

Supplementary file 2. Intervention repository for DRC outbreaks

Outbreak	Interventions carried out	Dates (if known)
1976, Yambuku	Yambuku Mission Hospital closed	30/10/1976
	Active surveillance nationwide, in Kinshasa and in the epidemic area	
	A technical note on the disease and practical advice on protection, notification and sample shipping was given to healthcare workers at the national level. Disseminated through radio and the Catholic and Protestant mission amongst others.	
	Isolation of confirmed cases in Kinshasa and quarantine of contacts for 21 days with daily temperature checks	
	Training of local active surveillance teams and provision of protective equipment	
	Involvement of the village chiefs and house-to-house surveying	
	Retrospective surveillance	
	Isolation of cases. Suspected cases were isolated in their village with no close monitoring	
	Barriers installed around villages affected to prevent entry and exit	
	Sodium hypochlorite (2%), boiling or burning were used to decontaminate or dispose of contaminated materials and waste	
Cadavers wrapped in cloth, soaked in formalin or phenol and buried deeply	3	
1995, Kikwit	Closure of all hospitals, health centers and laboratories in the Kikwit area (later reopened)	04/05/1995
	Quarantine of patients in Kikwit General Hospital	
	Passive surveillance carried out by re-opened healthcare facilities	
	Active surveillance and follow-up carried out by medical students of Bandundu University	
	The establishment of a rumour registry of suspected cases and deaths	
	The use of the Kikwit Diocese radio station and church gatherings for surveillance messages	
	The distribution of protection equipment	
	The infection prevention and control training of medics and other volunteers	
	The organization of safe burials by the Red Cross	
	Leaflets, posters, banners and speeches through megaphones through the streets of Kikwit	
Instruction of approximately 60 healthcare workers on protective equipment, disease characteristics, case definitions and management	12/05/1995 and 14/05/1995	
Death registry established		
2007 Mweka	Retrospective and prospective surveillance	27/09/2007
	Two international mobile laboratories opened, one in Mweka (PHAC) and one in Luebo (CDC)	
	Organization of safe burials	

Investigation of drinking water sources and subsequent chlorination of water

Disinfection of abandoned households belonging to EVD victims and all major treatment, isolation and healthcare facilities in the area

Implementation of protocols for adequate protective equipment, disinfection and hand hygiene amongst healthcare workers

Improvement of the general sanitation conditions of the SNCC hospital

Construction of three treatment centers, one in Kampungu, one in the Bulape Hospital and one in the Luebo General Hospital and establishment of a transport system for patients

Dissemination of knowledge about the disease through leaflets, radio and television education campaigns

Provision of free healthcare and food and medical aid for the population residing in the Kampungu area

Training of 185 nurses, hygiene technicians and red cross employees

2008/9 Mweka

Arrival of national and international support on site 18/12/2008-25/12/2008

Opening of first isolation center by MSF Belgium in Kaluamba 27/12/2008

Isolation center was transferred from Kaluamba to Kampungu with 25-bed capacity 02/01/2009

Three international mobile laboratories from Canada, Gabon and South Africa were built 15/01/2009

The establishment of a surveillance system including contact-tracing using specific forms to be completed for all cases

Health promotion in the community to raise awareness about the disease and how to avert infection (including sessions carried out daily in each village, meetings with authorities from many social groups (eg. priests from many religions, village chiefs, school directors), outreach through songs and messages in local radio stations, at markets and through the distribution of cassettes, response to rumours and household visits)

The symptomatic treatment and isolation of cases to prevent transmission in the community and improve patients' chances of survival in an environment where appropriate protective equipment and measures were put in place. The interior of the isolation centers were fully visible from the outside to increase transparency with regard to the community.

Burials made safe

At-risk households were disinfected

Waste was appropriately disposed of

Psychological support was made available to healthcare workers, patients and their families

2012, Isiro

Laboratory

First laboratory was installed, a collaboration between the CDC and the Institut National de Recherche Biomédicale (INRB, Kinshasa) 25/08/2012

A team from the PHAC (Winnipeg) arrived and started managing the diagnostic activities together with the INRB. 03/10/2012

Surveillance

Retrospective surveillance (including taking blood samples, consultation of registers, family of cases, community surveys)

Prospective surveillance(ensuring healthcare workers use correct definitions, contact tracing and taking blood samples)

Creation of a harmonised database that permitted real-time epidemiological analysis

