

FIP HEALTH ADVISORY

**Ebola Virus Disease:
Information and Guidelines for Pharmacists
and the Pharmacy Workforce**

INTERNATIONAL PHARMACEUTICAL FEDERATION

Ebola Virus Disease: Information and Guidelines for Pharmacists and the Pharmacy Workforce

Contents

Purpose of this document	2
FIP purpose.....	2
Responsibilities and role of community pharmacy	2
Ebola virus disease (EVD)	2
What is EVD.....	2
How is EVD transmitted?.....	2
How is EVD <u>not</u> transmitted?	2
EVD clinical information	3
Onset.....	3
Symptoms.....	3
Treatment	3
Prevention	3
Pharmacy-mediated EVD activities	4
Prevention.....	4
Screening.....	4
Referral.....	4
Pharmacy as an information resource	5
Infection control: hand washing and hand rubbing.....	5
How to prepare alcohol-based handrub formulations and chlorine solutions	6
Infection control: other precautions.....	6
Alleviating concerns: travel	6
Pharmacy staff	6
Additional resources and information	7
References used for this document	7
Other resources and information.....	8
Validity	8
ANNEX 1: WHO guide to local production of handrub formulations	9
ANNEX 2: WHO guide on how to make chlorine solutions for environmental disinfection.....	11
Acknowledgements.....	12

Purpose of this document

To provide relevant information and guidelines on Ebola virus disease (EVD) for pharmacies in a primary care context (i.e. community pharmacies and primary healthcare facilities), and a set of references that may be consulted for more information.

FIP purpose

EVD can be prevented and an outbreak can be stopped through the active engagement of decision-makers, healthcare professionals, the media and the community, as has been shown in both Senegal and Nigeria, which were declared free of Ebola by the World Health Organization in October of the 2014 outbreak. This document aims to assist pharmacists and the pharmacy workforce in preventing the spread of the disease and contributing to its efficient management in the healthcare system.

Responsibilities and role of community pharmacy

Community pharmacies in Ebola affected and unaffected countries are often the first point of contact with the health system for those with health-related concerns or simply in need of information and reliable advice.

Community pharmacists have the shared responsibility of:

- informing
- counselling
- referring
- promoting disease prevention
- promoting infection control

Ebola virus disease (EVD)

What is EVD

EVD is a severe, highly infectious and often fatal illness. It is a viral haemorrhagic fever caused by a virus of the *Ebolavirus* genus, *Filoviridae* family (filovirus). The *Zaire ebolavirus* is the most dangerous species of this genus and has been responsible for most of the outbreaks so far, including the 2014 one. EVD has an average fatality rate of around 50%, but case fatality rates have varied from 25% to 90% in past outbreaks.

How is EVD transmitted?

The virus is transmitted:

- a. by direct contact between mucous membranes (e.g. eyes, nose or mouth) or broken skin (e.g. cuts, wounds or abrasions) and blood, tissues or body fluids (such as saliva, mucus, vomitus, urine, stool, semen, vaginal discharge, sweat, tears, breast milk, bile and phlegm) of a symptomatic infected person;
- b. by direct contact with environments or objects contaminated with fluids from an infected person (e.g. clothes, bed linen and needles);
- c. through the semen of men who have recovered from the disease (for up to 7 weeks after recovery);
- d. by direct contact with a person who has died from EVD (e.g. during funerals and burial rituals).

How is EVD not transmitted?

EVD cannot be transmitted from person to person through:

- a. virus particles suspended in the air, for example after an infected person coughs or sneezes;
- b. intact skin;
- c. water or food (except for the meat of certain wild animals, including bats, monkeys and apes, especially in the affected African countries);
- d. routine, social contact with asymptomatic individuals, such as shaking hands, hugging or sitting next to someone. (However, in areas where an active EVD outbreak exists, it is prudent to keep close forms of social contact to a minimum.)

EVD clinical information

Onset

EVD has an incubation period of 2 to 21 days before the onset of the symptoms. Most frequently, the incubation period lasts for 4 to 10 days.

