



ELSEVIER

Contents lists available at ScienceDirect

American Journal of Infection Control

journal homepage: www.ajicjournal.org

Major article

Knowledge, attitude and practice of health care providers toward Ebola virus disease in hotspots in Khartoum and White Nile states, Sudan, 2014



Musaab M. Alfaki MBBS^{a,*}, Alaaddin M.M. Salih MBBS^a,
Daffalla A'lam Elhuda MBBS, MIH, MPH, MD^{a,b}, Mohammad S. Egail MBBS^a

^aAcademy of Health Sciences Research Group, Federal Ministry of Health, Khartoum, Sudan

^bDepartment of Community Medicine, Faculty of Medicine, University of Khartoum, Khartoum, Sudan

Key Words:

Ebola virus disease
Health care providers
Knowledge, attitude and practice
Sudan

Background: Ebola virus disease (EVD) is an infectious disease associated with a high fatality rate. Health care providers (HCPs) are frequently infected while treating patients with suspected or confirmed EVD. Knowledge of, attitudes toward, and practices of HCP toward EVD, especially in hot spots, is an essential element to control the disease.

Materials and methods: In this descriptive, cross-sectional, health facility-based study, 258 HCPs were interviewed in different health facilities in hot spots in the targeted states, including district and federal hospitals and health centers, using a self-administrated questionnaire.

Results: The majority of respondents were house officers (40.7%), followed by nurses (26.4%). The remaining respondents were registrars, medical officers, and allied health professionals. All participants had heard about EVD. There were significant differences in the knowledge of doctors and allied health care providers regarding modes of transmission and clinical manifestations. Some false information, such as airborne transmission (53.1%) and insect transmission (20.2%), was reported by respondents. The majority of respondents (81.3%) claimed that they would treat patients with suspected EVD while taking a safe approach, 83.5% said they would notify health authorities about cases of suspected EVD, and 91.1% reported not attending any training sessions about EVD.

Conclusion: The media plays an important role in increasing awareness about EVD. Regardless, however, researchers recommend more in-service training for HCPs to increase their knowledge about EVD.

Copyright © 2016 by the Association for Professionals in Infection Control and Epidemiology, Inc. Published by Elsevier Inc. All rights reserved.

Ebola virus disease (EVD) is a serious acute illness that is often fatal if untreated.¹ It is caused by infection with a virus of the family *Filoviridae*, genus *Ebola virus*.² The first cases of EVD were reported in 1976 in 2 simultaneous outbreaks, one in Anzara, Sudan (currently the Republic of South Sudan) and the other in Yambuku village, Democratic Republic of Congo. The virus was named after the Ebola River, which runs close to that village.¹

Ebola hemorrhagic fever outbreaks constitute a major public health issue in sub-Saharan Africa.³ Multiple outbreaks occurred between 1976 and 2014. In Sudan, cases were reported in 1976 and 2004. A total of 301 people were infected in the 2 outbreaks.⁴

On August 8, 2014, the World Health Organization (WHO) declared an EVD outbreak in West Africa (Guinea, Liberia, Sierra Leone, and Nigeria) as an extraordinary event and a public health emergency of international importance.⁵ By January 29, 2015, a total of 22,101 cases and 8818 deaths had been reported.⁶

By August 25, 2014, more than 240 health care workers had developed the disease, of whom 120 had died.⁷ In Sierra Leone, the confirmed EVD incidence was 103-fold higher among health care providers (HCPs) than in the general population.⁸

During epidemics, the virus is transmitted through direct human-to-human contact. HCPs are frequently infected while treating patients with suspected or confirmed EVD. This occurs through close contact with patients when infection control precautions are not strictly followed.¹

HCPs' detailed knowledge of EVD is an essential preventive tool, given that multiple infectious diseases that are endemic in sub-Saharan Africa, like malaria and typhoid fevers, mimic the

* Address correspondence to Dr Musaab M. Alfaki, MBBS, Academy of Health Sciences, Federal Ministry of Health, Baladiya Street, Khartoum, Sudan.

E-mail address: musabnoor946@live.com (M.M. Alfaki).

Conflicts of interest: None to report.

initial symptoms of EVD. In addition, neither doctors nor the public are familiar with the disease. Moreover, patients infected with these diseases will often need emergency care, and treating personnel may see no reason to suspect EVD and thus might not take recommended safety precautions. Meanwhile, adherence to such precautions has been associated with a dramatic drop in cases among medical staff.⁷ This finding highlights the importance of assessing HCPs' knowledge, attitude, and practice related to controlling EVD.

As a result of conflicts in South Sudan, the site of a previous EVD outbreak, more than 635,000 refugees flooded into neighboring countries, including Sudan.⁹ This situation underscores the importance of instituting and maintaining preventive measures against EVD.

