

# Chapter 5

## Global Spread (October 2014)



**Abstract** As the Ebola outbreak continued to rage in West Africa, Western countries began to be directly affected by the disease. On the last day of September 2014, the first active Ebola case was diagnosed in the United States. Officials in Dallas, Texas, scrambled to contain the virus. A few weeks later, tension rose dramatically when two of the nurses who treated the initial US patient developed Ebola. One of the nurses traveled to Ohio and back before becoming sick. She flew by plane and had contact with other travelers. Officials were very worried that Ebola flare-ups would start to occur across the country. On October 6, 2014, a nursing assistant in Spain was diagnosed with Ebola. Like the US nurses, she had helped treat a repatriated Ebola victim. On October 23, 2014, a new US case was identified. A doctor was diagnosed with Ebola in New York City after returning from Guinea. On the same day, an Ebola case was discovered in the West African country of Mali. The Ebola outbreak seemed out of control and poised to start a major international epidemic. In West Africa, however, a corner had been turned. Healthcare efforts had shifted from treating all Ebola patients in medical facilities to providing families with supplies to take care of sick patients at home. Toward the end of October 2014, reports started to surface about there being fewer cases in West Africa, especially in Liberia. These reports were initially treated with caution. As time progressed, however, it became clear that the drop in cases was real.

### 5.1 Day-by-Day Outbreak Entries (October 2014)

#### October 1, 2014 (Wednesday)

Total cases: 7178 (604 new)    Fatalities: 3338 (247 new)  
(World Health Organization [2014a](#))

The Texas Ebola patient has been identified as Thomas Eric Duncan (Onishi [2014](#)). NPR reporter Wade Goodwyn provides an in-depth description of Duncan's illness and the events surrounding his diagnosis:

*WADE GOODWYN, BYLINE: The story begins on September 19, when a man in Liberia boarded a plane for Texas. He was tested for fever at the airport and showed none. That's important because this strain of Ebola is not contagious until symptoms of the illness begin*

*to present in the patient. For three days after he arrived in Dallas on the 20[th], all was well. But last Wednesday, the man became sick. By Friday, he was so ill he went to the emergency room at Presbyterian Hospital. Dr. Edward Goodman, the top infectious disease specialist at Presbyterian, describes what happened next.*

*(SOUNDBITE OF ARCHIVED RECORDING)*

*EDWARD GOODMAN: I think he was evaluated for his illness, which was very non-descript. He had some laboratory tests, which were not very impressive. And he was dismissed on some antibiotic because he was like the majority of people who come in the emergency room.*

*GOODWYN: If Dr. Goodman sounds the tiniest bit defensive, it's because of what happened next. Although the ER staff didn't realize it, Presby released an infected, contagious Ebola patient back into the general population. It will be this span of time, from when the Ebola symptoms first presented themselves up until when the man was admitted to the hospital, that the Centers for Disease Control and Prevention will focus its tracking effort. As for the man who came from Liberia, as the weekend came to a close, he'd grown so seriously ill with Ebola he returned to Presbyterian. Dr. Goodman says this go-around, the ER staff figured out what they were looking at pretty quickly.*

*(SOUNDBITE OF ARCHIVED RECORDING)*

*GOODMAN: I think those caring for him were suspicious of that almost immediately. The emergency room people identified that as a concern and consulted infection prevention department, which is my department, and consulted the infectious disease clinician. And that was on the top of everyone's list.*

*GOODWYN: Ebola - it had quietly slipped into Dallas through the eighth-busiest airport in the world. Though the diagnosis would not be confirmed by the CDC for another two days, the patient was nevertheless whisked away into the hospital's isolation unit in intensive care. (Goodwyn 2014)*

Four members of Thomas Duncan's family have been ordered to stay in their home until October 19, 2014 (Altman 2014; Szabo 2014a). They have also been ordered to submit to health tests, provide blood samples, and report any Ebola-like symptoms to Dallas County Health and Human Services. The written orders were hand-delivered to the family this evening (Altman 2014; Szabo 2014a).

Currently, 12–18 people who had contact with Duncan are being monitored (NBC News 2014a). Healthcare workers who interacted with him have all tested negative for Ebola. They will continue to be monitored for the next 21 days. The Dallas mayor's office says the three-person EMS crew who transported Duncan to the hospital has been quarantined (Whitely 2014). Similarly, the ambulance that carried him, ambulance No. 37, has been isolated and sealed with biohazard tape (Whitely 2014; Yan 2014a). Five students from four different schools, including two elementary schools, a middle school, and a high school, had contact with Duncan (Perez 2014). None of the children have symptoms of Ebola, but they are all being monitored at home. Dallas schools remain open (NBC News 2014a).

Duncan had been staying at the Ivy Apartments in Northeast Dallas (CBS DFW 2014a; Lopez 2014). Residents of the complex are worried that they may have been exposed to Ebola. They are also bothered by the lack of information officials have given them. The city activated a reverse 911 system to notify residents in the area, but people say it did little to remove their fears (Lopez 2014). The level of concern among other Dallas residents varies (Business Journals 2014; Hylton 2014). Some people are exceptionally worried. Others are unconcerned. A few think the dangers

of the disease are overstated. Overall, most Dallas residents do not seem overly alarmed by the appearance of Ebola in their community (Business Journals 2014; Hylton 2014).

Stock prices fell on the news of the first US Ebola case. Airline stocks were especially hard-hit. Delta is down to 3.5%. Southwest is down to 2.8%. In contrast, stocks of companies working on Ebola treatments rose. Tekmira Pharmaceuticals is up 17% (Reuters 2014a).

Conditions in the Ebola holding center of Makeni, Sierra Leone, remain grim. During a recent visit, a reporter found a 4-year-old girl lying on the floor. She was in a puddle of urine and had blood coming from her mouth. In the corner was the body of a dead young woman. When a body recovery team arrived, they collected the body and sprayed the living little girl with chlorine (Nossiter 2014a).

Ambulance crews in Liberia do not have the authority to force patients to go for treatment. In Monrovia, an obviously sick man recently refused to board an ambulance. He said that he hadn't been near anyone who had died. Neighbors contradicted this and said that one of the man's family members had recently died. On further questioning, the man said if he left, no one would take care of his children (Larson 2014).

Mauritius will not allow foreign nationals to enter the country if they have visited an Ebola-affected country within 2 months of their arrival (Warner 2014).

### **October 2, 2014 (Thursday)**

Four relatives of Thomas Duncan are quarantined in the apartment where Duncan became sick. They are his partner Louise Troh, her 13-year-old son, and two nephews in their 20s (Associated Press 2014a; Szabo 2014a). Troh is very worried that the apartment is contaminated. The sheets and towels used by Duncan are still in the residence (Martinez 2014).

As of this morning, 80 people had been identified who were known to have had contact with Duncan (Reuters 2014b). By noon, the number had risen to 100 (Altman 2014).

Attendance in Dallas area schools is down (Fernandez et al. 2014). Frightened parents are keeping their children home. School attendance was about 86% today. It is normally around 95% at this time of year (Fernandez et al. 2014). A high school student in Frisco, Texas, has been arrested for posting a false Twitter message saying that Ebola was infecting people in Frisco (Margason 2014).

When Thomas Duncan left Liberia, he answered "no" to questions about whether he had contact with Ebola victims. As a result, Liberia says it will prosecute him if he returns to the country (Stanglin 2014a).

Ashoka Mukpo, a 33-year-old American freelance cameraman working for NBC in Liberia, has contracted Ebola (Barbash 2014; NBC News 2014b). Mukpo had a fever during a routine check on Wednesday, October 1, 2014. Tests confirmed he has Ebola. He will be returned to the United States for treatment. The rest of his news team, including NBC News Chief Medical Editor and Correspondent Dr. Nancy Snyderman, will return with him and be isolated for 21 days (Barbash 2014). Currently, no one else on the team has Ebola symptoms (NBC News 2014b).

It is unclear how to deal with the hazardous waste generated by US Ebola patients. The waste should be incinerated or autoclaved, but few US hospitals are equipped to handle large amounts of infected material (NBC News 2014c).

Save the Children estimates that five people in Sierra Leone are being infected with Ebola every hour (BBC 2014a). The agency also says that last week, only 327 treatment beds were available for 765 new cases (BBC 2014a). Sierra Leone's Ministry of Health and Sanitation says 8478 households have been quarantined since May 2014 (Tommy 2014).

Due to border closures associated with the Ebola outbreak, less food is available in West Africa. Indigenous food production is also down, and food prices have increased. For example, in some areas of Sierra Leone, 40% of farms have been abandoned. The cost of palm oil has increased by 40% in 4 weeks. Overall, trade in West African food markets is down to 50% (Hussain and Arsenault 2014).

Up to 500 troops from the 1st Armored Division will deploy to West Africa in the next few weeks. The troops are currently stationed at Fort Bliss, Texas. They will provide logistic and air support for US Ebola efforts (Kocherga 2014).

Australia has increased its financial support for Ebola-fighting efforts to \$16 M. It is still unwilling to send personnel to West Africa (McGuirk 2014).

### **October 3, 2014 (Friday)**

Total cases: 7492 (314 new)    Fatalities: 3439 (101 new)  
(World Health Organization 2014b)

Five members of the Dallas County Sheriff's Department who entered Thomas Duncan's apartment have been placed on leave (Eiserer 2014). They include three deputies, a sergeant, and a lieutenant. The officers visited Duncan's apartment the night of October 1, 2014, to deliver a court order. The head of Dallas County Health and Human Services Department and a doctor were also present (Eiserer 2014). Late today, Duncan's family was moved to a new location (CBS DFW 2014b). They remain under quarantine but are now in a donated four-bedroom home in an unspecified gated community (CBS DFW 2014b). The number of contacts under surveillance in Dallas has been lowered to about 50. Ten of these are thought to be at high risk of exposure (Dallas News 2014; Ghebremedhin et al. 2014).

Brett Adamson, an Australian aid worker in Monrovia, Liberia, describes the development of the local crematorium. Workers initially cremated about 20 bodies a day at the site. This was not enough, so an additional altar was built to increase the capacity to 60 bodies a day. More recently, a road has been built leading to the crematorium and a large incinerator has been delivered. Now about 100 bodies a day can be cremated (Newcastle Herald 2014).

The Reverend Father Peter Konteh of Sierra Leone describes some of his experiences with the Ebola outbreak. Father Konteh knew the late Dr. Modupeh Cole. Cole worked for Connaught Hospital in Freetown. One day, a patient walked into the hospital and collapsed. Dr. Cole instinctively ran to catch him. After taking care of the patient, Cole realized the patient could be infected with Ebola, so he

quarantined himself in a room in his house. Two days later he developed a fever. Dr. Cole died on August 13, 2014. Father Konteh's home is near King Tom Cemetery. He can see the funerals of Ebola victims from his house. He thinks the government is underreporting the number of fatalities. For example, one day the government said three people had died. However, Father Konteh personally witnessed ten burials (Dribben 2014).

Hospitals in Sierra Leone are running out of basic supplies. Standard equipment like body bags, alcohol gel, and gloves are being consumed at a tremendous rate. Adam Goguen, director of academic affairs at the University of Makeni, says the staff has almost no PPE and medicine is becoming scarce (O'Carroll 2014a).

An infected Ugandan doctor, Dr. Michael Mawanda, has arrived at University Hospital in Frankfurt, Germany, for treatment. Dr. Mawanda had been working in Sierra Leone (ABC News 2014a; Agaba 2014). This is the second time an infected person has been transferred to Germany for treatment.

Infected NBC cameraman Ashoka Mukpo will be transported to the Nebraska Medical Center for treatment (Freyer 2014).

UNMEER released a statement saying there is no evidence that Ebola has become airborne (UNMEER 2014a).

About 120 soldiers from Fort Bragg will deploy to West Africa later this month (Associated Press 2014b). The troops will come from the 86th Combat Support Hospital, the 44th Medical Brigade, and the 16th Military Police Brigade (Associated Press 2014b). Fort Carson will send about 160 soldiers from the 615th Engineer Company, 52nd Engineer Battalion, to West Africa (Associated Press 2014c).

The US military says it is continually assessing the situation in West Africa and could request an additional 1000 troops to help with the Ebola outbreak (Vanden Brook and Jackson 2014).

#### **October 4, 2014 (Saturday)**

Thomas Duncan is now in critical condition at Texas Health Presbyterian Hospital in Dallas (Karimi and Sutton 2014). He is being treated with the experimental antiviral drug brincidofovir (Keneally and Battiste 2014). The CDC says 114 people in Texas have been tested for Ebola (Zwirko 2014). None of them, including nine people who are considered to be at high risk of exposure, are showing symptoms of the disease (Zwirko 2014).

Workers at the Ebola treatment center in Bong County, Liberia, have walked off the job. They say that the International Medical Corps has not fully paid them and has not provided them with the food it promised. They also lack appropriate PPE (Lomax 2014).

A MSF volunteer nurse has been released from a French hospital after recovering from Ebola. The patient arrived in France on September 18, 2014 (Reuters 2014c).

Canada is sending a second mobile medical lab and two scientists to Sierra Leone to help with the Ebola outbreak (Reuters 2014d).

In Newark, New Jersey, a father and daughter were removed from a United Airlines flight and taken to the hospital. The father had been exhibiting Ebola-like symptoms. The flight was coming from Brussels, and the passengers are thought to be from Liberia (7 Online 2014).

**October 5, 2014 (Sunday)**

Sierra Leone says there were 121 new Ebola deaths on Saturday October 4, 2014. This is the highest 1-day fatality total to date (Reuters [2014e](#)).

Another high-level doctor, Dr. John Taban Dada, has died from Ebola in Liberia (Agaba [2014](#)).

Politics and bureaucracy are hampering the distribution of Ebola supplies in West Africa. In one case, a shipping container with supplies and PPE has been waiting on the docks of Freetown, Sierra Leone, since August 9, 2014. It is there because a \$6500 shipping fee has not been paid (Nossiter [2014b](#)).

The CDC is handling 800 calls a day about Ebola (Villacorta [2014](#)).

Scientists estimate there is a 75% chance Ebola will arrive in France by October 24, 2014. There is a 50% chance it will arrive in Britain by October 24, 2014 (Reuters [2014f](#)).

Israel will send three mobile medical units to West Africa (JTA [2014](#)).

**October 6, 2014 (Monday)**

A Spanish nursing assistant [María Teresa Romero Ramos] has contracted Ebola in Spain (Brumfield and Levs [2014](#); Minder and Grady [2014](#)). The nursing assistant helped treat infected priest Brother Manuel Garcia Viejo in Spain's Carlos III Hospital. She developed symptoms on Tuesday, September 30, 2014, and was hospitalized today. Officials are now trying to determine who she had contact with before she was isolated. This is the first documented case of Ebola transmission outside of Africa during the outbreak (Brumfield and Levs [2014](#); Minder and Grady [2014](#)).

Numerous reporting agencies described María Teresa Romero Ramos's Ebola infection and her efforts to contact medical authorities about her initial symptoms. Taken as a whole, these reports are convoluted and often contradictory. For example, the media usually refers to Ramos as a nurse, though she appears to have been a nursing assistant (e.g., Wheaton [2014](#)). The following represents the best effort to provide an accurate description and timeline of Ramos's activities. Ramos entered Brother Viejo's room twice, once to change his undergarments and once to collect his personal belongings after his death (Alexander H [2014](#); Phillip and Ferdman [2014](#)). She may have become infected when she touched her face with a gloved hand while removing her PPE (Independent.ie [2014](#)). However, the use of substandard equipment and poor operating procedures may have contributed to her infection. Hospital staff told the investigators that the PPE they were issued did not meet WHO standards (Kassam [2014a](#); Phillip and Ferdman [2014](#)). For example, gloves were simply sealed with adhesive tape. There were other problems with the care of Ebola patients at the hospital as well. For example, medical waste from Ebola patients was transported out of the hospital via the staff elevator (Kassam [2014a](#)). Ramos left for vacation on the Spanish coast soon after Brother Viejo died (Morris [2014](#)). On September 30, 2014, she developed a fever. She contacted occupational risk personnel at Carlos III Hospital about her condition. Because her fever was below 101.5 °F, she was advised to go to her local clinic (Kassam [2014b](#)). During the early stages of her illness, Ramos used public transportation, visited restaurants

and shops, and spent time with friends (Nadeau 2014). On October 2, 2014, she called Carlos III Hospital again to report that she still had a fever. She was directed [presumably meaning her call was routed] to a department of Madrid's regional health service (Botelho et al. 2014). It is unclear what she was told, but no significant action was advised (Kassam 2014b). She called the hospital again today to say she was severely ill (Kassam 2014b). She was advised to go to the nearest emergency facility, which was Alcorcón. She was transported to the hospital by paramedics. At Alcorcón, she told the staff she thought she had Ebola, but she was kept in the general emergency ward (Kassam 2014b).

Infected NBC cameraman Ashoka Mukpo has arrived in Nebraska for treatment. Mukpo may have become infected when he was splashed with disinfectant while cleaning a car in which an Ebola victim had died (Keneally 2014a).

MSF says a Norwegian worker in Sierra Leone [Dr. Silje Michalsen] has contracted Ebola (Médecins Sans Frontières 2014). The patient will be transported to Oslo, Norway, for treatment (Reuters 2014g). The 30-year-old Michalsen developed a fever on October 2, 2014, and tested positive for Ebola on October 3 (The Health Site 2014).

Liberian healthcare workers plan a work slowdown. The workers are trying to get the government to issue their Ebola hazard pay (Reuters 2014h).

US troops have begun constructing the main hospital tent for a new 25-bed facility in Monrovia, Liberia (Associated Press 2014d). Heavy rains are slowing the work.

A US C-130J loaded with Ebola-fighting supplies has been sent from Ramstein Air Base, Germany, to Monrovia (Svan and DeMotts 2014). This is the first time a European-based air unit has been sent to the Ebola zone.

Representative Frank Wolf (R-Virginia) and Senator Jerry Moran (R-Kansas) have sent a letter to President Obama requesting that he appoint an overall US Ebola coordinator (Marcos 2014).

A US airline trade group will meet with government officials to review screening procedures for passengers from Ebola-infected areas (Dastin 2014).

### **October 7, 2014 (Tuesday)**

The infected Spanish nurse [María Teresa Romero Ramos] is being given injections of antibodies from Ebola survivors (Sharkov 2014). The nurse's husband has been quarantined, as has a second nurse who helped treat Brother Viejo (Associated Press 2014e, Morris 2014). The second nurse has diarrhea, but does not have a fever (Associated Press 2014e). Thirty other healthcare workers at Carlos III Hospital have been placed under observation. Twenty-two people at Alcorcón hospital have been contacted by health officials (Bennett 2014). Officials plan to euthanize and cremate the infected nurse's dog, named "Excalibur" (Hatton and Giles 2014).

A group of Spanish healthcare workers protested the poor management of Ebola patients in Spain (Hatton and Giles 2014).

Thomas Duncan remains in critical condition in Dallas. He is now on a ventilator and is receiving kidney dialysis (Garza and Valdmanis 2014). Ashoka Mukpo is being treated with brincidofovir (Herriman 2014).

In Freetown, Sierra Leone, the cemetery at Connaught Hospital is filling rapidly. There are hundreds of recent graves. Most of the graves are unmarked, but some have a cross or a few toys scattered on them. About 400 bodies have been interred in the cemetery in the last few weeks (Mazumdar 2014).

An obviously infected man was recently turned away from an Italian NGO clinic near Freetown, Sierra Leone. He had red eyes and hiccups. A doctor inside the clinic explained that the facility was at capacity and simply could not accept any more patients. If they did, it would put the staff and current patients at risk. The sick man died the next day at an isolation center (Mazumdar 2014).

Burial workers have gone on strike in two of Sierra Leone's districts. They have not been paid in 2 weeks. Each 12-man burial team has been burying between 17 and 35 bodies a day (Reuters 2014i).

The EU has activated its Early Warning and Response System (Román 2014). The network allows EU members to share information about disease outbreaks and coordinate responses (Román 2014). The EU will also increase its aid to Ebola-affected countries. The EU's Emergency Response Coordination Center will begin airlifting supplies to the region starting Friday, October 10, 2014 (UNMEER 2014b).

News of the infected Spanish nurse has led to a drop in tourism-related stocks (Martin 2014). In contrast, shares of Lakeland Industries, a maker of hazmat suits, have risen 40% since Thomas Duncan was diagnosed with Ebola (Udland 2014).

Four major hospitals in the United Kingdom have been placed on standby to receive any future UK Ebola cases. The hospitals are Royal Free Hospital in North London, Royal Liverpool University Hospital Foundation Trust, Newcastle upon Tyne Hospital Foundation Trust, and Sheffield Teaching Hospital NHS Foundation Trust (Donnelly and Knapton 2014).

The Atlanta airport is giving CDC fliers to passengers arriving from Ebola-affected countries. The fliers describe Ebola and encourage readers to seek medical assistance if they have had contact with Ebola victims or develop symptoms (Associated Press 2014f).

Gambia Bird Airlines will resume flights to Freetown, Sierra Leone, starting October 17, 2014 (Awoko 2014).

### **October 8, 2014 (Wednesday)**

Total cases: 8033 (541 new)    Fatalities: 3865 (426 new)  
(World Health Organization 2014c)

Thomas Duncan died in Dallas at 0751 h today. His remains were handled according to CDC guidelines. His body was placed inside two sealed body bags, disinfected, and cremated. A service was held for Duncan today at the Wilshire Baptist Church at 4316 Abrams Road in Dallas (Wiley 2014).

Michael Monnig, a Dallas County Sheriff's Deputy who entered Duncan's home, has fallen ill and been isolated (Rahmanzadeh and Mohney 2014). Monnig helped deliver the quarantine order to Duncan's family. He was in the residence for about 30 min, but was not wearing any PPE (CBS DFW 2014c). It is unclear if he has Ebola.



The infected Spanish nurse has been identified as María Teresa Romero Ramos (Wheaton 2014). Her name was revealed when her husband posted an online letter appealing for their dog “Excalibur” to be spared from euthanasia (Wheaton 2014). Unfortunately, the dog was put down today (Minder and Belluck 2014).

Sierra Leone burial teams have returned to work. A government official says their strike has been resolved. During the short strike, there were reports of unattended bodies lying in the streets (Kamara 2014).

A UN medical worker has contracted Ebola in Liberia (Reuters 2014j).

The cost to care for an Ebola patient in the United States is exceptionally high. It is estimated that Thomas Duncan’s treatment cost between \$18,000 and 24,000 per day (Wayne 2014). Total cost for his care may reach \$0.5 M (Wayne 2014). The World Bank estimates that Ebola could cost the global economy up to \$32 B, depending on how severe the outbreak becomes (CBS News 2014a).

Dr. Kent Brantly has donated blood for infected NBC cameraman Ashoka Mukpo (NBC News 2014d). Separately, the doctor [Dr. Lewis Rubinson] who had been under observation at the NIH in Maryland after a needlestick has been released (Schnirring 2014). He has not developed symptoms, but will remain at home for another 21-day observation period.

Five US airports (JFK, Newark Liberty, Dulles, O’Hare, and Hartsfield-Jackson) will begin screening passengers from Ebola-affected countries for fevers and will observe passengers for signs of Ebola (Centers for Disease Control and Prevention 2014a). About 150 people arrive in the United States each day from Sierra Leone, Liberia, and Guinea. Of these, 94% arrive at these five major airports (Kelto 2014; Centers for Disease Control and Prevention 2014a). Canada will also screen passengers arriving from West Africa (Hume 2014).

The United Kingdom will deploy 750 troops, three helicopters, and a naval vessel to help fight Ebola in West Africa (Cooper et al. 2014).

### **October 9, 2014 (Thursday)**

María Teresa Romero Ramos’s condition has worsened. She is now intubated (Kassam 2014c).

