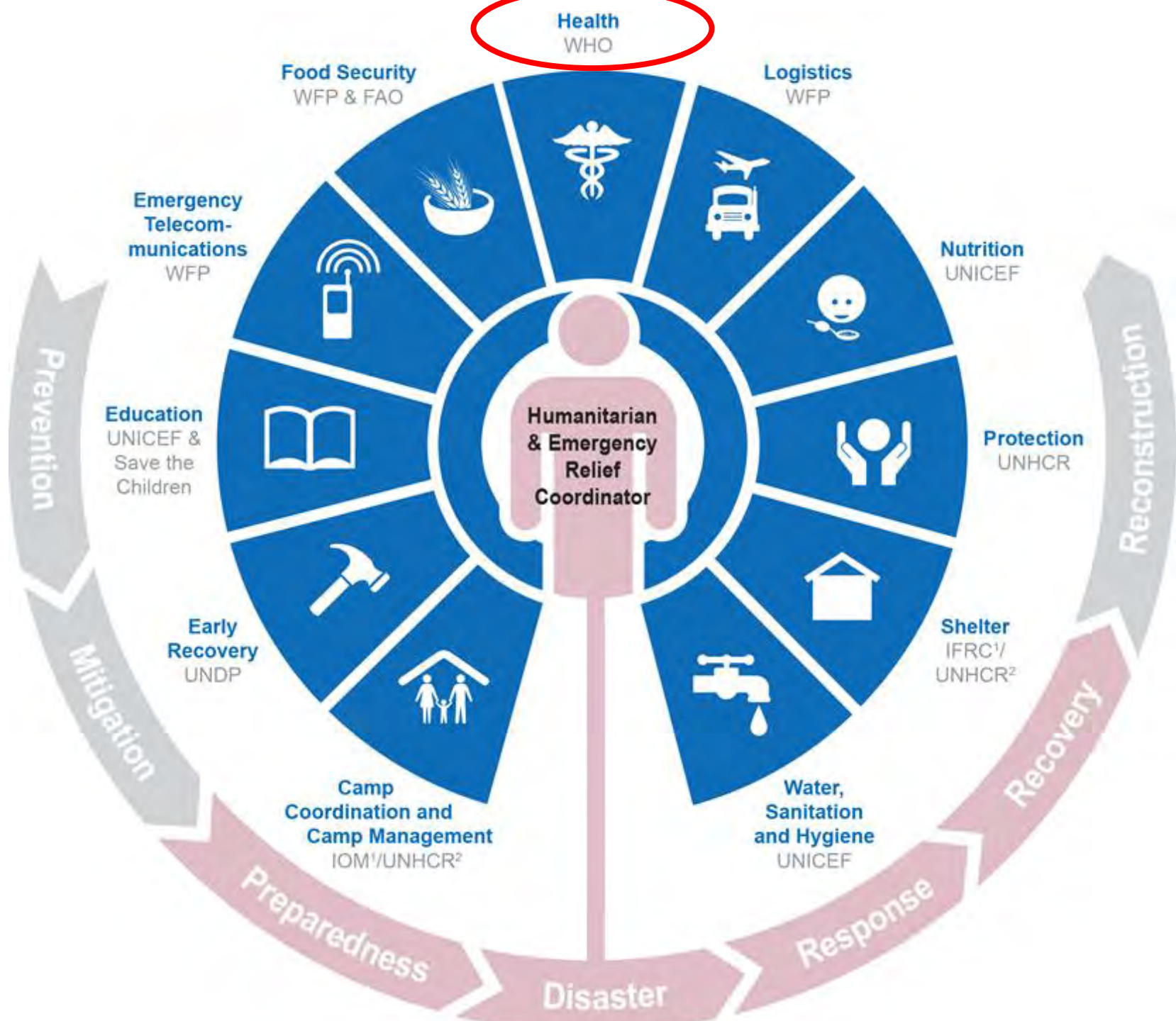


Population health and the WHO in managing viruses in humanitarian settings

Infection Prevention & Control (IPC)
and Personal Protective Equipment (PPE)
training for staff working in Ebola
Treatment Units (ETU) - 2014



World Health
Organization



BREAKING NEWS

[Cruise ships at Melbourne pier evacuated after sniffer dogs smell 'something suspicious'](#)



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Ebola crisis: WHO declares international public health emergency, to consider use of experimental medicines

By Europe correspondent [Barbara Miller](#), wires

Updated 9 Aug 2014, 12:26pm

West Africa's raging epidemic of the Ebola virus has been declared an international public health emergency by the World Health Organisation (WHO).

Holding an emergency meeting, the Geneva-based UN health agency said the possible consequences of further spread are "particularly serious" given the virulence of the virus.

WHO chief Margaret Chan has described the outbreak as an extraordinary event and a risk to other countries, and said a coordinated international response was required.

"I am declaring the current outbreak of Ebola virus ... a public health emergency of international concern," she said.

"The committee's decision was unanimous. It's advice to me acknowledges the serious and unusual nature of the outbreak and the potential for further international spread."

It is expected that WHO will be meet again next week to consider the ethics of using experimental medicines to deal with the outbreak.

The death count has now climbed to almost 1,000 people, in Guinea, Sierra Leone and Liberia.

WHO's emergency declaration comes as the United States orders the families of embassy staff in Liberia to return home, as West Africa struggles to cope with the world's biggest ever outbreak of Ebola.



PHOTO: Health workers - like this one from the Liberian capital [Monrovia](#) - form part of the front line in treating those infected with Ebola. (AFP: Zoom Dosso)

RELATED STORY: [NSW doctors urged to be on alert for Ebola virus](#)

MAP: [Guinea](#)

EBOLA VIRUS OUTBREAK



[Donate to Ebola fight](#)



[Explained: Australia's plan to tackle Ebola](#)



[How you can and can't get Ebola](#)



[Ebola: what is it and how does it spread?](#)

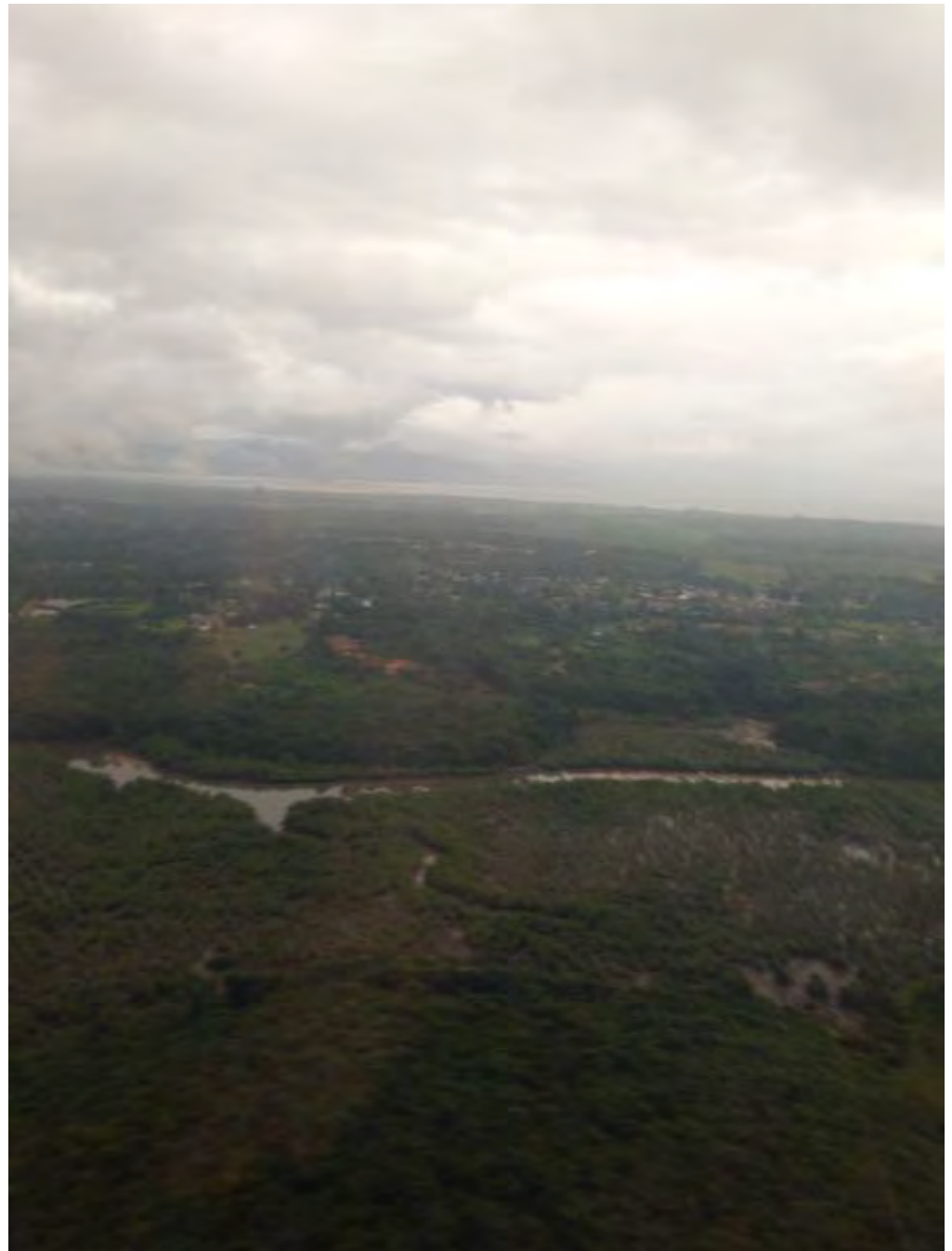
Year	Country	Ebolavirus species	Cases	Deaths
2012	Democratic Republic of Congo	Bundibugyo	36	13
2012	Uganda	Sudan	11	4
2011	Uganda	Sudan	1	1
2008	Democratic Republic of Congo	Zaire	32	15
2007	Uganda	Bundibugyo	149	37
2007	Democratic Republic of Congo	Zaire	264	187
2004	Sudan (now South Sudan)	Sudan	17	7
2003 (Nov-Dec)	Congo (Republic of)	Zaire	35	29
2003 (Jan-Apr)	Congo (Republic of)	Zaire	143	128
2001-2002	Congo (Republic of)	Zaire	57	43
2001-2002	Gabon	Zaire	65	53
2000	Uganda	Sudan	425	224
1996	South Africa	Zaire	2	1
1996 (Jul-Dec)	Gabon	Zaire	60	45
1996 (Jan-Apr)	Gabon	Zaire	37	21
1995	Democratic Republic of Congo (fm Zaire)	Zaire	315	250
1994	Cote d'Ivoire	Taï Forest	1	0
1994	Gabon	Zaire	52	31
1979	Sudan (now South Sudan)	Sudan	34	22
1977	Zaire (now DRC)	Zaire	1	1
1976	Sudan (now South Sudan)	Sudan	284	151
1976	Zaire (now DRC)	Zaire	318	280

1976 -2012: <2400 cases in total over 38 years

2014-2016: 28,616 cases with 11,310 deaths in 2 years

<https://www.cdc.gov/vhf/ebola/outbreaks/history/chronology.html>

Welcome to Freetown, Sierra Leone, West Africa







Independence 1961

Civil war ended 2002

Population: ~ 6 million

Gross National Income per capita: \$1 (cf \$42)

Total expenditure on health per capita: \$228 (cf \$4200)

50% safe drinking water

Life expectancy: 46 years

Physicians: ~ 132

Nurses: ~ 1,000



In Memory of the Late



Mrs. Hajia Isata Rahaman-Cole
R.I.P.



- V. Vigilant At Work At All Times
- I. Inspirational Thought To Colleagues
- C. Confidence at Work Place
- T. Tolerance At All Times
- G. Open Mind For All Staff at Work Place
- R. Respect For All



MORAL SERVICE FOR THE
LATE STAFF NURSE
NAGOMI KARGBO
HELD ON FRIDAY 16TH MAY
AT THE WINNER'S CHAPEL,
BACK OF PADEMBA ROAD
PRISON
8 - 10:00 A.M. PROMPT.







Renovation of WATSAN
facilities and Installation

TRINITY FULL G
(NEW CREATION)

WEEKLY AC

Sundays - School And W
Mondays - Evangelism And V
Tuesdays - Home Cell Fellow
Wednesdays - Healing, Deliv
Fridays - Prayer Meetings



PROJECT
PARTNER:
IMPLEMENTING AGENCY











Signs & Symptoms of EVD

Early Stage:

Fever (warm body), very weak, headache

Joint pain, back pain, muscle pain

Difficulty swallowing, sore throat

Red eyes

Sometimes a body rash

Middle Stage

Previous signs and symptoms but now with:

Diarrhea, abdominal pain

Vomiting

Late Stage

Bleeding

Mental confusion

Low or absent urine output

Rapid breathing

Convulsions, loss of consciousness

Training of HCW

- Three-day program based on IPC and PPE training
 - Social mobilisation messaging
 - 30+ participants per room with 2-3 trainers
 - Multiple rooms operating simultaneously
 - Participants arranged by MOHS, plus additions.
-
- **EDIP Principle:**
 - **E**xplanation – presentation and discussion
 - **D**emonstration – one person getting into/out of PPE
 - **I**mitation – working in pairs under trainer guidance
 - **P**ractice – repeat donning and doffing