Note: If a person has been exposed to the virus but has not developed symptoms within 21 days, they can be considered as not infected.

Symptoms

Initial: The illness usually begins suddenly with fever, headache, joint and muscle aches, sore throat and intense weakness. Stomach cramps, diarrhoea and vomiting can occur.

Progression: About a week after the onset of the first symptoms, some individuals may develop a rash, red eyes, hiccoughs and bleeding (e.g. from nose or mouth, blood in diarrhoea or vomit).

Severe: In severe cases patients develop liver and kidney failure. EVD may eventually lead to the death of patients from massive bleeding and/or multiple organ failure. Laboratory findings include low white blood cell and platelet counts, and elevated liver enzymes.

Treatment

Currently, there is no licensed medicine or vaccine for EVD and no medicines have been fully tested for safety and efficacy. Several products are under development and some investigational medicines have been used in some patients.

Severely ill patients require intensive supportive care. They are frequently dehydrated and need intravenous fluids or oral rehydration with solutions that contain electrolytes. Fluid selection (e.g. Lactated Ringer's Solution or normal saline) should be based on patient electrolyte status. Hydrocortisone may be administered to patients with impaired steroid synthesis due to viral disruption of adrenal glands.

It is also important to maintain oxygen status and blood pressure and to treat other infections if they occur. Fever and mild pain should be treated with paracetamol (acetaminophen) when necessary. Opioids should be used for moderate to severe pain.

Note: Aspirin, diclofenac, ibuprofen and other NSAIDs or any medicine that can have an anticoagulant effect are contraindicated, given the issue of bleeding associated with EVD.

Prevention

To help control further spread of the virus, people who are suspected or confirmed to have the disease should be isolated from other patients and treated by health workers using strict infection control precautions.

People who have had social contact with symptomatic individuals with confirmed EVD infection should be followed up as a contact through the local healthcare teams.

The use of condoms for any sexual practices is essential during the 7-week period following clinical recovery.

Pharmacy-mediated EVD activities

Prevention

Pharmacist and the pharmacy workforce can play a key role in preventing the spread of EVD by:

- understanding the nature of the disease, how it is transmitted, and how to prevent it from spreading further;
- knowing about the EVD programmes developed at national level (including the closest referral centre for EVD);
- informing, advising and educating the community;
- supplying appropriate products
- encouraging individuals and families with suspected cases of EVD to seek treatment from healthcare facilities that possess the appropriate environment and equipment to manage EVD patients. Primary care centres, pharmacies or other healthcare facilities (including those of traditional medicine) that do not have such an environment and equipment may play a key role in the prevention of the disease but they are not the appropriate facilities to treat EVD patients. Endeavouring to treat patients in inadequate environments may put other healthcare professionals and others at risk.

Screening

Screening and referring any real suspected cases in a timely and safe manner to appropriate healthcare facilities and health authorities is an important public health role that pharmacies can play. Considering that the initial symptoms of EVD are non-specific and may be mistaken for those of other illnesses like influenza, pharmacists may help dissipate doubts by asking the person if:

- they have visited an affected area in the previous 21 days, or
- they have been in contact with anybody with the disease or who is suspected of being infected.

As a general principle, Ebola should be suspected in patients who:

- have a fever of $>38^{\circ}\text{C}$ (100.4°F) OR a history of fever in the past 24 hours and
- have recently visited any affected areas (within the previous 21 days)

or:

- have a fever of $>38^{\circ}\text{C}$ (100.4°F) or a history of fever in the past 24 hours, and
- have cared for or come into contact with body fluids of, or handled clinical specimens (blood, urine, faeces, tissues, laboratory cultures) from an individual or laboratory animal known or strongly suspected to have EVD.

Referral

If you suspect that someone may have EVD, encourage and support him or her to seek immediate appropriate medical treatment in a suitable healthcare facility. The WHO does not advise families or communities to care for individuals with symptoms of EVD at home.