Dr. Juan Manuel Parra helped treat Ramos in the Alcorcón emergency room. He published an open letter describing his interactions with Ramos and raising concerns about the care of Ebola patients in Spain (Ohlheiser and Phillip 2014; Penty and Munoz 2014). Dr. Parra says he worked with Ramos for 16 h during which time she vomited and had diarrhea. The PPE he was issued, however, was inadequate, and the sleeves were too short (Penty and Munoz 2014). Dr. Parra and a second Spanish doctor who treated Ramos have both been placed under observation (Ohlheiser and Phillip 2014). A total of seven people were isolated in Spain today, including two hairdressers who had worked on Ramos (Dowsett 2014).

Dallas Deputy Michael Monnig has tested negative for Ebola (Houston Chronicle 2014).

Because of the Ebola outbreak, the Liberia government will postpone senate elections that were originally scheduled for October 14, 2014 (Sputnik International 2014). A new date for the elections has not been set.

Schools remain closed in Sierra Leone. To make sure children receive some education, the country has started broadcasting educational lessons. Parents are encouraged to have their kids listen to the 4-h programs (Ohlheiser 2014).

Ships sailing directly from West Africa to ports in Brazil and Argentina will have to wait 10 days before they will be allowed to dock. It takes about 10 days for ships to reach South America from Africa. This 10-day travel time, plus the additional 10-day waiting period, will approximate the 21-day Ebola incubation period (Hellenic Shipping News 2014).

A British man who died at the Clinic of Infectious Disease in Skopje, Macedonia, may have had Ebola. The man had Ebola-like symptoms and died soon after he was admitted (Casule 2014; MINA 2014). However, his travel history is unclear, and it is not certain if he had been in an area with Ebola.

In New York, about 200 airline cabin cleaners staged a protest. This was partly due to their concern about possible on-the-job exposure to Ebola. The cleaners say they frequently find hypodermic needles, vomit, and blood as they clean the planes (ABC News 2014b).

One hundred additional US marines have landed in Monrovia, Liberia. This brings the total number of US troops in the country to about 300 (Paye-Layleh and Giles 2014).

Britain will start screening passengers for Ebola at Heathrow and Gatwick airports and at the Eurostar rail terminal (Reuters 2014k).

### **October 10, 2014 (Friday)**

Total cases: 8399 (366 new)    Fatalities: 4033 (168 new)  
(World Health Organization 2014d)

A total of 14 people are now under observation in Spain (Dowsett 2014). At Carlos III Hospital, some staff are making excuses to avoid work (Kassam 2014d). When Spanish Prime Minister Mariano Rajoy visited the hospital today, angry protesters threw surgical gloves at his car (Reuters 2014l).

Officials in Sierra Leone have begun shifting the focus away from caring for Ebola patients at medical facilities to helping families care for sick individuals at home (Nossiter 2014c). Sierra Leone has realized that it does not have, and will not have, enough beds to care for all of its infected citizens. Currently, there are 304 Ebola treatment beds in the country, but 1148 are needed. Instead of trying to find additional space for victims in hospitals, healthcare workers will now distribute painkillers, rehydrating solution, and gloves to the families of Ebola victims (Nossiter 2014c). There were 140 Ebola deaths in Sierra Leone today, the highest 1-day fatality count to date (Douglas 2014).

Liberia's healthcare system is overwhelmed by the Ebola outbreak. Clinics remain completely full. Non-Ebola cases are often turned away no matter how sick the patient is. In one recent case, a 21-year-old named Nikita Forh died from complications of an asthma attack. Before they would treat her, the doctors at JFK hospital in Monrovia wanted her to provide a certificate proving she did not have Ebola (Reuters 2014m).

Liberian President Ellen Johnson Sirleaf has requested additional governmental powers to combat Ebola. Among other things, Sirleaf is asking for the power to restrict movement, prevent public gatherings, and appropriate property. Some lawmakers worry that Liberia will turn into a police state if the President is given these rights (Paye-Layleh 2014a).

An infected UN Sudanese doctor has been evacuated from Liberia to Leipzig, Germany, for treatment (Health Site 2014). In Liberia, the UN has isolated 41 workers, including 20 military personnel, who had contact with an infected staff member [most likely the Sudanese doctor]. The infected staffer developed Ebola symptoms on October 5, 2014, and tested positive for the disease several days later (AFP 2014a).

Trials of the GlaxoSmithKline Ebola vaccine have begun in Mali. Healthcare workers have been inoculated with the vaccine to assess the vaccine's safety and see if recipients develop Ebola antibodies (Boseley 2014a).

### **October 11, 2014 (Saturday)**

Liberia has banned journalists from Ebola clinics. It is thought that this is to keep reporters from revealing the scope of the outbreak and to prevent them from reporting on protests by healthcare workers. MSF will petition the government to exclude its clinics from the ban (Charlton 2014).

Thirteen-year-old Bintu Sannoh describes her experience with Ebola in Sierra Leone. The disease began in her community when a pharmacist died. He had said that he had a septic ulcer, not Ebola, so he was given a traditional burial. About 2 weeks after his funeral, people who had washed his corpse began to get sick. Soon many people in the community were affected, including Sannoh's aunt. In less than 2 weeks, 26 people developed Ebola. Seventeen of them died. Healthcare workers in full PPE came to the community. They disinfected homes and burned infected bedding. This probably helped control the outbreak, but it terrified the residents and made them even more frightened (Sannoh 2014).

Ebola training for Spanish healthcare workers continues to be substandard. For example, medical experts say it takes 10–14 days to become fully proficient in donning, using, and removing PPE. In contrast, one Spanish doctor says his training consisted of a 10-min briefing followed by being shown some photographs about how to care for Ebola patients (Govan 2014).

Health officials in New Jersey have imposed a mandatory quarantine on Nancy Snyderman's NBC News team (Wagner 2014). The team had returned to the United States after cameraman Ashoka Mukpo contacted Ebola in Liberia. They were in voluntary isolation when at least one team member broke quarantine. This forced officials to legally order the group to remain isolated (Wagner 2014). It was later learned that on October 9, 2014, Nancy Snyderman and several team members were seen outside the Peasant Grill restaurant in Hopewell, New Jersey (Day 2014).

Ebola screening has begun at New York's JFK airport (Malo 2014).

### **October 12, 2014 (Sunday)**

A healthcare worker [Nina Pham] who assisted Thomas Duncan at Texas Health Presbyterian Hospital has tested positive for Ebola (Du Lac et al. 2014; Rainone 2014). This is the first known case of person-to-person Ebola transmission in the

United States. Texas Health Presbyterian Hospital's ER has been put on "diversion," which means no new patients will be admitted (du Lac et al. 2014). The healthcare worker lives on the 3700 block of Marquita Avenue in Dallas (Rainone 2014). The area around the apartment has been decontaminated and secured by police (Rainone 2014). Neighbors have been notified about the case (Fox News 2014a). All telephone lines within a four-block radius of the worker's apartment received a reverse 911 call:

*THIS IS AN IMPORANT MESSAGE FROM THE CITY OF DALLAS*

*Please be advised that a heath care worker who lives in your area has tested positive for Ebola. This individual is in the hospital and isolated. Precautions are already in process to clean all known potential areas of contact to ensure public health.*

*While this may be concerning, there is no ongoing danger to your health. The virus does not spread through casual contact.*

*The City of Dallas is working closely with the Centers for Disease Control and Prevention, Dallas County, Dallas Independent School District, and Community Leaders to protect your health.*

*For more information please call 311 or Dallas County Health and Human Services at 214-819-2004. (ABC 13 Eyewitness News 2014)*

Nina Pham developed a fever on Friday October 10, 2014, and was isolated late on Saturday (Du Lac et al. 2014; Rainone 2014). Only 90 min elapsed from time Pham realized she had symptoms until she was isolated (Rainone 2014). Pham helped Duncan several times during his second trip to the ER, but she always wore full PPE. As a result, the CDC did not consider her at high risk of exposure (du Lac et al. 2014).

In Liberia, members of the National Health Workers Association are threatening to strike over reduced hazard pay. At the start of the outbreak, Liberia authorized nurses working with Ebola patients to receive \$700 a month hazard pay. As the scale of the outbreak increased, this sum was deemed a financial burden to the state. The payment was reduced to \$435 a month. The nurses want their pay returned to the initial levels. They will begin striking at midnight Monday October 13, 2014, unless an agreement is reached. It is thought that the government is speeding up the licensing student nurses so they can take the place of striking nurses (Associated Press 2014g).

NPR correspondent Jason Beaubien was in Morovia, Liberia, in August 2014 and has recently returned to the city (Silver 2014). He compares the mood in the city today with his last visit:

*There's a bit of a sense of Ebola is becoming the new normal. The streets are supercrowded and busy. Despite government declarations that people aren't supposed to gather in large crowds [to prevent the spread of Ebola], the markets look like any street scene. Traffic was fairly light in August but it's once again terrible. There are traffic jams. It feels like, in many ways, life has gone back to normal.*

*On the radio everybody is still talking about Ebola, and there are lots of Ebola songs, some old ones, some new ones, and signs everywhere about Ebola. All schools remain closed. (Silver 2014)*

Operators for Britain's NHS non-emergency 111 number will try to identify possible Ebola cases. If a caller reports Ebola-like symptoms, the operators will ask

about their travel history. If Ebola is possible, emergency services will be contacted (BBC 2014b).

Budget and personnel cuts may have weakened the ability of the United States to respond the Ebola crisis. The CDC's Public Health Emergency Preparedness budget declined from \$1.1 B in 2006 to \$585 M in 2013. Between 2008 and 2013, local health departments shed 48,300 jobs – a 15% reduction in personnel (Begley and Abutaleb 2014).

### **October 13, 2014 (Monday)**

The infected Dallas nurse has been identified as 26-year-old Nina Pham (Associated Press 2014h). She received a blood transfusion from Ebola survivor Kent Brantly today (Associated Press 2014h). Nina Pham's dog, a Cavalier King Charles spaniel named "Bentley," is under surveillance at an undisclosed location (CBS News 2014b; Douglas and Owens 2014). It is unclear if pets can catch or transmit Ebola (CBS News 2014b). To be safe, Spain euthanized María Teresa Romero Ramos's dog. Officials in the United States have been very clear that they plan to save and care for Pham's dog (Douglas and Owens 2014).

While speaking about the Ebola outbreak, WHO Director Dr. Margaret Chan said she had never seen a disease with such a strong potential to cause societal failure within a country (World Health Organization 2014e).

Despite the threat of a strike, healthcare workers in Liberia generally reported for work today (Associated Press 2014i). It is unclear if the issues associated with the planned strike have been resolved or if the strike has been postponed.

Friends of infected cameraman Ashoka Mukpo are raising money to help pay for his medical treatment. It is thought that the total cost for his medical care will be about \$500,000. His flight from Liberia to the United States alone cost \$150,000. Mukpo had travelers insurance, but it does not cover evacuations caused by disease outbreaks (Associated Press 2014j).

A survey of US nurses finds that 76% have not been provided with an official policy about how to admit Ebola patients to their hospitals. Eighty-five percent say that they have not been provided with interactive Ebola training (Chuck 2014).

The British government has ordered 500,000 hazmat suits from Arco (Cutlack 2014). Germany says it currently has 50 beds available to treat Ebola patients (The Local 2014).

### **October 14, 2014 (Tuesday)**

Police in the Aberdeen community of Freetown, Sierra Leone, used tear gas and live rounds (presumably fired into the air) to disperse angry residents. The residents were protesting the fact that the body of a young woman had been in the streets for 2 days. She is thought to have died from Ebola (Olu-Mammah and Giahue 2014).

A battalion of 800 Sierra Leone peacekeepers bound for Somalia has been quarantined because a Sierra Leone soldier has tested positive for Ebola (Shankar 2014). The infected soldier is not part of the quarantined unit (Associated Press 2014k). However, the battalion will be quarantined for 21 days before they are deployed (Shankar 2014).

President of Guinea Alpha Condé issued an urgent appeal to retired doctors. He is asking them return to work to help with the Ebola outbreak (Associated Press 2014i).

The CDC is developing specialized Ebola response teams. They will be immediately sent to any US hospital that identifies an Ebola case (Fox 2014).

WHO Assistant Director-General Bruce Aylward warned that by December, 2014, there could be 5000–10,000 new Ebola cases each week in West Africa (Boseley 2014b). However, he also said that the rates of infection have been relatively stable for the past few weeks and this could indicate that the outbreak is slowing down (Achenbach 2014). A press statement released by the WHO today described an unexpected pattern seen in the outbreak. Infected areas often experience a slow decline in cases and then experience a sudden flare-up (World Health Organization 2014f).

The UN worker being treated for Ebola in Leipzig, Germany, has died. He was 56 years old and tested positive for Ebola on October 6, 2014 (Associated Press 2014m).

The *RFA Argus*, a British naval medical vessel, is preparing to sail to West Africa to help with the outbreak (BBC 2014c).

Facebook CEO Mark Zuckerberg and his wife have donated \$25 M to help the CDC fight Ebola (Gynn 2014).

### October 15, 2014 (Wednesday)

Total cases: 8997 (598 new) Fatalities: 4493 (460 new)  
(World Health Organization 2014g)

A second Dallas nurse who worked with Thomas Duncan has tested positive for Ebola. The new patient is 29-year-old Amber Joy Vinson (Fox News 2014b; Yan 2014b). Unlike Nina Pham who had only been in Dallas before she was diagnosed with Ebola, Vinson had traveled to and from Tallmadge, Ohio (about 30 miles south of Cleveland), before being diagnosed (Berman 2014). Vinson flew to Cleveland on October 10, 2014, and returned October 13 (Berman 2014; Shoichet et al. 2014). She developed a 99.5 °F fever before boarding the return plane (NBC DFW 2014). There were 132 other passengers on her return flight, Frontier Airlines flight 1143 (WKYC 2014). The CDC is asking passengers to contact the agency, so they can determine who might have been exposed to Vinson (Berman 2014; WKYC 2014). Vinson's apartment, located in the Village Apartments in Dallas, is being decontaminated (Associated Press 2014n; Zeeble 2014). Her stepfather's home in the Stonegate Reserve neighborhood in Tallmadge, Ohio, has been cordoned off by police (Harper 2014). Around midday today, health officials decided to move Vinson to Emory University Hospital for treatment. She arrived in Atlanta this evening (NBC News 2014e).

CDC Director Thomas Frieden said he was upset that Vinson had flown even though she had treated an Ebola patient and developed a fever (Shoichet et al. 2014). It was later revealed, however, that Vinson had sought CDC approval before her

flight (NBC DFW 2014; WKYC 2014). Vinson called the CDC on Monday. She explained her situation, and said she had a 99.5 °F fever. The person she talked with checked the CDC website for guidance. It said that it was ok for a person with uncertain risk to fly if their temperature was below 100.4 °F (NBC DFW 2014). Dr. Frieden was not aware of these facts when he made his initial statements. In the future, however, the CDC vows that anyone who has had contact with infected patients will not be allowed to travel on commercial airlines (Shoichet et al. 2014). It is unclear how this travel ban will be enforced, but it has been suggested that people under Ebola surveillance might be placed on the Transportation Security Administration's no-fly list (Sheets 2014).

National Nurses United, a US nursing union, has released a highly critical assessment of Texas Health Presbyterian Hospital's handling of Ebola patient Thomas Duncan. Citing unnamed nurses at the hospital, the report describes numerous failings of the facility. Specifically, the report says:

1. Protocols were constantly changing.
2. Duncan was not immediately isolated when he returned to the hospital the second time.
3. The PPE nurses were issued did not cover their necks; instead nurses were instructed to wrap medical tape around their necks.
4. Hazardous waste was not collected in a timely fashion and piled up.
5. Nurses were given no hands-on Ebola training (Shoichet 2014).

The CDC is currently monitoring 125 people in the United States for Ebola symptoms, including 76 who had contact with Thomas Duncan (Washington Examiner 2014).

President Obama canceled a trip to New England and convened an emergency Ebola meeting at the White House. Officials from the CDC, HHS, and DOD attended (Dwyer 2014).

The WHO says there are currently 620 Ebola treatment beds in Liberia, 346 in Sierra Leone, and 160 in Guinea. These represent only 21–50% of the planned number of beds for these countries. Through October 12, 2014, 427 healthcare workers have contracted Ebola. Of these, 236 have died (World Health Organization 2014g).

Several Ebola cases have been confirmed in Koinadugu District, Sierra Leone. Koinadugu was the last unaffected district in the country. Ebola has now reached all 14 of Sierra Leone's districts (Gbandia and Gale 2014).

Liberia is desperately short of Ebola-fighting supplies. According to the Liberian Ministry of Health and Social Welfare, there is too little of almost all essential equipment. Only 4901 body bags are on hand, but 84,841 are expected to be needed within the next 6 months. Only 2199 pairs of rubber boots are available, but 176,304 are needed. Only 309,206 face masks on hand, but 1.7 M are needed (Tharoor 2014).

Two Nigerian students have been rejected from Navarro College in Texas. The school did not want to accept them because they come from a country that has Ebola cases. One of the prospective students, Idris Bello, said that this was rather ironic given the ongoing Ebola outbreak in Dallas, Texas (Mangan 2014).

Three house democrats are requesting that US troops be allowed to directly aid Ebola patients in West Africa. US forces currently act in supporting roles. They are not allowed to have direct contact with Ebola patients (Sullivan 2014).

British Ebola survivor, William Pooley, will return to Sierra Leone to help with the outbreak (O'Carroll 2014b). Doctors think he is now immune to Ebola because he successfully fought off the virus.

There have been a variety of incidents in the United States where people have claimed to have Ebola either as a joke or threat. This evening, a 60-year-old man was arrested at his home in Cleveland, Ohio. While he was at the Horseshoe Casino in Cleveland, he said his wife had Ebola. He had been losing and it is thought that this was meant as a threat (Pinckard 2014).

### **October 16, 2014 (Thursday)**

Amber Vinson may have had Ebola symptoms as early as October 10, 2014, the day she flew from Dallas to Cleveland (Livingston and Powell 2014). The CDC is asking passengers on Vinson's October 10 flight, Frontier Airlines flight 1142, to contact the agency (Centers for Disease Control and Prevention 2014b). Vinson had flown home to plan her wedding. Five of her bridesmaids are now quarantined (Associated Press 2014o; Livingston and Powell 2014). In addition, Coming Attractions Bridal & Formal, a bridal shop that Vinson visited in Akron on October 11, has been closed (Associated Press 2014o). Health officials are asking patrons who visited the shop between 1200 and 1530 h on October 11 to contact them (Livingston and Powell 2014).

Frontier Airlines has placed the six crewmembers from Amber Vinson's October 13 flight on paid leave (NBC News 2014f). The jet that Vinson flew on, registration number N220FR, has been taken out of service. It has been cleaned and the seat covers and carpets near Vinson's seat have been removed. Before being taken out of service, the jet made five additional flights to Cleveland, Fort Lauderdale, and Atlanta (NBC News 2014f). Two Ohio schools, Solon Middle School and Parkside Elementary School, were closed today because a staff member flew on the same plane, but not on the same flight, as Amber Vinson (Szabo 2014b). The schools will be disinfected. The Ohio Department of Health issued the following quarantine protocols for people exposed to Ebola victims:

*For individuals with any direct physical contact with the index case (including brief contact such as a handshake without personal protective equipment), ODH recommends quarantine for 21 days after the last contact in conjunction with public health officials.*

*For individuals without direct contact, but within a three foot radius of the index case (such as adjacent passengers in an airplane or car) for a prolonged period of time, ODH recommends twice-daily temperature-taking and symptom check (one observed by a public health official) for 21 days after the last contact with the index case.*

*For individuals without direct contact but in the vicinity of the index case as indicated by a public health official, notification and self-monitoring is recommended. (Ohio Department of Health 2014)*

Texas Health Presbyterian Hospital has apologized for mistakes it made in handling Ebola patients (Yan and Shoichet 2014). The hospital is offering to provide hospital rooms to any of its healthcare workers who are under surveillance. Staying



at the hospital will ensure that workers do not infect their families or community if they are infected. The use of a room is entirely at the workers' discretion (Yan and Shoichet 2014). Late in the day, all of the healthcare workers who had contact with Thomas Duncan were asked to sign a document legally requiring them to self-quarantine, avoid public places, and not use mass transit (Associated Press 2014p). Dallas is considering asking Governor Rick Perry to declare the county's Ebola outbreak a disaster (NBC News 2014g).

Nina Pham has been transferred to an NIH facility in Maryland for treatment (CBS DFW 2014d).

In Spain, a person who had contact with María Teresa Romero Ramos has developed a fever and been isolated (Associated Press 2014q).

A nurse who treated the French Ebola patient in September has developed Ebola-like symptoms. She has a high, long-lasting fever. The nurse has been taken to the Begin Hospital in Saint-Mande, France, and been isolated (AFP 2014b).

President Obama issued an executive order that allows the Pentagon to call up reservists to help fight Ebola (Korte and Vanden Brook 2014).

A doctoral student at the Yale University School of Public Health has been isolated in the Yale-New Haven Hospital with Ebola-like symptoms (New Haven Register 2014). The student returned from Liberia on Saturday, October 11, 2014, and developed a fever Wednesday night (Donahue and Tensa 2014).

Ebola screening has started at airports in Atlanta, Chicago, New Jersey, and Washington, D.C. (ABC News 2014c).

Ninety-two British medics from the 22 Field Hospital have arrived in Sierra Leone to help with the outbreak (Robinson 2014).

### **October 17, 2014 (Friday)**

Total cases: 9216 (219 new)    Fatalities: 4555 (62 new)  
(World Health Organization 2014h)

The Ebola outbreak in Senegal is officially over (World Health Organization 2014i). The only reported case in the country occurred on August 29, 2014. Two, 21-day incubation periods have now passed without any other cases developing. Ebola is no longer considered to be in the country (World Health Organization 2014i). The WHO has congratulated Senegal for its handling of the outbreak (World Health Organization 2014j).

A laboratory supervisor who had contact with Thomas Duncan's medical specimens is on the cruise ship *Carnival Magic* off the coast of Belize (Keneally 2014b). She is considered a low risk of exposure but has agreed to isolate herself in her cabin and the ship is returning to port (Cowell 2014; Keneally 2014b). In Dallas, 75 healthcare workers who assisted Duncan have been placed on the US no-fly list (CBS DC and Associated Press 2014a).

Dealing with the waste generated by Ebola patients is difficult for US hospitals. Texas Health Presbyterian Hospital has been shipping 55 gallon waste drums to Port

Arthur, Texas, for incineration. The waste includes body fluids, contaminated bedding, and used PPE (Wines 2014).

President Obama has appointed Ron Klain as Ebola response coordinator (Tapper 2014). The media is referring to Klain as the Ebola Czar.

Major Alfred Palo Conteh has been appointed Sierra Leone's Ebola Czar (Awareness Times 2014)

Ebola survivors in West Africa are being trained to help care for Ebola orphans (United Nations 2014).

Food prices in Liberia, Sierra Leone, and Guinea are up an average of 24% since the start of the outbreak (Brinded 2014).

A 63-year-old Nigerian man vomited profusely and then died in his seat on an Arik Air flight from Lagos, Nigeria, to New York City (Aminu 2014). This caused tremendous concern about Ebola among the passengers and crew. However, the CDC has determined the deceased passenger did not have Ebola (Aminu 2014). In a separate incident, a woman on a tour of the Pentagon began vomiting in the parking lot and said she had recently been in Sierra Leone (CBS DC and Associated Press 2014b). She later tested negative for Ebola (Morozova 2014).

Benowitz et al. (2014) warn that New York City is especially vulnerable to the arrival of Ebola. New York is a significant transit hub and a major port of entry into the United States. It is also home to many West Africans who travel back and forth to their home countries (Benowitz et al. 2014).