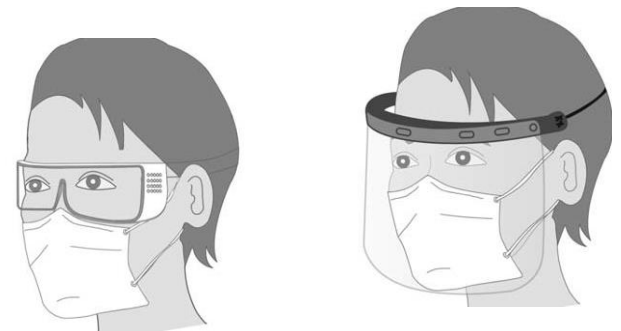
The Steps to Putting on PPE

7 Put on face protection:

7a Put on a medical mask & then



7b Put on goggles or a face shield.



Demonstration



Imitation



Practice



More practice...



Mock ETU





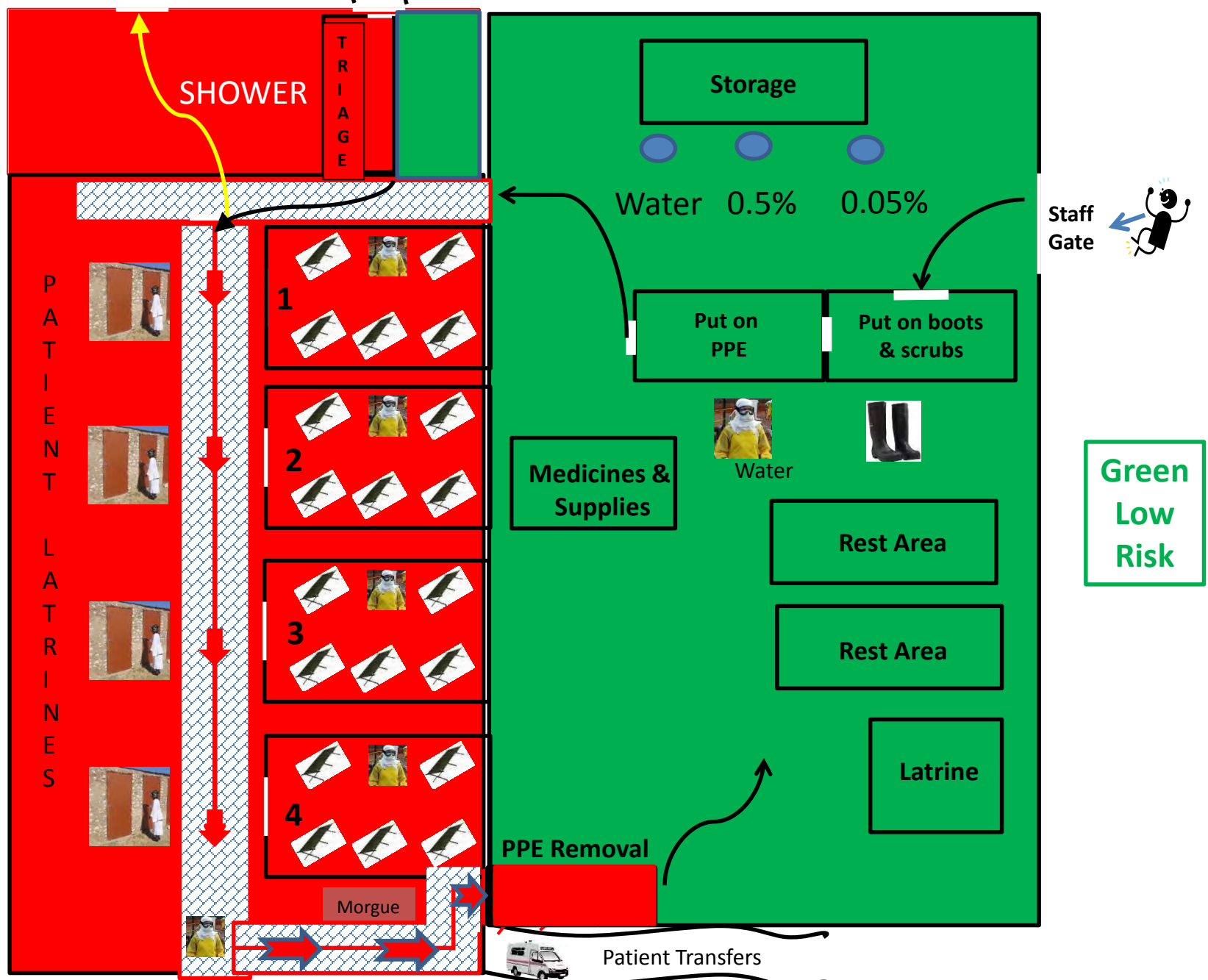
Some definitions

- **Suspect case** – fever plus three other symptoms
- **Probable case** – suspect case plus epidemiological link to a confirmed case
- **Confirmed case** – positive laboratory test