In terms of referral of suspect cases, your national, regional or local health authorities may have developed protocols for this, and it is important that you become familiar with these procedures, follow them and collaborate in their implementation. This may include the isolation, whenever possible, of the suspect case in a separate room and the immediate call to the appropriate emergency services, which should send a team of duly trained and protected professionals to transport the person to the appointed health facility.

This isolation room at the pharmacy should ideally have a private bathroom and the minimum furniture and objects required for the person's comfort while waiting, in

order to avoid the potential contamination of such items and the need to decontaminate more items than necessary. Once the suspected case has been transferred to a healthcare facility, the room in which the patient has been isolated or any potentially contaminated areas such as toilets should not be used until a diagnosis of Ebola has been excluded. If the diagnosis is confirmed, the room should be decontaminated by appropriate personnel, following the protocols established by the health authorities.

Pharmacy as an information resource

Pharmacists and their associations may also develop information materials (posters, leaflets, websites, text messages, app alerts, etc) for the community, including the information contained in these guidelines and any other information that may be relevant to local needs. They may also organise question & answer sessions in the community (schools, community centres, etc.).

The content of this guidance may be used as a source for any awareness material, but FIP has also developed a number of summary statements highlighting key aspects related to the transmission and control of the disease, the roles that pharmacist may play in managing and controlling the disease, and the procedures that pharmacists may follow for screening and referring suspected patients. These summary statements were designed in a simple and easy-to-print format so that they can be printed by pharmacists and used as posters in pharmacies and/or the back office, to share with the entire pharmacy workforce.

FIP also developed a website where these materials and other resources can be accessed. Please visit www.fip.org/ebola periodically for updates.

Apart from the materials prepared by FIP, you may find a vast international compilation of communication resources on the website of the Center for Disease Control and Prevention of the United States of America, including the following:

- video messages (in English and French)
- audio messages in English, French, Fullar, Kissi, Kono, Krio, Limba, Loko, Madingo, Mende, Susu, Themne and Wolof
- infographics & illustrations
- factsheets
- posters
- banners
- brochures
- graphics

These materials can be viewed and/or downloaded from

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

Infection control: hand washing and hand rubbing

Pharmacies may play a role by stocking or preparing alcohol-based hand sanitiser and raising the awareness about the importance of frequent and appropriate hand washing. Hand hygiene is essential for preventing the spread of the virus, and should be performed by applying the correct technique recommended by the WHO and using either soap and running water or an alcohol-based hand sanitiser. The WHO recommends that handrub formulations should have an alcohol content of 80% (ethanol) or 75% (isopropyl alcohol).

How to prepare alcohol-based handrub formulations and chlorine solutions

For detailed information on how to prepare handrub formulations and chlorine solutions, including calculation and formulation methods and a step-by-step guide for local producers, please refer to WHO's *Interim Infection Prevention and Control Guidance for Care of Patients with Suspected or Confirmed Filovirus Haemorrhagic Fever in Health-Care Settings, with Focus on Ebola*, pages 22-24, which we reproduce in these guidelines for easier reference (**Annexes 1 and 2**).

This publication also includes instructions on how to perform hand hygiene (pages 19 and 20).

This document is available at:

http://www.who.int/csr/resources/publications/ebola/filovirus_infection_control/en/

Infection control: other precautions

The Ebola virus is not a robust virus and can be eliminated relatively easily with:

- heat (1 hour at 60 °C or 5 minutes at 100 °C);
- UV or gamma radiation;
- soap and water;
- alcohol-based products with 80% ethanol (v/v) or 75% isopropyl alcohol (v/v);
- sodium hypochlorite (bleach) or calcium hypochlorite (bleaching powder) at appropriate concentrations (0.5% for disinfecting objects and surfaces).

As the Ebola virus is susceptible to chlorine, bleach is a suitable disinfectant for cleaning purposes. Household bleach concentrations may vary considerably, but the product usually needs to be diluted before use. For a simple calculation method for obtaining chlorine solutions of effective and safe concentrations, please consult annex 2.

