	0	0
	Suspected	0	0
	All	11	5

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As of October 19, 2014 (updated October 22, 2014)
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http://apps.who.int/iris/bitstream/10665/113709/1/roadmapstrept22Oct2014_eng.pdf?ua=1

EVD in healthcare workers

Country	Case definition	Cases	Deaths
Sierra Leone*	Confirmed	125	91
	Probable	2	2
	Suspected	2	2
	All	129	95
Spain	Confirmed	1	0
	Probable	***	***
	Suspected	***	***
	All	1	0
United States of America	Confirmed	2	0
	Probable	***	***
	Suspected	***	***
	All	2	0
Total		443	244

*Countries with widespread and intense transmission. **Now declared free of EVD transmission. ***No available data. Data are based on official information reported by Ministries of Health. These numbers are subject to change due to ongoing reclassification, retrospective investigation and availability of laboratory results.

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Consolidated Ebola Virus Disease Preparedness Checklist

17 October 2014



World Health Organization

สมาคมโรคติดเชื้อแห่งประเทศไทย

<http://www.who.int/csr/disease/ebola/evd-preparedness-checklist-en.pdf?ua=1>

CDC Centers for Disease Control and Prevention
CDC 2014 Spring Issue "Emerging Infections"

SEARCH

EBOLA Z INDEX

Ebola (Ebola Virus Disease)

EBOLA (Ebola Virus Disease) - CDC - Ebola Virus Disease - Healthcare Workers

Infection Prevention and Control Recommendations for Hospitalized Patients with Known or Suspected Ebola Virus Disease in U.S. Hospitals

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Standard contact and droplet precautions are recommended for management of hospitalized patients with known or suspected Ebola virus disease (EVD). (See Table below). Note that the guidance outlines only those measures that are specific for EVD; additional infection control measures might be warranted if an EVD patient has other conditions or diseases for which other measures are indicated (e.g., tuberculosis, multi-drug resistant organisms, etc.).

Though these recommendations focus on the hospital setting, the recommendations for [universal precautions](#), [EBIC](#), and [universal precautions](#) in [healthcare settings](#) who have the potential for exposure to patients and/or to infectious materials, including body substances, contaminated medical supplies and equipment, contaminated environmental surfaces, or aerosols generated during certain medical procedures. HCP includes, but are not limited to, physicians, nurses, nursing assistants, therapists, technicians, emergency medical services personnel, dental personnel, pharmacists, laboratory

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<http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html>

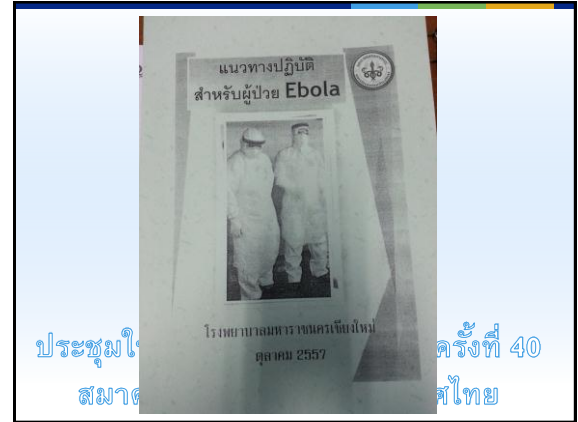


แนวทางการดำเนินงาน
สำหรับศูนย์
ป้องกัน และควบคุม
โรค Ebola
ประเทศไทย
2557
สำนักงานป้องกันโรคติดต่อ