- **Holding centre** – suspect & probable cases only
- **Ebola Treatment Unit (ETU)** – confirmed cases only



Patients Arrive



Red
Very
High
Risk

Green
Low
Risk



GOVERNMENT OF SIERRA LEONE
MINISTRY OF HEALTH AND SANITATION
HASTINGS EBOLA TREATMENT CENTRE

Date: 10th November, 2014

DISCHARGE CERTIFICATE

This is to certify that Mr. [REDACTED] who was admitted at the Hastings Ebola Treatment Centre has been successfully treated for Ebola Viral Disease and is now **NEGATIVE** of the infection. He is now medically free from any Ebola related symptoms and is therefore discharged home. He poses no risk to her community.

Dr. SANTIGIE SESAY
Centre Coordinator

Capt (Dr.) KOMBA SONGU-M'BRIWA
Centre Clinician

The Ebola virus is relatively fragile and vulnerable to:

- Chlorine
- Alcohol (e.g. alcohol hand rub)
- Soap
- Detergents
- Heat (steam sterilization)
- Drying
- Direct sunshine (UV light)



“What is Ebola?”

“How does a person get Ebola?”

“Have you heard of other ways people are saying you can get Ebola?”

“Is Ebola the result of a spell or a curse?”

“What happens when you get Ebola?”

“Can you catch Ebola by touching a dead body?”

“When a person survives Ebola and returns to the community can you catch it from that person?”

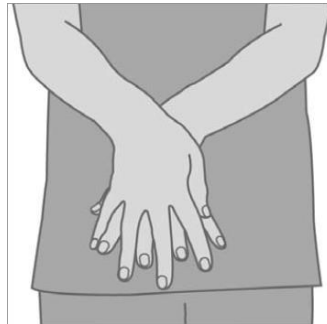
“Now that Ebola is in the community, what do you do when there is a sick friend, relative or family member?”

**Adapted for
Sierra Leone
For the 2014
outbreak**



**World Health
Organization**

The **MOST IMPORTANT** activity
in any ETU is to **PREVENT**
the spread of infection,
Ebola or others, to staff and patients







Ebola locks down Sierra Leone

Six million people have been ordered to stay indoors in a bid to contain the disease

FREETOWN: Sierra Leone has ordered its six million people to be confined to their homes for three days while volunteers conduct a house-to-house search for Ebola victims in hiding.

Meanwhile, at an emergency meeting, the UN Security Council unanimously called the crisis "a threat to international peace and security" and urged all countries to provide experts, field hospitals and medical supplies. It was only the second time the council had addressed a health emergency, the first being the AIDS epidemic.

And in Guinea, seven bodies were found after a team of health workers trying to educate people about Ebola was abducted by villagers armed with rocks and knives. Among the dead were three Guinean radio journalists.

Many villagers have reacted with fear and panic when outsiders have come to conduct awareness campaigns and have even attacked health clinics, as happened in Guinea.

The disease, which has also touched Liberia, Nigeria and Senegal, is believed to have struck more than 5300 people and killed more than 2600 of them, the UN's World Health Organisation reported. In a sign that the West African crisis is picking up steam, more than 700 of those infections were recorded in the latest week for which data is available.

During the lockdown in Sierra Leone, set to run through until tomorrow night, volunteers will try to identify sick people reluctant or unable to seek treatment. They will also hand out 15 million bars of soap and dispense information on how to prevent Ebola.

Authorities have said they expect to discover hundreds of cases during the shutdown. Many of those infected have not sought treatment out of fear that hospitals are merely places to die. Others have been turned away by centres overwhelmed with patients.

Sierra Leone's government said it had prepared screening and treatment centres to accept the



The World Health Organisation trains nurses in Freetown yesterday in the correct use of protective clothing; Haj pilgrims were screened at Lagos airport

expected influx of patients. As people rushed to buy food and other items ahead of the shutdown, some merchants worried about how they would feed their own families after losing three days' income. Much of Sierra Leone's population lives on \$US2 a day or less, and making ends meet is a day-to-day struggle.

"If we do not sell here we cannot eat," said Isatu Sesay, a vegetable seller in the capital. "We do not know how we will survive during the three-day shutdown."

The UN Security Council resolution was co-sponsored by an unprecedented 130 countries, reflecting the rising global con-

cern. "This is likely the greatest peacetime challenge that the UN and its agencies have ever faced," said WHO chief Margaret Chan.

"None of us experienced in containing outbreaks has ever seen, in our lifetimes, an emergency on this scale, with this degree of suffering, and with this magnitude of cascading consequences."

UN Secretary-General Ban Ki-moon called for a 20-fold increase in aid totalling almost \$US1 billion (\$1.1bn) to deal with the crisis. Several countries promised aid even before the resolution was adopted.

France announced it would set up a military hospital in Guinea in

the coming days and Britain will provide 500 more badly needed beds in Sierra Leone. The US plans to send 3000 military personnel to the region and build more than a dozen treatment centres in Liberia. An American general is in Liberia's capital, Monrovia, to set up a command centre.

With no proven treatment for the disease, public health experts have kept the focus on isolating the sick, tracking down those they have come into contact with, and stopping the chain of transmission through travel restrictions, cordoning-off entire communities and now Sierra Leone's lockdown.



India warns China over Himalayan border stoush

NEW DELHI: India has demanded that China pull back troops from its contested border in the remote mountain state of Ladakh in the Himalayas after Beijing sent hundreds of soldiers to cross into the country this month.

The demand from Indian Prime Minister Narendra Modi overshadowed his first meeting with Chinese President Xi Jinping.

"I raised our serious concern over repeated incidents along the border," Mr Modi said after a state dinner with Mr Xi.

"There should be peace in our relations and in the borders. If this happens we can realise true potential of our relations."

A brutal war was fought over this part of the India-China border in 1962. Despite decades of talks, neither side has been able to agree on even a so-called "line of control" on either side of which they can deploy their armed forces, triggering frequent accusations of border violations in Ladakh and Arunachal Pradesh, another disputed region in the eastern Himalayas.

Both countries lay claim to the 84,000sq km area of the Himalayan range as their own. It currently gives India access to substantial water resources.

This week, China breached its 3500km border with India by sending 50 troops into Ladakh tasked with trying to build a road using cranes and bulldozers. In response, India has deployed three battalions of troops.

military sources said. On Thursday, speaking after meeting Indian President Pranab Mukherjee in New Delhi, Mr Xi said China was committed to ensuring "peace and tranquillity" on their border.

Adding to tensions between the two sides during the visit, a separate dispute between Indian and Chinese civilians is under way in Demchok, another area of Ladakh.

Indian military sources said it took place after Indian workers began building a canal for irrigation that would divert some of the flow of a river used for water supplies in both countries.

The double stand-off, however, came as China offered to invest \$22 billion in Indian railways, industrial parks and infrastructure. Mr Xi's visit also prompted comments from the Dalai Lama, who said Mr Xi was "more open-minded" than his predecessor, Hu Jintao.

Speaking in Mumbai, the exiled Tibetan spiritual leader said Mr Xi should learn from his experience of observing democratic rule in India and apply it to China.

This month's attempt to reclaim part of the contested border area is the latest act by China to seek to extend its influence in Asia. Last week, Beijing was revealed to be using a dredger to reclaim land from the South China Sea to redraw the regional map.

THE TIMES

Jolie credited for rise in tests

KAY LAY
LONDON

ANGELINA Jolie has been credited with encouraging thousands of women to have genetic breast cancer tests after making public her double mastectomy.

Researchers believe the actress's glamorous image and relationship with Brad Pitt may have reassured women worried about losing their "sexual identity" after preventive surgery.

Referrals for genetic testing in

still at a high level in January. The BRCA1 mutation, inherited from a parent, is the cause of at least one in 10 breast cancers. The risk of developing breast cancer for women with the mutation is 45 to 90 per cent.

Two weeks after Jolie's announcement, Debbie Martin, her maternal aunt, died from breast cancer.

Lester Barr, chairman of Genesis Breast Cancer Prevention, said: "Angelina's story has encouraged those who are at high risk of developing breast cancer to come forward to be tested for a mutated BRCA1

A top Spanish doctor says nurses in West Africa are more rigorously trained to avoid the infection and detect Ebola symptoms than in his native Madrid



A WHO health worker teaches trainee how to put on a protective suit in Freetown, Sierra Leone Photo: Umaru Fofana/Reuters



By [Fiona Govan](#), Madrid

11:46AM BST 11 Oct 2014

[Follow](#)

A leading Spanish doctor who is fighting the [Ebola](#) outbreak in West Africa has said training for medics in Sierra Leone was more rigorous than that given in Spain.

Jota Echevarria, a senior health coordinator for the International Rescue Committee (IRC), expressed dismay at the measures being used in his native Madrid to contain the outbreak, claiming [Spain](#) had failed to carry out correct containment measures.

"I can tell you that [in Sierra Leone] all medical staff charged with treating patients suspected of Ebola have rigorous training, most of all in how to put on and take off the protective suits," said the 62-year old doctor, who is currently in the west African country to set up a treatment and isolation clinic.

Speaking to *The Telegraph* from Freetown, the doctor with more than 25 years experience in humanitarian crises around the world explained: "It takes ten to 14 days to become fully trained in wearing a special protective suit. It is hard to put on and even harder to remove and that is where the biggest danger of infection lies."

His comments after Maria Teresa Romero Ramos, an auxiliary nurse on a specialist team charged with treating two missionary priests who had been repatriated from West Africa, became the first person to contract Ebola in Europe.

Related Articles

Ebola beds prevented 40,000 deaths

By Michelle Roberts
Health editor, BBC News online

🕒 13 October 2015 | Health



The global response to the Ebola crisis in Sierra Leone helped avert 40,000 deaths but if aid had been offered sooner, thousands more lives there might have been saved, say researchers.

Britain's donations of more than £100m in the summer of 2014 helped to set up nearly 3,000 hospital beds.

This vital provision, researchers estimate, prevented 56,000 Ebola cases.

Ebola crisis

How Ebola changed the world

The hunters breaking an Ebola ban on bushmeat

Why Ebola is so dangerous

Ebola: Mapping the

“From September 2014 onwards, more than 2,700 treatment beds were introduced in Ebola holding centres, CCCs and **ETUs...in Sierra Leone.**”

Trained 850 HCWs in first 6 weeks

Followed by 3,000 more over next 4 weeks by UK MOD



Thank you....

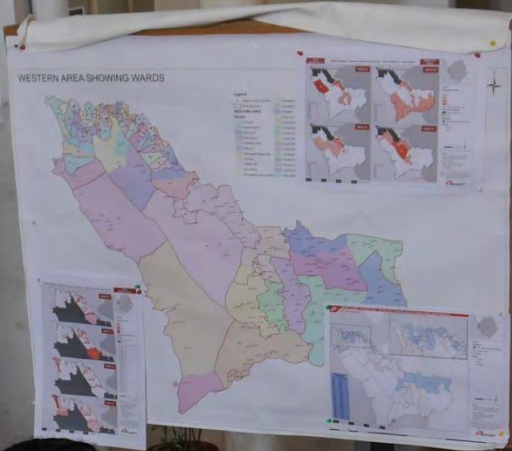




 **World Health Organization**
Organisation mondiale de la Santé

WEEK NO. 2 DATES 16/04 to 22/04

VARIABLES	M	T	W	T	F	S	Su
No. of Alerts	59				21	43	26
No. of Alerts by SDC	55				29	40	23
No. of Alerts making EVD test	21/3				2/4/4	4/6/10	
No. of deaths	35				25	30	4
No. of alerts with investigation					0	0	0
TOTAL no. of reported cases	59				37	38	26
No. of confirmed cases					5	4	6
No. of confirmed cases by SDC					04	05	06
No. of confirmed cases by SDC	5				1	1	0
No. of confirmed cases by SDC	13				3	3	4
No. of confirmed cases by SDC	4				1	0	0
No. of other deaths made to be in (Deaths in the community)							



Confirmed Cases: 3/1/15

WARD	NAME	ADDRESS	Investigated by
390	MURRAY	Murray town barracks 4th	W.H. Ix
355	ALHAY	20 WINGHURST STREET BORTOE	W.H. Ix
360	PHILIP	245 Wellington	NOT TRACED
371	SHAW	87 Sankofa St	W.H. Ix
380	MUHAMMAD SAMAI	YAK ROAD	W.H. Ix



