



**Issue 167 | Oct 31, 2014 | Focus on WASH and Ebola**

This issue contains updates on Ebola outbreaks and other recent journal and newspaper articles as well as links to World Health Organization (WHO), UNICEF, and Centers for Disease Control and Prevention (CDC) websites on Ebola. Included are WHO/UNICEF factsheets, guidance on making chlorine solution from Tufts University, articles from the Global Public-Private Partnership on Handwashing, a summary of water and Ebola issues from the Pacific Institute, Ebola-related anthropological studies from the Institute of Development Studies, and other resources.

**OVERVIEWS**

**Ebola Virus Disease (EVD): Key Questions and Answers Concerning Water, Sanitation and Hygiene**, 2014. WHO. [Link](#)

The key to controlling the hazard associated with the presence of the virus in the body fluids of infected individuals lies in the rigorous enforcement of protocols to separate and contain ALL body fluids (including feces and urine). Feces from suspected or confirmed Ebola cases must be treated as a biohazard and handled at a minimum.

**An Open Memo on Ebola and Water**. *Science Blogs*, Oct 2014. P Gleick, Pacific Institute. [Link](#)

As input to the ongoing discussions about how to meet and overcome the spreading risks of Ebola, this blog post provides thoughts on the water-related components of U.S. efforts. The author urges manufacturers of water treatment technologies to confirm that they are designed and can be operated to specifically remove or inactivate Ebola-type viruses with high reliability and for medical experts to determine the quality and quantity of water needed in a field hospital setting.

**Ebola Virus Disease Factsheet**, 2014. WHO. [Link](#)

Good outbreak control relies on applying a package of interventions, namely case management, surveillance, and contact tracing; a good laboratory service; safe burials; and social mobilization. Community engagement is key to successfully control outbreaks.

**WASH-RELATED RESOURCES**

**Methods to Make Chlorine Solution in Ebola Emergencies**, 2014. D Lantagne, Tufts University. [Link](#)

The methods for onsite manufacturing of chlorine include: diluting HTH or NaDCC powder in water; diluting concentrated liquid solution in water; and generating sodium hypochlorite using salt, water, and electricity.

**Methods to Test Chlorine Solution Concentrations in Ebola Emergencies**, 2014. D Lantagne, Tufts University. [Link](#)

This document describes three methods for testing chlorine solution: portable iodimetric titration kits; dilution followed by testing with FCR/TCR test kits; and calculation based on manufacturing.

**WASH Package for Ebola Care and Treatment Centres/Units: Guidance Note**, UNICEF. [Link](#)

This guidance note recommends actions for the implementation of WASH packages in treatment and care centers. The recommended actions are presented under the different components (water supply, hygiene and hand washing, disinfection, solid waste management, latrine and wastewater management, and dead body management) of the defined Ebola Care Center/Unit WASH package to complement community and house-to-house level interventions.

**Ebola and WASH**. UNC Water Institute Water and Health Conference, 2014. P Hunter. [Link](#)  
There is still much to learn about Ebola risks associated with WASH as the virus has not been extensively studied in this context. Nevertheless, much is known about the Ebola virus and other viruses that provide the basis for addressing WASH-related questions concerning potential environmental transmission routes and human exposure risks. This workshop communicated what is known or suspected as well as what we still need to know about Ebola virus risks in relation to WASH.

**Ebola Information Released for Water and Wastewater Utilities**, 2014. Water Research Foundation. [Link](#)

Because of Ebola's fragility when separated from its host, bodily fluids flushed by an infected person would not contaminate the water supply. Researchers believe Ebola survives in water for only a matter of minutes. This is because water does not provide the same environment as bodily fluids, which have higher salt concentrations. Once in water, the host cell will take in water in an attempt to equalize the osmotic pressure, causing the cells to swell and burst, thus killing the virus.

## **HAND WASHING/HYGIENE**

**Handwashing and Ebola: The Facts**, 2014. Global Public-Private Partnership for Handwashing. [Link](#)

Hand washing with soap after any contact with body fluids is one method to protect against infection. It is known that the Ebola virus can be killed by soap, chlorine, alcohol-based hand rub (CDC recommends at least 60 percent alcohol), very high heat, and exposure to many hours of sunlight. The preferred way to remove Ebola virus from your hands is with soap and running water. Soap and running water should always be used when hands are visibly dirty/soiled. If hands are not visibly dirty/soiled, alcohol-based hand rub may be used.

**Global Handwashing Day in the Time of Ebola.** Huffington Post, Oct 2014. J Sachs, Earth Institute at Columbia University. [Link](#)

Many of the world's poor lack access to safe water and soap needed to protect them from water-borne and hand-to-mouth pathogens. One problem that needs to be overcome is extreme poverty itself. Proper hygiene requires a basic minimum of resources. Ending the extreme poverty that blocks proper hygiene and the foundations of good health should be a core worldwide commitment of the new Sustainable Development Goals. The second problem to overcome is that of bad habits. Proper hygiene requires that individuals know the importance of good hygiene and develop the habits to carry it out.