Production of a daily bulletin

Case management, funeral safety and infection control

Isolation unit at the Isiro General Reference Hospital opened 06/08/2012

Re-organisation of treatment center at the Isiro General Reference Hospital by MSF Belgium and Spain: isolation units, handwashing stations, waste burning stations 10/08/2012

Personal protection equipment distributed

Free treatment of patients

Systematic (analgesic, antimalarial, antibiotics, vitamins A, B and C) and symptomatic treatments as well as three meals a day were provided

The safety of 37 burials was ensured: cadaver disinfected with 0.5% chlorine solution and placed in a bag before funeral and burial. When a death took place at home, the home was disinfected. Sometimes safety of burial was relayed to families and gloves were provided

Water, hygiene and sanitation

220 healthcare workers, 34 technicians and 77 red cross employees were trained in disinfection techniques, preparation of chlorine solutions, secure burial and infection control in the healthcare setting. Protection and disinfection equipment was provided.

Disinfection of 30 households of cases and 36 healthcare centers

Incinerators built by a local engineer and installed in various healthcare centers

13 patients were securely transferred

Psychosocial support

Psychological support was made available to healthcare workers, patients and their families

122 families were provided kits for their reinsertion into the community (bedding, food, bucket, cup and soap)

Psyco-educational sessions in the community and with healthcare workers

Social support of families affected (eg. food)

400 providers trained in psychological management of EVD cases

Communication

Briefing of local media, organised groups and community leaders to relay information about EVD

Lobbying of political and administrative authorities to gain their support. This resulted in the temporary banning of hunting, playing football and greeting in churches and the use of churches and schools to communicate messages about the disease

2014, Boende

Flyers, posters, songs in Lingala and other local languages, a radio sketch, messages transmitted through the Isiro radio stations

21 film projections gathering 12,450 people

Fast survey of the communication activities

9/10/2012-10/10/2012

Register of hostile reactions encountered

Evaluation and reinforcement of existing prospective and retrospective surveillance

Training of 150 community support workers, 33 community nurses and 52 local healthcare workers

Harmonisation of surveillance tools

Creation of an epidemiological surveillance database, a laboratory surveillance database and a treatment centre database

Distribution of surveillance tools

21 day follow-up of the contacts of cases

Investigation of any alerts (ill or dead individuals)

Active search for new cases in the existing healthcare structures (analysis of consultation registers) and in the community (door-to-door knocking in affected villages)

Writing and distribution of regular surveillance reports

Epidemiological analysis of the outbreak dynamics as it progresses

Daily surveillance meetings

Set-up of mobile laboratory

Case management

Lokolia open 10/09/2014

Two Ebola treatment centres subdivided by risk areas. One built from scratch in Lokolia (24 beds) received 40 patients and one in the General Reference Hospital of Boende (18 beds) received 12 patients. Three meals a day provided for patients and their carers

Home-based management of one case by a healthcare worker

Communication

Leaflets and posters in French and Lingala distributed to affected villages and surrounding villages (explained in households for those who spoke only Lomongo)

Messages and songs emitted on the local Radio Boende Bosekota

Briefing of community representatives (13 village chiefs, 37 healthcare workers, 91 teachers, 61 religious leaders, 3 traditional healers and 43 other community leaders)

Door-to-door knocking

Community volunteering for sensibilisation campaigns (122 support workers were trained and given bicycles, megaphones and disinfectants), transfer of patients to the treatment centers and notification of deaths and safe burials.

Briefing of affected households

Mass speeches in markets, schools and churches

Rapid surveys to evaluate the outcome of the sensibilisation campaigns and re-focus efforts

Improvement of sanitation and hygiene

Supplying protection equipment and disinfectants to healthcare centers, two schools and the general reference hospital plus briefing on how to use these, hospital hygiene measures and how to dispose of waste

Distribution of soap, water treatment and disinfectants (1200 households), family Wash Kits (25 households) and hand washing buckets (400 households) in the community

Disinfection of 521 households, 17 schools, 16 churches and 7 healthcare centers and daily disinfection of Ebola treatment centers

Ensuring the safety of 18 burials

Evaluation of water distribution points and supply of drinking water in the meantime

Psychosocial support

Psychotherapy for healthcare workers, community, EVD cases and their family members (psychoeducational, supportive and community therapies)

Nutritional support kits distributed to patients, their families and the local population