ประชุมใน
สมาคม

ครั้งที่ 40
ศไทย

http://beid.ddc.moph.go.th/beid_2014/hl/diseases/270



แนวทางปฏิบัติ
สำหรับผู้ป่วย Ebola

ประชุมใน
สมาคม

ครั้งที่ 40
ศไทย

โรงพยาบาลพระนครศรีอยุธยา
เดือน 2557

The Consolidated Checklist for Ebola Virus Disease Preparedness			2/2
Component	What this component is about	Why this needs to be in place and ready	
Overall coordination	These are all efforts to clarify roles and responsibilities of national authorities and international partners in preparedness activities under a shared set of objectives.	This will allow to minimize duplication of efforts and ensure maximum impact from limited resources that are currently available.	
Rapid Response Team (RRT)	RRT is a group of experienced experts that are on stand-by and can reach any part of the country within 24 hours. Their actions will help to contain an outbreak early on. They will survey the first cases, provide health care in a central facility, engage with the community and carry out infection, prevention and control measures.	As countries will not know exactly in which geographical area a first case will emerge, a fully operational RRT is critical to be able to act immediately once a suspicious case is reported. They will act as an initial stabilising resource in the earliest phase of the outbreak.	
Public awareness and community engagement	These are efforts to promote the understanding of at risk communities on Ebola and address any stigma hampering EVD emergency healthcare and effective surveillance. In short, the community has a crucial role in the alert.	In currently affected countries, health centres have been attacked as people were highly afraid and false rumours about the disease spread.	
Infection Prevention and Control	This is to develop optimum IPC capacity and support facilities to ensure safe working conditions within healthcare facilities and social mobilization.	The ongoing epidemic in West Africa has caused considerable fatality of healthcare workers (average rate of infections 5-6%). IPC and safe working conditions are critical components to deliver emergency healthcare.	
Case management at Ebola Treatment Centre (ETC)	These are all efforts to develop or improve an existing facility as ETC to treat 15 patients and have them fully operational. It includes the physical infrastructure as well as the capacities of staff to manage EVD cases.	The lack of functional ETCs in the beginning of an outbreak can lead to a small outbreak getting out of control. Therefore, having at least one fully operational ETC facility before a first case occurs is important to contain an outbreak early on.	
Case management at Safe burials	These are efforts to ensure safe burial with due regard to local custom and region while safe handling of deceased is necessary to prevent wider transmission to communities.	Unsafe burial of Ebola victims has caused considerable community infection during burial ceremonies and is one of the main risk factors.	
Confinement and surveillance	This is a cross-country effective alert/notification system to immediately investigate a person for potential EVD.	The key to success in controlling EVD is largely dependent on timely and accurate community based surveillance.	
Contact Tracing	These are all efforts that need to be in place to identify and track the chain of transmission within the first 72 of reporting a confirmed/suspected case.	Rapid contact tracing and immediate monitoring is essential to stop the transmission to other people.	
Laboratory	These are all efforts to ensure that samples are safely taken and transported to laboratories which are ready to safely analyse them.	Rapid confirmation of cases is crucial to contain an outbreak, trace contacts and provide emergency healthcare.	
Capacities at Points of Entry	Efforts to get Points of Entry ready to deal with an Ebola case once it occurs. This includes the preparation of facilities as well as increasing staff capacity.	An effective targeted screening at Point of Entries will help to prevent cross border transportation of infections.	

<http://www.who.int/csr/disease/ebola/evd-preparedness-checklist-en.pdf?ua=1>

Infection Prevention and Control

- Recommendations are based on
 - High mortality rate
 - Risk of human to human transmission
 - Lack of FDA-approved vaccine and therapeutics
- Standard, contact, and droplet precautions
- Airborne precaution only aerosol-generating procedure

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<http://www.cdc.gov/vhif/ebola/hcp/procedures-for-ppe.html>

Key components

- Patient placement
- Personal protective equipment (PPE)
- Staff allocation
- Patient care equipment
- Patient care considerations
- Aerosol generating procedures
- Hand hygiene
- Safe injection practices

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Key components

- Environmental infection control
- Monitoring and management of potentially exposed personnel
- Monitoring, management, and training of visitors

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Patient placement

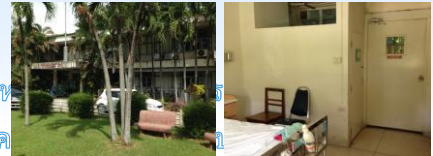
- Designated area for patient screening



สมาคมโรคติดต่อแห่งประเทศไทย

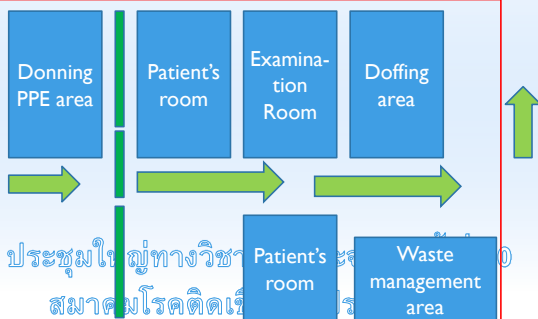
Patient placement

- Designated unit/ ward
- Single room with a private bathroom with the door closed
- Maintain a log of all persons entering the patient's room



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Patient placement



PPE

- All healthcare workers providing care for Ebola patients undergo rigorous training and be competent with PPE, including taking it on and off in a systematic manner
- All workers are supervised by a trained monitor who watches each worker don and doff PPE

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<http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>

PPE training



ประ

40

PPE training



ประ

Donning area

Doffing area



วิชาการป
ดเชื้อแห่ง

Patient Care Equipment

- Dedicated medical equipment should be used for patient care
- Disposable when possible
- Carefully clean and decontaminate reusable equipment according to the manufacturer's instructions and hospital policies

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<http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html>

Patient Care Considerations

- Limit use of needles and other sharps as much as possible
- Phlebotomy, procedures, and laboratory testing should be limited to the minimum necessary for essential diagnostic evaluation and medical care
- All needles and sharps should be handled with extreme care and disposed in puncture-proof, sealed containers

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Monitoring and management of potentially exposed personnel

- Sick leave policies
- HCP who develop sudden onset of fever or any signs suspected of EVD
 - Immediately stop working
 - Notify their supervisor
 - Prompt medical evaluation
 - Comply with work exclusion until they are no longer infectious to others

■ Asymptomatic HCP who had an unprotected exposure
 ■ Fever monitoring for 21 days after the last known exposure

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Resources

- www.cdc.gov/ebola
- <http://www.who.int/csr/disease/ebola/en/>
- http://beid.ddc.moph.go.th/th_2011/news.php?g=1&items=1748

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Case Management

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Control of EVD

- Case finding
- Isolating and caring patients
 - Hospital infection control
- Tracing contacts

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