**Ebola, Other Hospital-Acquired Infections... and Handwashing.** *Huffington Post*, Oct 2014. L McCay, Global Public-Private Partnership for Handwashing. [Link](#)

As hundreds of millions of people around the world celebrate Global Handwashing Day on October 15, the focus on promoting hand washing comes at a pertinent time for health services. The Ebola outbreak has compelled health facilities around the world to assess their infection control readiness.

## **ANTHROPOLOGICAL STUDIES**

**The Significance of Death, Funerals and the After-Life in Ebola-Hit Sierra Leone, Guinea and Liberia: Anthropological Insights into Infection and Social Resistance,** 2014. J Fairhead, IDS. [Link](#)

The aim of this briefing paper is to consider the various ways in which widely reported fear and resistance to the Ebola response can be understood, and what each way of understanding offers to those battling with the current epidemic.

**Medical Anthropology Study of the Ebola Virus Disease Outbreak in Liberia/West Africa,** 2014. WHO. [Link](#)

The topics explored in this study are: local knowledge and understanding of Ebola as a viral hemorrhagic disease, understanding of current health messages, and community concerns regarding Ebola.

## **OTHER STUDIES**

**Controlling Ebola: Next Steps.** *The Lancet*, Oct 2014. R Dhillon. [Link](#)

Control strategies based on rapid diagnosis, patient isolation, and treatment can reduce the transmission to well under one additional person per infected case, thereby rapidly containing the epidemic. No coherent national or international approach has so far been implemented to integrate the intervention chain from case identification to diagnosis, to secure transport, to isolation and treatment. While efforts to create new vaccines, medicines, and diagnostics are underway, the authors recommend these three measures be adopted in a concerted way.

**How to Avoid Being Infected with Ebola.** *The Guardian*, Oct 2014. S Boseley. [Link](#)

Can I get Ebola from a toilet seat? Yes – feces from somebody with Ebola are a real hazard and the virus has also been detected in urine. But there would only be a danger if a seriously sick person had used the toilet and contaminated it and that is most likely in their home or hospital. Public toilets, in general, are very unlikely to be a risk.

**The Ebola Epidemic Special Collection.** *Science*. [Link](#)

Given the current outbreak, unprecedented in terms of number of people killed and rapid

geographic spread, *Science* and *Science Translational Medicine* are making their collection of research and news articles on the viral disease freely available to researchers and the general public.

**Consolidated Ebola Virus Disease Preparedness Checklist**, 2014. WHO. [Link](#)

The Consolidated Checklist identifies 10 key components and tasks for both countries and the international community to complete within 30, 60, and 90 days.

**Transmission Dynamics and Control of Ebola Virus Disease (EVD): A Review**. *BMC Medicine*, Oct 2014. G Chowell. [Link](#)

The complex and unprecedented Ebola epidemic ongoing in West Africa has highlighted the need to review the epidemiological characteristics of EVD as well as the current understanding of the transmission dynamics and the effect of control interventions against Ebola transmission. This article reviews key epidemiological data from past Ebola outbreaks and carries out a comparative review of mathematical models of the spread and control of Ebola in the context of past outbreaks and the ongoing epidemic in West Africa.

**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**, 2014. WHO. [Link](#)

This document provides a summary of infection prevention and control measures for those providing direct and non-direct care to patients with suspected or confirmed cases of Filovirus haemorrhagic fever, including Ebola or Marburg, in health care facilities.

## WEBSITES

**UNICEF WASH Cluster – WASH and Ebola** - [Link](#)

This page enables users to be directly linked to the technical Q&A platform in order to ask questions to Ebola specialists in real-time. It also aims at providing up-to-date WASH guidelines, manuals, and news related to the evolving Ebola response.

**World Health Organization Ebola Website** - [Link](#)

This website contains updates on Ebola outbreaks and links to WHO reports on Ebola.

**Centers for Disease Control and Prevention Website** - [Link](#)

This website contains factsheets, situation reports, and other resources.

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WASHplus Weeklies highlight topics such as Urban WASH, Household Air Pollution, Innovation, Household Water Treatment and Storage, Hand Washing, Integration, and more. If you would like to feature your organization's materials in upcoming issues, please send them to Dan Campbell, WASHplus Knowledge Resources Specialist, at [dacampbell@fhi360.org](mailto:dacampbell@fhi360.org).



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**About WASHplus** - WASHplus, a five-year project funded through USAID's Bureau for Global Health, supports healthy households and communities by creating and delivering interventions that lead to improvements in access, practice and health outcomes related to water, sanitation, hygiene (WASH) and household air pollution (HAP). WASHplus uses at-scale, targeted as well as integrated approaches to reduce diarrheal diseases and acute respiratory infections, the two top killers of children under five years of age globally. For information,

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