Note: Refrigeration or freezing does not inactivate the virus

Other infection control precautions that may be relevant for pharmacies to communicate to people and communities on are:

- the use of safe injection and phlebotomy procedures, including the safe management of sharps;
- the regular and rigorous environmental cleaning;
- the decontamination of surfaces and equipment;
- the management of soiled objects and of waste.

Alleviating concerns: travel

People may be concerned about the possibility of travelling in the same aeroplane, ship, bus or other vehicle with a person infected with EVD, and may ask the pharmacy about this. It is useful to remind them that the Ebola virus is not transmitted through virus particles suspended in small droplets in the air (after coughing or sneezing) and that transmission requires direct contact with blood or body fluids from a symptomatic patient. If the individual has not developed symptoms, they cannot transmit EVD to those around them.

Pharmacy staff

Although it is important that all pharmacy staff are familiar with these guidelines and advice, the assessment of a patient's risk of Ebola should be led by pharmacists. They are also responsible for appropriately referring suspected cases to the relevant healthcare facility and authorities.

Additional resources and information

References used for this document

1. World Health Organization: Frequently asked questions on Ebola virus disease
<http://www.who.int/csr/disease/ebola/faq-ebola/>
Updated 8 August 2014
2. World Health Organization: Interim Infection Prevention and Control Guidance for Care of Patients with Suspected or Confirmed Filovirus Haemorrhagic Fever in Health-Care Settings, with Focus on Ebola
http://www.who.int/csr/resources/publications/ebola/filovirus_infection_control/en/
September 2014
3. Centers for Disease Control and Prevention (USA)
<http://www.cdc.gov/vhf/ebola/>
October 2014
4. Colegio Oficial de Farmacéuticos de Madrid (Centro de Información del Medicamento)
Información para la Farmacia: Enfermedad por Virus del Ébola (EVE).
http://www.cofm.es/recursos/doc/37692_710710201414028.pdf
October 2014
5. Public Health England: Information for Primary Care: Managing patients who require assessment for Ebola virus disease
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/364858/PHE_Ebola_guidance_for_primary_care_v3_October_17_2014.pdf
17 October 2014
6. The Pharmaceutical Journal: Ebola: What Pharmacists Need to Know
<http://www.pharmaceutical-journal.com/learning/learning-article/ebola-what-pharmacists-need-to-know/20066261.article>
27 August 2014
7. American Hospital Association / Jonathan B. Perlin, MD, PhD / ACCME
Ebola facts: Clinical progression of Ebola
<http://www.accme.org/news-publications/publications/public-health-resources/ebola-facts>
20 October 2014

Other resources and information

Key contents	Published by	Title or description with hyperlink (click to consult)	Language(s)
General information	World Health Organization	Frequently asked questions on Ebola virus disease	Arabic Chinese English French Russian Spanish
Prevention and Control; practical guidelines	World Health Organization	Interim Infection Prevention and Control Guidance for Care of Patients with Suspected or Confirmed Filovirus Haemorrhagic Fever in Health-Care Settings, with Focus on Ebola	English
General information, resource centre	European Centre for Disease Prevention and Control	Disease updates, information for healthcare professionals and the public, assessment algorithms, etc.	English
General information, resource centre	Centers for Disease Control and Prevention (USA)	Disease updates, information for healthcare professionals and the public, assessment algorithms, etc.	English Spanish
Experimental treatment options and vaccines	Centers for Disease Control and Prevention (USA)	Questions and Answers on Experimental Treatments and Vaccines for Ebola	English
Guidelines for hospital pharmacists	American Society of Health System Pharmacists	Pharmacy Checklist: Ebola and Pandemic Preparedness	English
Professional guidance for community pharmacy, poster	Ordre National des Pharmaciens and Ministry of Health, France	Prise en charge d'un patient cas suspect de maladie à virus Ebola - fiche professionnelle	French
General information and resource centre; guidance for community pharmacists	Consejo General de Colegios Oficiales de Farmacéuticos, Spain	Enfermedad del Virus del Ébola (EVE)	Spanish
Professional guidance for community pharmacy	Colegio Oficial de Farmacéuticos de Madrid (Centro de Información del Medicamento), Spain	Información para la Farmacia: Enfermedad por Virus del Ébola (EVE)	Spanish
General information, resource centre	Ministry of Health, Peru	Ébola: Lo que debes saber	Spanish
Public health management	Public Health England / UK Government	Ebola virus disease: Clinical Management and Guidance	English
Potential treatment and vaccine options and drug targets	The Pharmaceutical Journal, UK	The Ebola Outbreak	English
Potential treatment and vaccine options	Public Health Emergency, USA	Ebola Experimental Treatments & Vaccines	English
Hospital pharmacy preparedness	American Society of Health System Pharmacists	Pharmacy Checklist: Ebola and Pandemic Preparedness	English
Guidelines for pharmacists, pharmacy staff and pharmacy owners	Rx Response	Ebola Resources (posters)	English

Validity

This document has been prepared based on commonly accepted evidence as of 30 October 2014.

ANNEX 1: WHO guide to local production of handrub formulations

GUIDE TO LOCAL PRODUCTION

This is intended to guide a local producer in the actual preparation of the formulation.

Materials required (small volume production)

REAGENTS FOR FORMULATION 1:

- Ethanol 96%
- Hydrogen peroxide 3%
- Glycerol 98%
- Sterile distilled or boiled cold water

REAGENTS FOR FORMULATION 2:

- Isopropyl alcohol 99.8%
- Hydrogen peroxide 3%
- Glycerol 98%
- Sterile distilled or boiled cold water

- 10-litre glass or plastic bottles with screw-threaded stoppers (1), or
- 50-litre plastic tanks (preferably in polypropylene or high density polyethylene, translucent so as to see the liquid level) (2), or
- Stainless steel tanks with a capacity of 80–100 litres (for mixing without overflowing) (3, 4)
- Wooden, plastic or metal paddles for mixing (5)
- Measuring cylinders and measuring jugs (6)
- Plastic or metal funnel
- 100 ml and 500 ml plastic bottles with leak-proof tops (7)
- An alcoholometer: the temperature scale is at the bottom and the ethanol concentration (percentage v/v and w/w) at the top (8)

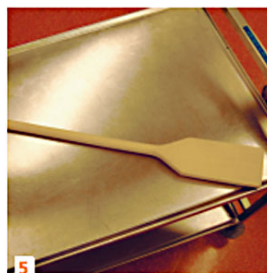
NOTE

- Glycerol: used as humectant, but other emollients may be used for skin care, provided that they are cheap, widely available and miscible in water and alcohol and do not add to toxicity, or promote allergy.
- Hydrogen peroxide: used to inactivate contaminating bacterial spores in the solution and is not an active substance for hand antisepsis.
- Any further additive to both formulations should be clearly labelled and be non-toxic in case of accidental ingestion.
- A colorant may be added to allow differentiation from other fluids, but should not add to toxicity, promote allergy, or interfere with antimicrobial properties. The addition of perfumes or dyes is not recommended due to risk of allergic reactions.

General information

Labelling should be in accordance with national guidelines and should include the following:

- Name of institution, date of production and batch number
- WHO-recommended handrub solution
- For external use only
- Avoid contact with eyes
- Keep out of the reach of children
- Use: Apply a palmful of alcohol-based handrub and cover all surfaces of the hands. Rub hands until dry
- Composition: ethanol or isopropanol, glycerol and hydrogen peroxide
- Flammable: keep away from flame and heat



Production and storage facilities:

- Production and storage facilities should ideally be air conditioned or cool rooms. **No naked flames or smoking should be permitted in these areas.**
- WHO-recommended handrub formulations should not be produced in quantities exceeding 50-litres locally or in central pharmacies lacking specialised air conditioning and ventilation.
- Since undiluted ethanol is highly flammable and may ignite at temperatures as low as 10°C, production facilities should directly dilute it to the above-mentioned concentration. The flashpoints of ethanol 80% (v/v) and of isopropyl alcohol 75% (v/v) are 17.5°C and 19°C, respectively.
- National safety guidelines and local legal requirements must be adhered to the storage of ingredients and the final product.