GlaxoSmithKline says safety and efficacy trials of its Ebola vaccine will not be completed until the end of 2015 (Grogan 2014).

Financial contributions to fight Ebola are falling short. The UN has requested \$1 B to fight the disease, but so far, only 38% of these funds have been delivered (AFP 2014c).

Burundi, Kenya, Rwanda, Tanzania, and Uganda are sending 619 medical workers to West Africa to fight Ebola (AFP 2014d).

Belize will not issue visas to travelers from West African countries (Associated Press 2014r).

Illinois has opened an Ebola hotline. People can call 800-889-3931 for information about the disease (Nelson 2014).

### **October 18, 2014 (Saturday)**

The number of Ebola cases in Liberia is believed to be underreported. This is partly due to the confusion that normally surrounds large-scale, fast-moving events. But it also appears the government may be trying to downplay the scale of epidemic. Also, when families bury their dead privately, these victims are not recorded on official casualty lists (Townsend 2014).

In Dallas, people who had contact with Thomas Duncan are beginning to come out of their 21-day quarantines. One of the first people released was a man who visited Duncan's apartment in late September (Tsiaperas 2014).

The Transportation Security Administration says one of its agents gave Amber Vinson a routine pat down in Cleveland on October 13, 2014 (Kent 2014). The agent is now on paid leave and is self-monitoring for symptoms (Kent 2014). Separately,

Ohio will not allow people who are being monitored for Ebola in the state to travel internationally (Kesling 2014).

Oxfam says the Ebola outbreak could become the defining humanitarian disaster of the current generation. The agency also calls for more troops to be sent to West Africa to help with the outbreak (Ritchie 2014).

A highly critical internal WHO memo has been leaked to the press. The memo cites numerous flaws in the WHO's initial handling of the outbreak. The WHO is not commenting on the contents of the report (Alexander 2014a, b).

France has begun screening airline passengers arriving from Guinea for Ebola (Chazan 2014).

### **October 19, 2014 (Sunday)**

Spanish nursing assistant María Teresa Romero Ramos has tested negative for Ebola. A second test must also be negative before she can be declared Ebola-free (BBC 2014d).

Dr. Fred Hartman with Management Sciences for Health says the initial panic about Ebola in Monrovia, Liberia, has died down and there are no longer bodies lying in the streets. Even so, the disease is well entrenched in the population and many people are still dying (Kalter 2014).

Infected American doctor Ian Crozier has been released from Emory University Hospital (Loftus 2015; Reuters 2014n). Crozier was exceptionally sick during his illness. He spent 12 days on a ventilator and 24 days on dialysis (Sifferlin 2014).

Ebola survivor William Pooley has returned to Sierra Leone. He will begin working in Freetown on Monday (Gallagher 2014).

The Pentagon will train a 30-member Ebola response team to assist US hospitals with future Ebola cases (Leitsinger 2014).

Rwanda has begun screening passengers from the United States and Spain for Ebola (Stanglin 2014b).

### **October 20, 2014 (Monday)**

The Ebola outbreak in Nigeria is officially over. Two, 21-day incubation periods have passed without any additional cases developing in the country. Ebola is no longer considered to be in Nigeria. The WHO is optimistic about this success and says it shows Ebola can be contained (World Health Organization 2014k).

In Dallas, the observation period for 48 people who had contact with Thomas Duncan, including his fiancée Louise Troh, ended at midnight October 19–20, 2014 (Leitsinger and Jamieson 2014; Sickles 2014). It has been revealed that Troh and her family had been staying at the Catholic Diocese Conference Center in Oak Cliff, Texas (Schechter 2014). About 120 people are still under observation in Texas (Sickles 2014).

Hectic conditions make it difficult to track Ebola patients in Liberia. Relatives have a hard time finding loved ones and often do not know if a person is alive or dead. In one case, Linda Wilson visited Ebola wards in Monrovia for almost a month trying to find her friend, Barbara Bai. Wilson left Bai at Redemption Hospital in mid-September 2014. Patients are often transferred among facilities, and Bai was quickly lost in the system. There was no record of Bai at any medical center.

Eventually, Wilson located a nurse at the Island Clinic who knew about Bai. The nurse said Bai had died and been cremated. The communication problem is often exacerbated because healthcare workers do not want to give families bad news. Sometimes healthcare workers will reassure a family and say a person is ok, even though they know the person has died (Sieff 2014).

Food rations are being distributed to quarantined houses in the Waterloo community near Freetown, Sierra Leone. Ebola is rampant in the area, and at least 350 houses are under quarantine. Ration deliveries started Friday, October 17, 2014. Food packets contain enough food for 30 days (Associated Press 2014s).

The CDC has issued new PPE protocols for healthcare workers working with Ebola patients. The agency recommends all workers receive rigorous PPE training before they work with patients. The PPE needs to cover the entire body and no skin should be exposed. A designated monitor should also watch workers don and doff their PPE to help prevent errors and record any mistakes that do occur (Centers for Disease Control and Prevention 2014c).

The fear of Ebola is causing disruptions around the world. There are daily reports of suspected cases across the globe. There are also reports of people irrationally panicking when confronted with the threat of Ebola. In one recent incident in Zimbabwe, an ambulance crew ran away when they discovered that the woman they had been called to assist had been to Nigeria (AllAfrica 2014a).

Travelers arriving in Canada who do not disclose they have been in West Africa or have had contact with Ebola victims will face a \$300,000 fine and jail time (Wolter 2014). Separately, Air Canada will allow flight attendants to wear disposable gloves to help protect them from the virus (Marowits 2014).

The EU is trying to raise \$1.27 B to fight Ebola (Associated Press 2014t).

### **October 21, 2014 (Tuesday)**

Ebola cases are increasing rapidly in western Sierra Leone. On Monday, October 20, 2014, 49 new cases were reported in and around Freetown. In contrast, cases appear to be declining in other parts of the country. There were no new cases on Monday in Kenema or Kailahun (Associated Press 2014u).

At least two people were killed in an Ebola-sparked riot in Koindu, Sierra Leone. Healthcare workers tried to collect blood samples from the body of a 90-year-old woman who was thought to have died from Ebola. The woman's son is a youth leader in the community, and a gang of youths prevented the workers from approaching the body. When police arrived to help the healthcare workers, a riot started. During the violence, youths shouted "No more Ebola!" A curfew has been imposed on the town (AFP 2014e).

Decontamination crews filled 53 waste drums with potentially infected material from Amber Vinson's Dallas apartment (Saavedra 2014). Texas is preparing two Ebola biocontainment centers to handle future Texas Ebola cases. One is in Richardson, Texas, the other is at the University of Texas Medical Branch at Galveston (Schluz 2014).

Infected Norwegian doctor Silje Michalsen is now Ebola-free and has been released from Ullevål Hospital in Oslo (The Health Site 2014).

Bogoch et al. (2015) estimate that 2.8 Ebola-infected passengers may travel out of West Africa on commercial airlines each month. Most of these travelers will go to low- or middle-income countries (Bogoch et al. 2015).

There has been a significant drop in the number of air passengers traveling out of the Ebola-affected countries. Compared to last year, 51% fewer air passengers are flying out of Liberia, 66% less from Guinea, and 85% less from Sierra Leone (Bogoch et al. 2015).

The Department of Homeland Security says all travelers, even US citizens, coming to the United States from Guinea, Sierra Leone, or Liberia must enter the United States through one of the five airports screening for Ebola (Reuters 2014o). This regulation will begin Wednesday, October 22, 2014.

Ebola screening has begun at Britain's Gatwick airport (Guardian 2014a).

### October 22, 2014 (Wednesday)

Total cases: 9937 (721 new) Fatalities: 4877 (322 new)  
(World Health Organization 2014l)

Forty-five Ebola survivors were released from the Hastings Treatment Center near Freetown, Sierra Leone, today. This is the third mass release of patients from the site. Survivors proudly displayed their health certificates as they left the facility (Associated Press 2014v).

Placards are placed on quarantined West African houses. One such sign in Port Loko, Sierra Leone, reads [(transcribed from photograph credited to AP Photo/Michael Duff (DiLorenzo 2014)]:

*Police Order*

*Quarantined Home*

*Unauthorised [sic] should keep off*

NBC cameraman, Ashoka Mukpo, is now Ebola-free (Szabo 2014c). He has left the Nebraska treatment center and is on his way home to Rhode Island (Associated Press 2014w; Szabo 2014c). Amber Joy Vinson is also Ebola-free. She is still at Emory University Hospital (Winter 2014).

US Ebola Czar Ron Klain started working today (Associated Press 2014w).

Johnson & Johnson hopes to have a million doses of a two-step Ebola vaccine ready by next year. Johnson & Johnson is also in discussions with GlaxoSmithKline to see if the two companies can collaborate on vaccine development (Hirschler 2014).

Travelers arriving in the United States from West Africa are now required to monitor themselves for Ebola symptoms for 21 days and report their morning and evening temperatures to state or local health departments (McNeil and Shear 2014). Nine people in Connecticut have placed themselves in voluntary isolation and are being monitored for Ebola (Hartocollus 2014). They had all traveled to West Africa or had contact with people who had been in the region (Hartocollus 2014).

Insurance companies in the United States and Britain have begun to exclude Ebola from new insurance policies, especially from business policies that involve travel to West Africa (Reuters 2014p).

Rwanda has canceled its Ebola screenings for US and Spanish travelers (Associated Press 2014x).

### **October 23, 2014 (Thursday)**

There is a confirmed Ebola case in New York City. American doctor, Dr. Craig Spencer, has tested positive for Ebola in the city (Santora 2014a). The 33-year-old Spencer had been working with MSF in Guinea. He finished work on October 12, 2014, and returned to New York on October 17 (Santora 2014a; Wulforst and Malo 2014). Since his return, he has been self-monitoring for Ebola symptoms. Around 1100 h today, he developed a 100.3 °F fever, nausea, pain, and fatigue (Hartmann 2014; Karimi 2014). He was taken to Bellevue Hospital and quarantined (NYC Health + Hospitals 2014). Three additional people, including his fiancée, have also been isolated in Bellevue Hospital (Santora 2014a). On Wednesday, Spencer traveled in the city (Karimi 2014). He went jogging and bowling. He rode the subway (A, L, and 1 trains), took an Uber ride, and visited *The Gutter* bowling alley (Killough 2014; Santora 2014a). The bowling alley has closed for the night. Dr. Spencer's apartment on West 147th Street has also been quarantined (Hartmann 2014; Karimi 2014).

A 2-year-old girl [Fanta Condé] has tested positive for Ebola in the West African country of Mali (Guardian 2014b). The girl recently came to Mali from Guinea. She is currently in Fousseyni Dao hospital in Kayes, Mali (Höije 2014). Her symptoms include a 102.2° fever, cough, nose bleed, and bloody stools (World Health Organization 2014m). People who had contact with the girl have been isolated. Condé's grand aunt brought Condé to Mali on October 19, 2014. Her father, a healthcare worker, had died in Guinea, almost certainly of Ebola (World Health Organization 2014m; n). Condé and her aunt traveled extensively through Mali. They covered 700 miles, used at least one bus and three taxis, and visited Mali's capital, Bamako (World Health Organization 2014n). They eventually reached Kayes, Mali. On October 21, Condé was admitted to the hospital (World Health Organization 2014n). Given her extensive travel, there is significant concern that Condé may have exposed many people to Ebola.

Forty-three people in the town of Jenewonda, Liberia, are threatening to break quarantine because they have not been provided with food. The UN World Food Programme says provisions are on their way (Paye-Layleh and Roy-Macaulay 2014).

The EU has appointed Christos Stylianides as EU Ebola coordinator (Bendavid 2014).

Texas Health Presbyterian Hospital has suffered a 25% loss in revenue since it treated Thomas Duncan. ER visits are down 53%, and hospital occupancy has fallen from 428 to 337 patients (Murray 2014).