The Sudan Ministry of Health has declared that the country is free of the disease. On top of that, a strategy for preventing EVD outbreaks was established, including instituting a notification system, increasing general awareness of EVD, and training HCPs in how to handle suspected cases.¹⁰

MATERIALS AND METHODS

Study area

This study was conducted in hospitals and health centers in hot spots located in Khartoum and White Nile States. Khartoum State is divided into 6 localities. We selected 3 hot spots in the outskirts of Khartoum: Jabl Awlia, Sharg Alnil, and Umbada. Collectively, these 3 localities contain approximately 3.5 million residents who came from different parts of Sudan because of conflicts and drought.¹¹ In White Nile State, we selected Kosti, the largest city in the state, which represents the crossroads of the north, east, and south of Sudan and is the main portal of connection between Sudan and South Sudan,¹² where the first cases were reported.

Health facilities in Sudan are divided into 3 levels: primary (health centers), secondary (district hospitals), and tertiary (federal hospitals). We selected 3 health centers and 1 district hospital from each of aforementioned localities in Khartoum State. In addition, we chose a federal hospital at random. In White Nile State, we also chose 3 health centers and 1 district hospital in Kosti, but no federal hospital, because these are no such hospitals in the state.

Study design

This cross-sectional study was conducted among HCPs, including consultants, senior specialists, specialists, registrars, medical officers, house officers, nurses, and other allied health professionals, working in the selected health facilities using convenient sampling. The single federal hospital selected for the study, Central Police Hospital, is the referral hospital for cases of suspected EVD detected at border crossing points. Each locality had a district hospital selected. Health centers were elected using simple random sampling.

The study was conducted in November and December 2014. Data were collected using a pretested, self-administrated questionnaire written in Arabic comprising 44 questions divided into 6 sections. The first section solicited demographic data, the second section evaluated knowledge of the nature of the organism, and the third and fourth sections assessed knowledge regarding modes of transmission and symptoms of EVD. The fifth section concentrated on safety precautions, and the last section included questions about the respondent's attitude toward patients with suspected EVD and on efforts of health authorities against EVD.

The respondents were given sufficient time to read, comprehend, and answer all questions. They were informed that their

Table 1

Characteristics of the sample, Khartoum and White Nile states, Sudan, 2014

Main category and subcategories	n	%
Sex		
Male	73	28.3
Female	185	71.7
Age		
20-24 y	84	32.6
25-29 y	96	37.2
30-34 y	33	12.8
35-39 y	16	6.2
>39 y	29	11.2
Job		
Registrar	14	5.4
Medical officer	22	8.5
House officer	105	40.7
Nurse	68	26.4
Other HCP	49	19.0
Level of health facility		
Health center	35	13.6
District hospital	127	49.2
Federal hospital	96	37.2

Table 2

Respondents' knowledge of nature of the disease, incubation period, diagnostic tests, and outcomes, Khartoum and White Nile States, Sudan, 2014

Main category	n	%
Know that EVD is a viral disease	242	93.8
Know that EVD is zoonotic	161	62.4
Know the incubation period	114	44.2
Know the investigations of choice	141	54.7
Know that EVD is fatal	238	92.2
Know the mortality rate	79	30.6

individual responses and identity would be treated confidentially, and honest answers were anticipated.

Statistical analysis

SPSS version 20.0 (IBM, Armonk, NY) was used for statistical analyses. Significance was assessed using the χ^2 test. A *P* value <.05 was considered to indicate statistical significance.

RESULTS

Of the 258 respondents (response rate, 78.3%), the majority were house officers (40.7%), followed by nurses (26.4%). The remaining respondents were registrars, medical officers, and allied health professionals (medical assistants, midwives, and laboratory technicians). The majority of the respondents were females (71.7%), and 69.8% of the respondents were under age 30 years. Characteristics of the study participants are summarized in Table 1. In multiple response questions, 68.6% of HCPs reported hearing about EVD from classical media (ie, television, radio, and newspapers), whereas 25.2% did so from new media (social networks), and 23.3% from medical websites. Only 19% gained information from medical books, and 8.5% learned about EVD from other sources, such as training sessions and other persons.

The respondents' knowledge of EVD was assessed in terms of nature of the disease, incubation period, diagnostic tests, and outcomes. The data are presented in Table 2. In terms of HCPs' knowledge of modes of transmission, clinical manifestations, and prevention, the responses were rated as poor (<50%), average (50%-60%), good (60%-80%), or very good (>80%) for each of the aforementioned domains depending on the number of correct answers. Significant differences in knowledge of modes of

دانلود مقاله



<http://daneshyari.com/article/2638239>



- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات