



# Codification of Islamic Republic of Iran's Emergency Medical Services (EMS) Native Reaction Protocol to Suspected Ebola Patients based on World Protocols

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## Abstract

**Introduction:** Biological threats are one of the greatest dangers that threaten national security of different countries. Ebola haemorrhagic fever is one of these threats and there is no guideline that helps us to deal with suspected cases in Emergency Medical Services (EMS) in Iran.

**Objective:** This study has been conducted to develop native guidelines reaction, based on world protocols, in Emergency Medical Services of the Islamic Republic of Iran in facing Ebola.

**Method:** This study is considered literature review and was conducted by library studies. At first we started by identifying the domestic and international organizations and centres then visiting the sites and information resources available, we searched for proper keywords then we collected and localized all guidelines and instructions about dealing with Ebola. In the end a comprehensive chart was provided to determine the way of facing and transporting patients suspected with Ebola by care and pre-hospital emergency personnel

**Discussion:** Based on general facts, overview guidelines should be useful to establish native compilation that includes planning and preparation, screening (telephone triage) patients, special assessment and transmit team via telephone calls, making necessary coordination with other organizations and units within and outside the organization, preparation for patient transport, preparation and carrying out some activities after transporting and the process of evaluation after transferring patients.

**Conclusion:** To succeed in facing similar diseases, considering the need to write native guidelines for each country according to the generalities mentioned, all organizations and institutions involved, should start working in concert with each other and the instructions and practice manoeuvres should be performed again and again to review and fix bugs.

**Keywords:** Infectious haemorrhagic fever; Ebola; Bioterrorism; Guidelines, Emergency medical services

## Introduction

Bioterrorism and its potential capacity for destruction and genocide is an issue that has increasingly drawn the attention of the world because it endangers national security and public health communities simultaneously [1]. One of the modified viruses that threatens global security nowadays is Ebola haemorrhagic fever [2]. Ebola was called haemorrhagic fever Ebola in the past. Ebola virus is contagious and lethal. Ebola was identified in the second half of the twentieth century (1976) in Central Africa for the first time. This virus is named after a river that is called Ebola in Congo. From 1976 to 2014, more than 20 outbreaks of Ebola have been reported [3]. Ebola virus is a serious disease that kills more than 90% of patients [2]. Due to the nature of biological threats, the first group of people who encounter the consequences of a biological attack are managers and healthcare

centres' personnel [4]. Among the health centres and their personnel, emergency medical services' personnel (EMS) are one of the first units that interfere in all natural and man-made disasters and help sick and injured. More precisely Emergency Medical Services' personnel are usually the only medical staff personnel, present at the scene and they face the primary risk of exposure to biological agents, toxins and radiation [5]. Emergency Medical Services' personnel should be aware of guidelines, specific disease patterns and diagnostic clues that may help them to detect an act of bioterrorism or a disease outbreak [6]. In dealing with the patients at the scene, Emergency Medical Services' personnel must take a series of measures in accordance with international standards guidelines [5]. By considering the fact that detecting the presence and distinguishing the type of biological threats is very difficult, developing and having access to standardized guidelines for dealing with threats and reducing injuries and damage caused by them are difficult as well [7]. So far, several medical care guidelines are suggested. Advantages, strengths and weaknesses of these guidelines have been examined [8]. However, there are not any

comprehensive guidelines for dealing with biological events then the

In addition, the patients should be asked if they have symptoms like fever higher than 38 degrees Celsius, diarrhoea, nausea, vomiting, abdominal pain, shivering and intense weakness, muscle and joint

## Disinfection equipment and ambulance

Personal protective equipment used in transmission of the patient should be discarded for safe and respected organizations such as CDC guidelines.

In order to discard high-risk personal protective equipment in the area, use a plastic sheet. Do not touch personal protective equipment and put them away from your body. Sterilize the plastic sheet or dispose of it safely. Don new personal protective equipment. At first clean the ambulance then disinfect it. Do not touch personal protective equipment.

Throw away used personal protective equipment used safely. Sterilize the ambulance inner surface with bleach solution 10% or

should start working in concert with each other and the instructions and practice manoeuvres should be performed again and again to review and fix bugs.

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