Workers at the two new Texas Ebola containment units are using Tabasco sauce to help learn how to treat patients. Mock patients are sprayed with Tabasco sauce,

and workers treat them in full PPE. Any exposure is detected by a tingling sensation on the skin (Lupkin 2014).

Nigeria will send 506 healthcare workers to West Africa to fight Ebola (Akingbule and Hinshaw 2014).

### **October 24, 2014 (Friday)**

CDC experts are working to track Dr. Craig Spencer's movement in New York City and identify potential contacts (James 2014). To help dispel the fear of Ebola in the city, New York Governor Andrew Cuomo says he will ride one of the subway lines taken by Dr. Spencer today (Killough 2014). Ebola survivor, Nancy Writebol, has donated plasma for Dr. Spencer (WSOCTV 2014).

Independent of the federal government, New York and New Jersey have implemented their own enhanced Ebola containment protocols for travelers arriving from West Africa (CBS New York and Associated Press 2014). Officials will assess incoming travelers and determine their risk of Ebola exposure. Those with the highest risk, such as people who had contact with an infected person, will be automatically quarantined for 21 days at a government-regulated facility (CBS New York and Associated Press 2014). Those with lower risk will be monitored. The protocols are new and controversial, but they have already been put into practice. A female healthcare worker [Kaci Hickox] arrived at Newark Liberty International Airport today after treating Ebola patients in West Africa [Sierra Leone] (CBS New York and Associated Press 2014). A legal order was issued to place her in quarantine. At a press conference, the governors of the two states said that the new rules were needed because voluntary quarantines have proven to be ineffective (CBS New York and Associated Press 2014).

Fanta Condé, the 2-year-old Ebola victim in Mali, has died (McNeil 2014; World Health Organization 2014n). The WHO is treating the Mali outbreak as a significant emergency (World Health Organization 2014m). It is sending additional experts to the country (Neuman 2014). Forty-three people in Mali have been identified as potential contacts and are being monitored (Berlinger et al. 2014). The bus that Condé traveled in was located and disinfected; the disinfection was carried out as soon as the bus was found, apparently right in the middle of the street (Höije 2014). The bus had a passenger list, complete with phone numbers, which is being used to search for additional contacts (Höije 2014).

Concerns about burial customs appear to be making Liberians less willing to go to Ebola clinics. Cremation violates the cultural norms of Liberia, but all Ebola victims in Monrovia are cremated. As a result, many Ebola patients are kept at home so they can be secretly buried if they die. At facilities outside of Monrovia, the bodies of Ebola victims are generally buried. But the burials occur away from relatives and often in unmarked graves. Thus, the dead cannot be visited and honored. Recently, only 351 of Liberia's 742 Ebola treatment beds were filled. The empty slots are thought to be caused by people avoiding clinics (Paye-Layleh 2014b).

Nina Pham is now Ebola-free and has been released from isolation (Associated Press 2014y). Soon after her release, she traveled to the White House and met with President Obama. The President hugged her (Worland 2014).

The 101st Airborne will take command of Operation *United Assistance* in Monrovia, Liberia, on Saturday, October 25, 2014 (Levy 2014).

Ethiopia will send 200 healthcare workers to West Africa to fight Ebola (Africa Report 2014).

China will donate \$81.7 M to fight Ebola (Liping 2014).

### **October 25, 2014 (Saturday)**

Illinois and Florida are following New York and New Jersey's lead and are implementing enhanced Ebola quarantine protocols (Chicago Tribune 2014; Flegenheimer et al. 2014). Any high-risk traveler who enters the states will be isolated for 21 days. Washington D.C., Maryland, and Virginia (all associated with Dulles International Airport) will not quarantine returning healthcare workers (Hsu and Henderson 2014). Aid groups are very concerned that imposing mandatory quarantines will deter healthcare workers from volunteering to work in the Ebola zone (Hsu and Henderson 2014).

The nurse quarantined in New Jersey has identified herself as Kaci Hickox. She was detained at Newark Liberty International Airport after returning from Sierra Leone. She had been treating Ebola patients in Sierra Leone with MSF. In a letter to the *Dallas Morning News*, Hickox described her arrival in the United States and her subsequent quarantine. She says she arrived at the airport about 1300 h on October 24, 2014. The trip from Sierra Leone had taken 2 days. When she told immigration she had come from Sierra Leone, she was taken to a quarantine office. She was there for 6 h. During this time, many people questioned her. At least one of the questioners was from the CDC. After 4 h, her temperature was taken with a forehead scanner. The reading was 101 °F. Hickox told the officer who took the temperature that she was very upset and the forehead reading was probably inaccurate. However, a more accurate oral temperature was not taken. Around 1900 h, she was told she would have to go to a hospital. Once there, her temperature was taken again, this time both orally and from the forehead. The oral reading was 98.6 °F, and the forehead reading was 101 °F. A blood test for Ebola came back negative (Hickox 2014).

Morgan Dixon, Dr. Spencer's fiancée, has been released from the hospital and has returned to the apartment she shares with Dr. Spencer. She will remain quarantined in the apartment until November 14, 2014. Medical workers will monitor her for symptoms (Rudra 2014).

Different aid groups in West Africa use different PPE. WHO workers use a gown, gloves, a partial hood, a surgical mask, and goggles. The eyes, nose, and mouth are fully covered, but a tiny amount of skin is exposed. MSF workers use much heavier gear that leaves no skin uncovered. The MSF gear provides greater protection but is very hot. Workers can only work in the MSF gear for 45–60 min. The partial skin exposure of the WHO gear is a significant weakness, but the PPE is relatively cheap, quicker to don and doff, and relatively cool (Beaubien 2014a).

Major General Gary J. Volesky, commander of the 101st Airborne, has assumed command of US operations in Liberia (CBS News 2014c).

Mauritania has closed its border with Mali due to the Ebola outbreak (Diarra and Diagana 2014).



**October 26, 2014 (Sunday)**

There were more than 400 new Ebola cases in Liberia last week (NPR 2014). However, some parts of Liberia are experiencing dramatic drops in case numbers. NPR correspondent, John Hamilton, describes the current conditions in Foya, Liberia:

*Earlier today I toured the treatment area, and they showed me the areas where, at one time, they had well over 100 patients with Ebola. Today there are three. So it is just a dramatic, dramatic change. And part of it is that there has been, since they set up the unit here, a place to take people who are very sick. That has meant that they are not at home where they're at risk of infecting other people. But they say the biggest change is probably that they have sent health workers out into the community, people from the community who know the people here, and they have told them that the people at Medecins Sans Frontieres are not the people bringing Ebola but the people who are here to help them with that. And they've taught them about hand washing about how not to have contact with bodies. And it has made just an enormous difference. (NPR 2014)*

Residents of Kayes, Mali, are worried about Ebola but are unclear how to avoid catching the disease. Some people are wearing gloves. Others are avoiding handshakes (Ahmed 2014).

Kaci Hickox, the quarantined US nurse, is planning to file a lawsuit questioning the constitutionality of her confinement (Al Jazeera 2014). She is currently in an isolation tent behind Newark University Hospital in New Jersey (Schwartz 2014).

Some healthcare workers at Bellevue Hospital in New York, where Dr. Spencer is being treated, are calling in sick to avoid coming to work (Djuric 2014).

US Ambassador to the UN, Samantha Power, has traveled to Guinea to try to increase international support for Ebola-fighting efforts (Jansing 2014).

The Pentagon is developing plane-portable isolation units that can transport infected personnel. The units will be mounted in C-17 or C-130 transport planes. They will carry 12 walking patients or 8 patients on stretchers (Zoroya 2014).

**October 27, 2014 (Monday)**

Blackmailers are threatening to spread Ebola in the Czech Republic unless they are given \$1.27 M in bitcoins. The blackmailers say that they possess “biological material” from an infected Liberian. Officials say the blackmailers are sophisticated in their use of communication technology, but doubt they have the scientific know-how to collect, transport, and disseminate Ebola (AFP 2014f).

Quarantined nurse Kaci Hickox will be allowed to return home to Maine (Barbaro and Santora 2014). Officials in New Jersey say once she reaches Maine, it will be up to Maine to monitor her. It is unclear if Maine is interested in doing so (Barbaro and Santora 2014). New York has modified its quarantine protocols for medical workers arriving from West Africa (Fox News 2014c). Instead of being isolated at a state facility, workers will be quarantined at home and receive twice-a-day monitoring. The state will reimburse quarantined individuals for any lost pay (Fox News 2014c).

In response to increased concern about Ebola in the United States, the CDC has released new recommendations for monitoring people who may have been exposed to the virus. The agency only recommends restricting the movements of high-risk

individuals. High-risk people are those who (1) had an infected needlestick, (2) had direct contact with infected body fluids without PPE, (3) processed infected body fluids without PPE, (4) had direct contact with an infected corpse without PPE, or (5) lived in the same house and provided care to an infected person. People at lower risk may have their movements controlled if it is recommended by public health authorities (Centers for Disease Control and Prevention 2014d). These recommendations are in sharp contrast to, and are far more lenient than, the mandatory 21-day quarantines being imposed by some states on anyone who worked with infected patients.

Due to the intense effort needed to care for Ebola patients, Bellevue Hospital in New York City is transferring some of its other ICU patients to New York University Langone Medical Center (Evans and Karni 2014). Bellevue is currently treating Dr. Craig Spencer. It also ran tests today on a 5-year-old boy with Ebola-like symptoms who had recently traveled to Guinea (Evans et al. 2014). The boy later tested negative for Ebola (Evans et al. 2014).

Mali has identified 111 people who had contact with Fanta Condé. At least 40 of the people have not been located (Monnier and Rihouay 2014).

Ten people in Spain, including María Teresa Romero Ramos's husband, have ended their 21-day observation periods and been released from Carlos III Hospital (Giles 2014).

The Bong County Ebola Treatment Unit in Liberia recently hosted a movie night for its Ebola patients. *The Lion King* was shown to the great delight of the patients. This is the first time a movie has been shown at the facility. 90% of the staff at the Bong County Treatment Unit are Liberian workers, 10% are international workers. The international workers include personnel from Canada, Chad, Ethiopia, France, Germany, Guinea, Iraq, Kenya, Spain, Uganda, and the United States (Sia 2014)

US troops returning from Liberia spend their 21-day quarantines in Vicenza, Italy. Eleven troops, including Major General Darryl Williams, are currently quarantined in Vicenza. Thirty more troops are expected to arrive today (CBS News 2014c).

EU Ebola Coordinator Christos Stylianides would like the number of treatment beds in West Africa to increase to 5000 as soon as possible (Casert 2014).

The University of Nebraska Medical Center and Nebraska Medicine are putting two free Ebola courses online. One is about Ebola in general, and the other describes Ebola treatment techniques (Infection Control Today 2014).

Murray State University in Kentucky announced today that it will defer West African applications. West Africa students may still apply to the school, but they will not be admitted until at least the fall of 2015 (Associated Press 2014z).

Australia will no longer issue visas to travelers from Ebola-affected countries (AFP 2014g).

### **October 28, 2014 (Tuesday)**

Some West African observers think the WHO and CDC assessments of the Ebola situation are overly pessimistic (AllAfrica 2014b). In Liberia, for example, the

number of Ebola cases seems to be falling and many treatment centers have large numbers of open beds (AllAfrica 2014b; Fink 2014). The Liberian Red Cross also reports it is collecting fewer bodies than before (AFP 2014h).

Local nurses treating Ebola patients in West Africa are often shunned by their communities. Many end up living at their hospitals. Nurse Joya Koroma, a health-care worker at the Hastings Treatment Center in Sierra Leone, says when landlords find out that their tenants were nurses, they were are longer willing to rent to them (Styles 2014).

Amber Vinson has been released from Emory University Hospital (Achenbach and Dennis 2014).

After her visit to Sierra Leone, US Ambassador Samantha Power tweeted that safe burials in Freetown have gone from 30% to nearly 100% (Power 2014).

The United States says it will allow some infected foreign aid workers into the United States for treatment if needed. Officials say that it would be logical for the United States to treat foreign aid workers who cannot be medivacked back to their own country (Dinan 2014).