METHOD: 10-LITRE PREPARATIONS

These can be prepared in 10-litre glass or plastic bottles with screw-threaded stoppers.

Recommended amounts of products:

FORMULATION 1:

- Ethanol 96%: **8333 ml**
- Hydrogen peroxide 3%: **417 ml**
- Glycerol 98%: **145 ml**

FORMULATION 2:

- Isopropyl alcohol 99.8%: **7515 ml**
- Hydrogen peroxide 3%: **417 ml**
- Glycerol 98%: **145 ml**

Final products:

FORMULATION 1:

- Final concentrations:
- Ethanol 80% (v/v)
 - Glycerol 1.45% (v/v)
 - Hydrogen peroxide 0.125% (v/v)

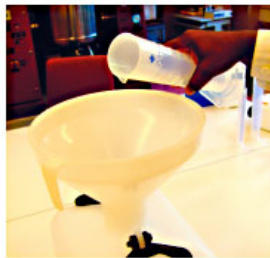
FORMULATION 2:

- Final concentrations:
- Isopropyl alcohol 75% (v/v)
 - Glycerol 1.45% (v/v)
 - Hydrogen peroxide 0.125% (v/v)

Step by step preparation:



1. The alcohol for the formula to be used is poured into the large bottle or tank up to the graduated mark.



2. Hydrogen peroxide is added using the measuring cylinder.



3. Glycerol is added using a measuring cylinder. As glycerol is very viscous and sticks to the wall of the measuring cylinder, it should be rinsed with some sterile distilled or cold boiled water and then emptied into the bottle/tank.



4. The bottle/tank is then topped up to the 10-litre mark with sterile distilled or cold boiled water.
5. The lid or the screw cap is placed on the tank/bottle as soon as possible after preparation, in order to prevent evaporation.



6. The solution is mixed by shaking gently where appropriate or by using a paddle.



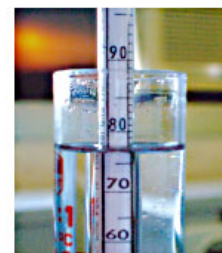
7. Immediately divide up the solution into its final containers (e.g. 500 or 100 ml plastic bottles), and place the bottles in quarantine for 72 hours before use. This allows time for any spores present in the alcohol or the new/re-used bottles to be destroyed.

Quality control

1. Pre-production analysis should be made every time an analysis certificate is not available to guarantee the titration of alcohol (i.e. local production). Verify the alcohol concentration with the alcoholmeter and make the necessary adjustments in volume in the preparation formulation to obtain the final recommended concentration.



2. Post-production analysis is mandatory if either ethanol or an isopropanol solution is used. Use the alcoholmeter to control the alcohol concentration of the final use solution. The accepted limits should be fixed to $\pm 5\%$ of the target concentration (75%–85% for ethanol).



3. The alcoholmeter shown in this information pamphlet is for use with ethanol; if used to control an isopropanol solution, a 75% solution will show 77% ($\pm 1\%$) on the scale at 25°C.

Source: Guide to Local Production: WHO-recommended Handrub Formulations, http://www.who.int/gpsc/5may/tools/system_change/en/

ANNEX 2: WHO guide on how to make chlorine solutions for environmental disinfection

Example I - Using Liquid Bleach

Chlorine in liquid bleach comes in different concentrations. Any concentration can be used to make a dilute chlorine solution by applying the following formula:

$$\left[\frac{\% \text{ chlorine in liquid bleach}}{\% \text{ chlorine desired}} \right] - 1 = \text{Total parts of water for each part bleach}^\dagger$$

Example: To make a 0.5% chlorine solution from 3.5%[‡] bleach:

$$\left[\frac{3.5\%}{0.5\%} \right] - 1 = 7 - 1 = 6 \text{ parts water for each part bleach}$$

Therefore, you must add 1 part 3.5% bleach to 6 parts water to make a 0.5% chlorine solution.

- † "Parts" can be used for any unit of measure (e.g. ounce, litre or gallon) or any container used for measuring, such as a pitcher.
- ‡ In countries where French products are available, the amount of active chlorine is usually expressed in degrees chlorum. One degree chlorum is equivalent to 0.3% active chlorine.

Example II - Using Bleach Powder

If using bleach powder,[†] calculate the amount of bleach to be mixed with each litre of water by using the following formula:

$$\left[\frac{\% \text{ chlorine desired}}{\% \text{ chlorine in bleach powder}} \right] \times 1\,000 = \text{Grams of bleach powder for each litre of water}$$

Example: To make a 0.5% chlorine solution from calcium hypochlorite (bleach) powder containing 35% active chlorine:

$$\left[\frac{0.5\%}{35\%} \right] \times 1\,000 = 0.0143 \times 1\,000 = 14.3$$

Therefore, you must dissolve 14.3 grams of calcium hypochlorite (bleach) powder in each litre of water used to make a 0.5% chlorine solution.

- † When bleach powder is used; the resulting chlorine solution is likely to be cloudy (milky).

Example III - Formula for Making a Dilute Solution from a Concentrated Solution

$$\text{Total Parts (TP) (H}_2\text{O)} = \left[\frac{\% \text{ Concentrate}}{\% \text{ Dilute}} \right] - 1$$

Example: To make a dilute solution (0.1%) from 5% concentrated solution.

$$\text{Calculate TP (H}_2\text{O)} = \left[\frac{5.0\%}{0.1\%} \right] - 1 = 50 - 1 = 49$$

Take 1 part concentrated solution and add to 49 parts boiled (filtered if necessary) water.

Source:

AVSC International (1999). Infection Prevention Curriculum. Teacher's Manual. New York, p.267.

Acknowledgements

FIP acknowledges the input received during the preparation of this document from:

Mr Aldo Álvarez-Risco – Director of Pharmaceutical Care Services, Ministry of Health of Peru
Mr Mohamed Conteh-Barrat – Pharmacy Board of Sierra Leone
Mrs Jane Dawson, FPS – FIP Military and Emergency Pharmacy Section
Mr Luis Lourenço – FIP Community Pharmacy Section

Coordination

Mr Gonçalo Sousa Pinto, FIP Ad-hoc Project Coordinator
Mr Luc Besançon, FIP Secretary-General and CEO

Ms Lin-Nam Wang, FIP Communications Manager



International Pharmaceutical Federation (FIP)

Andries Bickerweg 5
2517 JP The Hague
The Netherlands
Tel.: +31-70-3021970
Fax: +31-70-3021999
Email: fip@fip.org

www.fip.org/ebola

November 2014

EBOLA VIRUS DISEASE

WHAT CAN PHARMACISTS DO ABOUT IT?

The pharmacy workforce can play a key role in preventing the spread of Ebola virus disease (EVD) by:

- 1** Understanding the nature of the disease, how it is transmitted, and how to prevent it from spreading;
- 2** Knowing about the EVD programmes developed at national level (including the closest referral centre);
- 3** Informing, advising and educating the community;
- 4** Screening any suspected cases and referring them in a timely and safe manner to appropriate healthcare facilities and health authorities;
- 5** Supplying appropriate products;
- 6** Encouraging individuals and families with suspected cases of EVD to seek treatment from healthcare facilities that possess the appropriate environment and equipment to manage EVD patients.

EBOLA VIRUS DISEASE

DISEASE TRANSMISSION

GUIDELINES FOR PHARMACISTS

HOW IS EBOLA TRANSMITTED?

- a. By direct contact between mucous membranes (e.g. eyes, nose or mouth) or broken skin (e.g. cuts, wounds or abrasions) and blood, tissues or body fluids (e.g. saliva, mucus, vomitus, urine, stool, semen, vaginal discharge, sweat, tears, breast milk, bile and phlegm) of a symptomatic infected person;
- b. By direct contact with environments or objects contaminated with fluids from an infected person (e.g. clothes, bed linen or needles);
- c. Through the semen of men who have recovered from the disease (for up to 7 weeks after recovery);
- d. By direct contact with a person who died from EVD (e.g. during funerals or burial rituals).

HOW IS EBOLA NOT TRANSMITTED?

- a. Through virus particles suspended in the air, for example after an infected person coughs or sneezes;
- b. Through intact skin;
- c. Through water or food (except for the meat of certain wild animals, including bats, monkeys and apes, especially in Ebola affected African countries);
- d. Through routine, social contact with asymptomatic individuals, such as shaking hands, hugging or sitting next to someone. (However, in areas where an active EVD outbreak exists, it is prudent to keep close forms of social contact to a minimum.)

EBOLA VIRUS DISEASE

INFECTION CONTROL

GUIDELINES FOR PHARMACISTS

Hand washing with water and soap or hand rubbing with alcohol-based sanitiser is essential for preventing the spread of Ebola.

Ebola is not a robust virus and it can be eliminated by any of the following:

- Alcohol-based products with 80% ethanol (v/v) or 75% isopropyl alcohol (v/v)
- Sodium hypochlorite (bleach) or calcium hypochlorite (bleaching powder) at appropriate concentrations (0.5% for disinfecting objects and surfaces)
- Heat (1 hour at 60°C or 5 minutes at 100°C)
- UV or gamma radiation
- Soap and water

How to perform hand hygiene:

- A. Clean your hands by rubbing them with an alcohol-based formulation, as the preferred means of routine hygienic hand antisepsis if hands are not visibly soiled, or
- B. Wash your hands with soap and water when they are visibly dirty or visibly soiled with blood or other body fluids or after using the toilet.

Summary technique:

- A. Hand rubbing (20–30 sec): apply enough product to cover all areas of the hands; rub all skin surfaces until dry.
- B. Hand washing (40–60 sec): wet hands and apply soap; rub all surfaces; rinse hands and dry thoroughly with a single-use towel; use towel to turn off faucet.

EBOLA VIRUS DISEASE

PATIENT SCREENING AND REFERRAL

GUIDELINES FOR PHARMACISTS

The symptoms of Ebola virus disease (EVD) may be similar to those of influenza or a common cold. If a person suspected of being infected comes to the pharmacy, take the following steps:

STEP 1: ASK IF THE PERSON:

- a. Has a fever of $>38^{\circ}\text{C}$ or has had a fever in the past 24 hours.
- b. Has cared for or come into contact with the body fluids of someone known or strongly suspected to have EVD, or has been to an Ebola-affected area in the previous 21 days. Body fluids include blood, saliva, mucus, vomitus, urine, stool, semen, vaginal discharge, sweat, tears, breast milk, bile and phlegm.

If the answer to BOTH questions is YES, Ebola should be suspected and Step 2 should be taken.

Other initial symptom of EVD may include:

- Headache
- Joint and muscle aches
- Sore throat
- Intense weakness
- Stomach cramps
- Diarrhoea
- Vomiting
- Bleeding (e.g. from nose or mouth, or blood in diarrhoea or vomit)

STEP 2: REFER THE SUSPECTED CASE

- a. Isolate the patient in a separate room whenever possible; and
- b. Contact the appropriate emergency services. (Ask them to send a team of trained and protected professionals to transport the person to the appointed health facility.)

If you know or suspect that someone in your community may have EVD, encourage and support that person to seek immediate appropriate medical treatment in a suitable healthcare facility. People with EVD should not be treated at home.