ERN AREA SHOWING WARDS



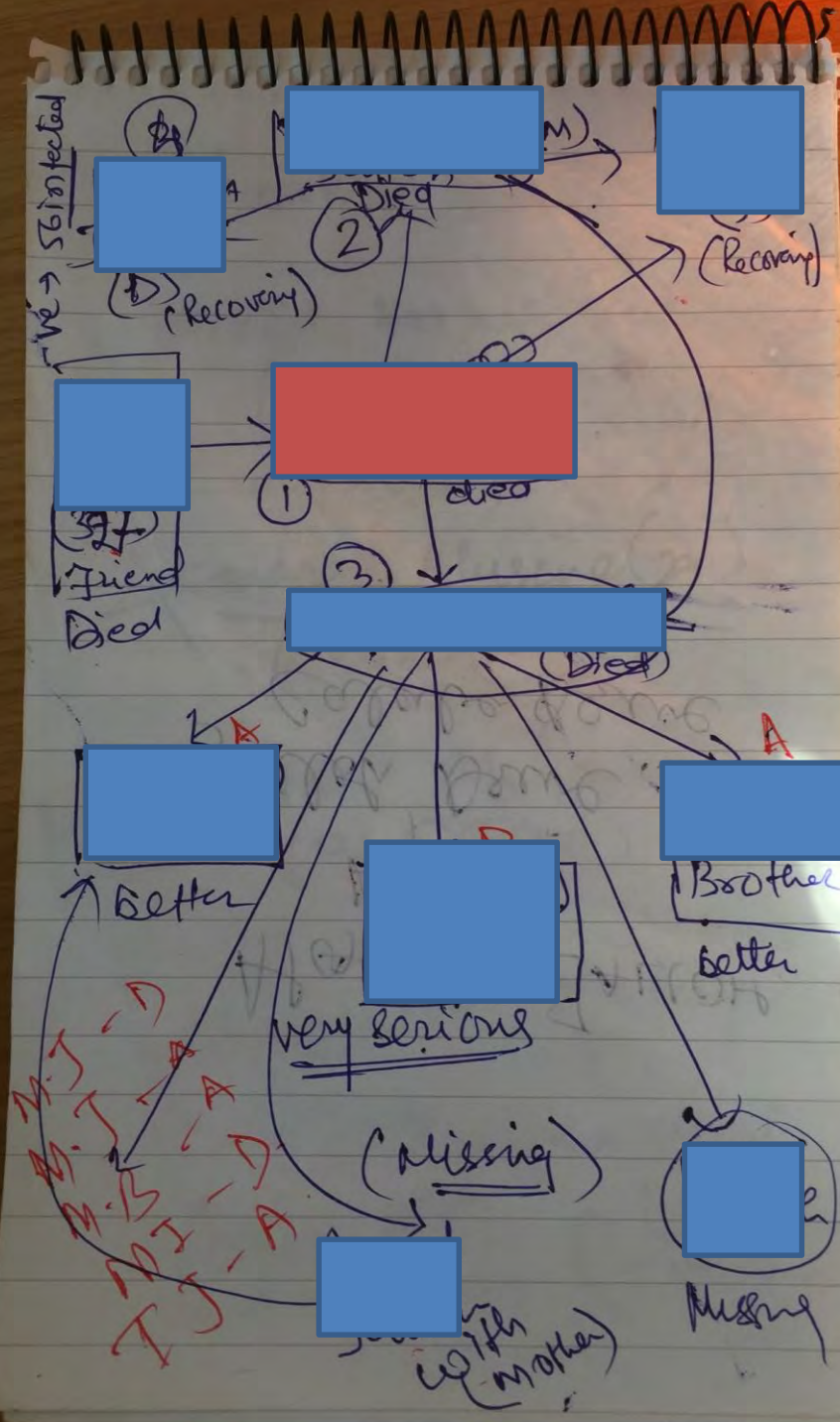


Confirmed Cases:

Date: 10/2/15

WK 07

WARD	NAME	ADDRESS	Investigated by
365 392 329		54 Rue Pissart Metzgar lane 2 Cape Rd W Site Jui	WHO CDC
360 ↓		power magazine Grussfield	WHO
352 PL? (31/16)		68 Congo Water Wellington Konkoby	
333 392 392		rgbo Ogoo farm Southich lan of Warbay ABE ach road smart poka berdeen	AU WHO
328		Grafton	CDC
355		DA Wright street ortee	WHO
355		27B Zara lane	WHO
392		Tamba Kula Aberdeen	WHO
346		abia Lane Calabatoun	
383		1 Lower MoaWare 7th Main Congo town	



BRITISH
COUNCIL

BRITISH
COUNCIL

BRITISH
COUNCIL

MONDAY - THURSDAY
9:30 AM - 4:30 PM

FRIDAY
9:30 AM - 2:00 PM













World Health
Organization
Organisation mondiale de la Santé





boy of Kaduna state
4 - male
B-25/5/15 at 12:35
MSB.