### October 29, 2014 (Wednesday)

Total cases: 13,703 (3766 new) Fatalities: 4922 (45 new)  
(World Health Organization 2014o)

The WHO has updated its Ebola data. This makes it look like there was a massive rise in Ebola cases over the last week. However, most of the 3766 “new” cases were earlier cases that had not been included in the database (World Health Organization 2014o).

The Ebola outbreak appears to be slowing in Liberia (Sun et al. 2014; World Health Organization 2014o). The number of new cases in Liberia is stabilizing or falling (World Health Organization 2014o).

Liberians have begun 3 days of fasting and prayer aimed at ending the Ebola outbreak (Reuters 2014q).

Schieffelin et al. (2014) describe the clinical features of Ebola during the current outbreak. They examined the records of 106 Ebola patients treated at Kenema Government Hospital in Sierra Leone. Younger people had a higher survival rate than older people. The mortality rate for patients under 21 was 57%, compared to 94% for patients over 45. Patients with fatal outcomes had higher temperatures on admission than patients who survived. Patients with higher viral loads ( $>10^7$  ml<sup>-1</sup>) had higher mortality than patients with lower viral loads ( $<10^5$  ml<sup>-1</sup>) (Schieffelin et al. 2014).

The Disasters Emergency Committee, a group composed of the United Kingdom’s 13 top charity organizations, has launched an appeal for help with the Ebola outbreak. This is the first time the committee has requested help for a disease outbreak (Pudelek 2014).

Kaci Hickox is now at her home in Fort Kent, Maine (Mathis-Lilley 2014). She says she will stop staying in isolation as of Thursday, October 30, 2014 (Alman

2014). The governor of Maine Paul LePage is trying to obtain the legal authority to keep her isolated. He says he will use the state police to enforce the quarantine (Alman 2014). Separately, California has ordered a 21-day quarantine for people returning from West Africa who had contact with infected patients (Serna 2014).

Defense Secretary Chuck Hagel has announced that all US troops returning from West Africa will be required to undergo a 21-day quarantine (Burns 2014).

### **October 30, 2014 (Thursday)**

Staff at an Ebola call center in Freetown, Sierra Leone, often field heartbreaking phone calls. One staff member received a call from a woman whose mother, father, and cousin had all died from Ebola. She was calling because their bodies had not been collected by burial teams. The next day the woman called back. She was crying and said that the bodies had still not been collected. Another worker got a call about an abandoned 2-year-old child. The child's mother and father were both dead, and the child was infected. The toddler kept knocking on a neighbor's door and crying for his father (O'Carroll 2014c).

All ambulance drivers in Kailahun, Sierra Leone, wear full PPE. They started doing this in June 2014 after two drivers died from Ebola. Because of the long distances, some ambulances have to travel 4 h or more and there are concerns that ambulance rides may be overly stressful for Ebola patients. Indeed, many patients die on their way to treatment centers (Wonacott 2014).

The state of New York is promising to provide employee protection and to pay and provide healthcare benefits to healthcare workers who are quarantined after returning from West Africa (Santora 2014b). It is hoped this will make workers more willing to comply with quarantine orders.

Researchers who have recently worked in West Africa will not be allowed to attend the American Society of Tropical Medicine and Hygiene's conference in New Orleans. The ban was imposed by the Louisiana Department of Health and Hospitals. The agency says anyone who has been in Guinea, Sierra Leone, or Liberia during the past 21 days should not travel to New Orleans. If they do, they could be quarantined (Beaubien 2014b).

China is sending an elite military unit to Liberia to build a 100-bed treatment facility. The unit has experience from the SARS outbreak (Rajagopalan 2014).

### **October 31, 2014 (Friday)**

Total cases: 13,567 (−136 new)    Fatalities: 4951 (29 new)  
(World Health Organization 2014p)

The WHO continues to adjust its Ebola figures. This has led to a drop in official case numbers.

Fanta Condé, the 2-year-old Ebola victim in Mali, is believed to have had contact with 141 people. Fifty-seven of these people have not yet been located. Two known contacts have developed Ebola-like symptoms and are being tested (Miles 2014).

A new 200-bed treatment center has opened in the Congo Town community of Monrovia, Liberia. With its opening, the JFK Medical Center treatment center has closed (Paye-Layleh 2014c).

The WHO has updated its PPE recommendations. The agency says PPE should cover the mouth, nose, eyes, and hands. Face cover, protective foot wear, gowns or coveralls, and head cover are essential (World Health Organization 2014q).

A Maine judge has ruled against a strict quarantine for Kaci Hickox. The judge says the current fear of Ebola in the United States is not entirely rational. Hickox is, however, required to continue monitoring herself for symptoms, report any symptoms that occur, and coordinate travel plans with health officials (Page 2014).

Canada will no longer process the visa applications for residents of countries with widespread and intense Ebola transmission (Associated Press 2014aa). “Widespread and intense transmission” is a category designated by the WHO. At present, these are the countries of Guinea, Sierra Leone, and Liberia (World Health Organization 2014p).

## References

- 7 Online (2014) CDC remove 2 from Newark flight after possible Ebola scare. 7 Online. <http://7online.com/health/cdc-investigating-possible-ebola-scare-on-newark-flight-/336774/>. Accessed 4 Oct 2014
- ABC 13 Eyewitness News (2014) Text of reverse 911 call neighbors of Ebola patient received. ABC 13 Eyewitness News. <http://abc13.com/news/text-of-reverse-911-call-neighbors-of-ebola-patient-received/347260/>. Accessed 20 May 2014
- ABC News (2014a) Ugandan doctor with Ebola treated in Germany. ABC News. <http://abcnews.go.com/Health/wireStory/ugandan-doctor-ebola-treated-germany-25937422>. Accessed 3 Oct 2014
- ABC News (2014b) Airline cabin cleaners strike over Ebola exposure fears. ABC News. <http://abcnews.go.com/Health/airline-cabin-cleaners-strike-ebola-exposure-fears/story?id=26066160>. Accessed 9 Oct 2014
- ABC News (2014c) Nurse who contracted Ebola called CDC before flight, official says. ABC News. <http://abcnews.go.com/Health/nurse-contracted-ebola-called-cdc-flight-official/story?id=26232809>. Accessed 28 May 2017
- Achenbach J (2014) WHO: Ebola spreading in W. Africa, threatens Ivory Coast; some areas see fewer cases. The Washington Post. [https://www.washingtonpost.com/news/to-your-health/wp/2014/10/14/who-ebola-spreading-in-w-africa-threatens-ivory-coast-some-areas-see-fewer-cases/?tid=a\\_inl&utm\\_term=.3973041f84fd](https://www.washingtonpost.com/news/to-your-health/wp/2014/10/14/who-ebola-spreading-in-w-africa-threatens-ivory-coast-some-areas-see-fewer-cases/?tid=a_inl&utm_term=.3973041f84fd). Accessed 28 May 2017
- Achenbach J, Dennis B (2014) Amber Vinson Dallas nurse leaves hospital after Ebola cure. The Washington Post. [http://www.washingtonpost.com/national/health-science/amber-vinson-dallas-nurse-leaving-hospital-after-ebola-cure/2014/10/28/d37e7fae-5e95-11e4-8b9e-2ccdac31a031\\_story.html](http://www.washingtonpost.com/national/health-science/amber-vinson-dallas-nurse-leaving-hospital-after-ebola-cure/2014/10/28/d37e7fae-5e95-11e4-8b9e-2ccdac31a031_story.html). Accessed 28 Oct 2014
- AFP (2014a) UN quarantines 41 personnel in Ebola-hit Liberia. AFP, News 18. <http://ibnlive.in.com/news/un-quarantines-41-personnel-in-ebolahit-liberia/505348-17.html>. Accessed 10 Oct 2014
- AFP (2014b) Nurse who treated French Ebola patient ‘in hospital with fever’. AFP, NDTV. <http://www.ndtv.com/world-news/nurse-who-treated-french-ebola-patient-in-hospital-with-fever-680359>. Accessed 10 Mar 2017

- AFP (2014c) UN Ebola appeal gets just 38% of cash needed. AFP, The Daily Star. <http://www.dailystar.com.lb/News/World/2014/Oct-17/274454-un-ebola-appeal-gets-just-38-of-cash-needed.ashx#axzz3GPOlx5rR>. Accessed 17 Oct 2014
- AFP (2014d) East Africa to send 600 health workers for Ebola fight. AFP, Yahoo News UK. <https://uk.news.yahoo.com/east-africa-send-600-health-workers-ebola-fight-094254871.html#7bKPmaE>. Accessed 17 Oct 2014
- AFP (2014e) Two killed after Ebola tests spark riot in Sierra Leone. AFP, The Malay Mail. <http://www.themalaymailonline.com/world/article/two-killed-after-ebola-tests-spark-riot-in-sierra-leone>. Accessed 22 Oct 2014
- AFP (2014f) Blackmailers threaten Czechs with Ebola outbreak. AFP, Yahoo News. <https://uk.news.yahoo.com/blackmailers-threaten-czechs-ebola-outbreak-174554858.html#HOe7z7V>. Accessed 7 Jun 2017
- AFP (2014g) Australia: no immigration from Ebola nations. AFP, Al Jazeera. <http://www.aljazeera.com/news/asia-pacific/2014/10/australia-no-immigration-from-ebola-nations-2014102783935140258.html>. Accessed 7 Jun 2017
- AFP (2014h) Red Cross: fewer bodies in Liberian capital signals Ebola waning. AFP, News Max. <http://www.newsmax.com/Newsfront/Health-Ebola-Liberia/2014/10/28/id/603516/>. Accessed 8 Jun 2017
- Africa Report (2014) 200 Ethiopian volunteers to join West Africa Ebola fight. The Africa Report. <http://www.theafricareport.com/East-Horn-Africa/200-ethiopian-volunteers-to-join-west-africa-ebola-fight.html>. Accessed 24 Oct 2014
- Agaba J (2014) Another Ugandan doctor dies of Ebola. New Vision. [http://www.newvision.co.ug/new\\_vision/news/1311979/ugandan-doctor-dies-ebola](http://www.newvision.co.ug/new_vision/news/1311979/ugandan-doctor-dies-ebola). Accessed 16 May 2017
- Ahmed B (2014) Mali rushes to track contacts after toddler becomes 1st Ebola death after long journey. Associated Press, Greenfield Reporter. <http://www.greenfieldreporter.com/view/story/f2157299bb3b4156be426fe291bff8b0/AF--Mali-Ebola>. Accessed 26 Oct 2014
- Akingbule G, Hinshaw D (2014) Nigeria to send medics to West African neighbors stricken with Ebola. Wall Str J. <http://online.wsj.com/articles/nigeria-to-send-medics-to-west-african-neighbors-stricken-with-ebola-1414065052>. Accessed 23 Oct 2014
- Al Jazeera (2014) Nurse quarantined over Ebola fears plans to file lawsuit. Al Jazeera. <http://america.aljazeera.com/articles/2014/10/26/ebola-power-fauci.html>. Accessed 27 Oct 2014
- Alexander B (2014) WHO not commenting on critical leaked Ebola report. USA Today. <http://www.usatoday.com/story/news/world/2014/10/18/ebola-report-world-health-organization-leaked/17502135/>. Accessed 18 Oct 2014
- Alexander H (2014) Spanish nurse: 'I have no idea how I contracted Ebola'. The Telegraph. <http://www.telegraph.co.uk/news/worldnews/ebola/11147947/Spanish-nurse-I-have-no-idea-how-I-contracted-Ebola.html>. Accessed 12 Mar 2017
- AllAfrica (2014a) Zimbabwe: Ebola – ambulance crew flees Kwekwe scare. AllAfrica, New Zimbabwe. <http://allafrica.com/stories/201410210131.html>. Accessed 20 Oct 2014
- AllAfrica (2014b) Liberia: with all our might Liberians, Guineans and Sierra Leoneans must fight WHO and CDC pessimism! AllAfrica, Daily Observer. <http://allafrica.com/stories/201410290989.html>. Accessed 28 Oct 2014
- Alman A (2014) Maine Gov. Paul LePage sends state police to enforce Ebola quarantine. The Huffington Post. [http://www.huffingtonpost.com/2014/10/29/paul-lepage-ebola-quarantine\\_n\\_6069740.html](http://www.huffingtonpost.com/2014/10/29/paul-lepage-ebola-quarantine_n_6069740.html). Accessed 29 Oct 2014
- Altman A (2014) 4 people quarantined over Ebola fears about 100 being monitored. Time. <http://time.com/3456050/ebola-texas/>. Accessed 2 Oct 2014
- Aminu A (2014) Ebola panic as Nigerian dies in a US bound flight. Daily Times. <http://www.dailytimes.com.ng/article/ebola-panic-nigerian-dies-us-bound-flight>. Accessed 17 Oct 2014
- Associated Press (2014a) Quarantined woman says she's tired of being "locked up". CBS DFW. <http://dfw.cbslocal.com/2014/10/02/quarantined-woman-says-shes-tired-of-being-locked-up/>. Accessed 2 Oct 2014

- Associated Press (2014b) Fort Bragg to send 120 soldiers to fight Ebola. Fox Carolina, AP. <http://www.foxcarolina.com/story/26701058/fort-bragg-to-send-120-soldiers-to-fight-ebola>. Accessed 3 Oct 2014
- Associated Press (2014c) Colorado soldiers going to Africa to combat Ebola. 9News, AP. <http://www.9news.com/story/news/local/2014/10/03/colorado-soldiers-going-to-africa-to-combat-ebola/16696617/>. Accessed 3 Oct 2014
- Associated Press (2014d) U.S. military to put up tent at Liberia Ebola clinic. Associated Press, The Mining Journal. <http://www.miningjournal.net/page/content.detail/id/627702/US-military-to-put-up-tent-at-Liberia-Ebola-clinic.html?isap=1&nav=5016>. Accessed 6 Oct 2014
- Associated Press (2014e) 3 people quarantined after nurse gets Ebola in Spain. Associated Press, New York Post. <http://nypost.com/2014/10/07/3-people-quarantined-after-nurse-gets-ebola-in-spain/>. Accessed 15 May 2017
- Associated Press (2014f) Atlanta airport gives Ebola info to some travelers. Associated Press, The Gazette. <http://gazette.com/atlanta-airport-gives-ebola-info-to-some-travelers/article/feed/165226>. Accessed 15 May 2017
- Associated Press (2014g) Liberian nurses threaten strike amid Ebola epidemic. Associated Press, CBS News. <http://www.cbsnews.com/news/ebola-outbreak-liberian-health-care-workers-threaten-strike/>. Accessed 12 Oct 2014
- Associated Press (2014h) Dallas nurse caught Ebola despite safety gear, can't pinpoint breach. Associated Press, NPR. <http://www.npr.org/2014/10/13/355970885/dallas-nurse-caught-ebola-despite-safety-gear-cant-pinpoint-breach>. Accessed 13 Oct 2014
- Associated Press (2014i) Liberia avoids mass hospital strike amid Ebola. Associated Press, Star Advertiser. <http://www.staradvertiser.com/news/apnews/international/article/?ID=7867231>. Accessed 14 Oct 2014
- Associated Press (2014j) Friends raising money for journalist with Ebola. Associated Press, Times Union. <http://www.timesunion.com/news/article/Friends-raising-money-for-journalist-with-Ebola-5819210.php>. Accessed 13 Oct 2014
- Associated Press (2014k) Soldier gets Ebola but is not among peacekeepers. Associated Press, WSOC. <http://www.wsoc.com/news/ap/top-news/doctors-without-borders-loses-9-medics-to-ebola/nhh5M/>. Accessed 14 Oct 2014
- Associated Press (2014l) Guinea calls on retired doctors to fight Ebola. Associated Press, My San Antonio. <http://www.mysanantonio.com/news/world/article/Guinea-calls-on-retired-doctors-to-fight-Ebola-5824450.php>. Accessed 14 Oct 2014
- Associated Press (2014m) German hospital: UN worker dies of Ebola. Associated Press, Yahoo News. <http://news.yahoo.com/german-hospital-un-worker-dies-ebola-082155030.html>. Accessed 14 Oct 2014
- Associated Press (2014n) Crews decontaminate Dallas hospital workers apartment, 2nd employee contracted Ebola. Associated Press, The Republic. <http://www.therepublic.com/view/story/868683011eaa4c8ea3c048bb66bd70de/TX--Ebola-Apartment>. Accessed 15 Oct 2014
- Associated Press (2014o) Ohio bridesmaids of nurse with Ebola quarantined, shop closes. Associated Press, Daily Herald. <http://www.dailyherald.com/article/20141017/news/141018398/>. Accessed 17 Oct 2014
- Associated Press (2014p) Officials move to keep Dallas health workers home. Associated Press, WHCC. <http://www.whcc.com/article/stories/S3592970.shtml?cat=10039>. Accessed 16 Oct 2014
- Associated Press (2014q) Spain tests 3 with fever for Ebola isolates jet. Associated Press, Townhall. <http://townhall.com/news/world/2014/10/16/spain-ebola-patient-improving-1--to-be-tested-n1905923>. Accessed 16 Oct 2014
- Associated Press (2014r) Ebola travel restrictions vary from country to country. Associated Press, Fox News. <http://www.foxnews.com/health/2014/10/18/ebola-travel-restrictions-vary-from-country-to-country.html>. Accessed 31 May 2017

- Associated Press (2014s) Liberia president says Ebola has brought country to 'a standstill.' Associated Press, Fox News. <http://www.foxnews.com/world/2014/10/20/liberia-president-says-ebola-has-brought-country-to-standstill.html>. Accessed 31 May 2017
- Associated Press (2014t) EU seeks \$1.27 billion in Ebola aid for W. Africa. Associated Press, KTVN. <http://www.ktvn.com/story/26827485/eu-seeks-127-billion-in-ebola-aid-for-w-africa>. Accessed 20 Oct 2014
- Associated Press (2014u) Ebola cases rising sharply in western Sierra Leone. Associated Press, Fox News. <http://www.foxnews.com/world/2014/10/21/ebola-cases-rising-sharply-in-western-sierra-leone.html>. Accessed 2 Jun 2017
- Associated Press (2014v) Dozens released Ebola free from Sierra Leone site. Associated Press, McDowell News. [http://www.mcdowellnews.com/news/world/ap/dozens-released-ebola-free-from-sierra-leone-site/article\\_8fb56bb7-f8ef-538b-b009-7a699224e4b0.html](http://www.mcdowellnews.com/news/world/ap/dozens-released-ebola-free-from-sierra-leone-site/article_8fb56bb7-f8ef-538b-b009-7a699224e4b0.html). Accessed 22 Oct 2014
- Associated Press (2014w) US journalist recovers; Ebola 'czar' gets to work. Associated Press, Midland Daily News. [http://www.ourmidland.com/news/world/us-journalist-recovers-ebola-czar-gets-to-work/article\\_ec69b617-c004-5c67-b913-28b00dd68a2e.html](http://www.ourmidland.com/news/world/us-journalist-recovers-ebola-czar-gets-to-work/article_ec69b617-c004-5c67-b913-28b00dd68a2e.html). Accessed 22 Oct 2014
- Associated Press (2014x) Rwanda cancels Ebola screenings for people coming from the US. Associate Press, The Daily Mail. <http://www.dailymail.co.uk/news/article-2804600/Rwanda-cancels-Ebola-screenings-US-Spain.html>. Accessed 23 Oct 2014
- Associated Press (2014y) Dallas nurse Ebola free leaving hospital Friday. Associated Press, KOIN. <http://koin.com/2014/10/24/dallas-nurse-ebola-free-leaving-hospital-friday/>. Accessed 24 Oct 2014
- Associated Press (2014z) Murray State deferring applications from Africa. Associated Press, Courier Press. [http://www.courierpress.com/gleaner/news/murray-state-deferring-applications-from-africa\\_32058331](http://www.courierpress.com/gleaner/news/murray-state-deferring-applications-from-africa_32058331). Accessed 27 Oct 2014
- Associated Press (2014aa) Canada restricts visas amid Ebola scare. Associated Press, USA Today. <https://www.usatoday.com/story/news/world/2014/10/31/canada-visas-ebola/18273133/>. Accessed 14 Jun 2017
- Awareness Times (2014) Defence Minister Major (rtd) Alfred Palo Conteh takes over from Health Minister Dr. Abu-Bakarr Fofanah in briefing the President on the progress being made in fighting Ebola disease. Awareness Times. <http://news.sl/drwebsite/exec/view.cgi?archive=10&num=26433>. Accessed 13 Jun 2017
- Awoko (2014) Sierra Leone news: Gambia Bird resumes twice-weekly flights to Freetown. Awoko. <http://awoko.org/2014/10/07/sierra-leone-news-gambia-bird-resumes-twice-weekly-flights-to-freetown/>. Accessed 7 Oct 2014
- Barbaro M, Santora M (2014) Nurse held in Ebola quarantine will be allowed to go home Christie says. New York Times. [http://www.nytimes.com/2014/10/28/nyregion/nurse-in-newark-to-be-allowed-to-finish-ebola-quarantine-at-home-christie-says.html?\\_r=0](http://www.nytimes.com/2014/10/28/nyregion/nurse-in-newark-to-be-allowed-to-finish-ebola-quarantine-at-home-christie-says.html?_r=0). Accessed 27 Oct 2014
- Barbash F (2014) NBC says cameraman tested positive for Ebola. Entire crew to be flown home. The Washington Post. <http://www.washingtonpost.com/news/morning-mix/wp/2014/10/02/nbc-says-cameraman-tested-positive-for-ebola-entire-crew-to-be-flown-home/>. Accessed 2 Oct 2014
- BBC (2014a) Ebola outbreak: 'five infected every hour' in Sierra Leone. BBC. <http://www.bbc.com/news/world-africa-29453755>. Accessed 2 Oct 2014
- BBC (2014b) Ebola screening for NHS 111 calls announced. BBC. <http://www.bbc.com/news/uk-29591561>. Accessed 12 Oct 2014
- BBC (2014c) Ebola Royal Navy prepare RFA Argus to sail to W Africa. BBC. <http://www.bbc.com/news/uk-29617647>. Accessed 14 Oct 2014
- BBC (2014d) Ebola crisis Spanish nurse tests negative for virus. BBC. <http://www.bbc.com/news/world-europe-29683616>. Accessed 19 Oct 2014



- Beaubien J (2014a) In Liberia, how to gear for Ebola still an issue. NPR. <http://www.npr.org/2014/10/25/358898029/in-liberia-how-to-gear-for-ebola-still-an-issue>. Accessed 25 Oct 2014
- Beaubien J (2014b) Ebola researchers banned from medical meeting in New Orleans. NPR, WXPB. <http://wxpr.org/post/ebola-researchers-banned-medical-meeting-new-orleans>. Accessed 30 Oct 2014
- Begley S, Abutaleb Y (2014) Cities, states scramble after Dallas's Ebola missteps expose planning gaps. Reuters. <http://in.reuters.com/article/2014/10/12/health-ebola-planning-idINL2N0S70R220141012>. Accessed 12 Oct 2014
- BenDavid N (2014) EU appoints Ebola response coordinator. The Wall Street Journal. <http://online.wsj.com/articles/eu-appoints-ebola-response-coordinator-1414100467>. Accessed 23 Oct 2014
- Bennett M (2014) Spain isolates 3 more, puts 52 under observation, as Spaniards report botched Ebola crisis response. The Spain Report. <https://www.thespainreport.com/11672/spain-isolates-three-puts-52-ebola-observation-spaniards-report-botched-crisis-response/>. Accessed 7 Oct 2014
- Benowitz I, Ackelsberg J, Balter SE et al (2014) Surveillance and preparedness for Ebola virus disease – New York City, 2014. *Morb Mortal Wkly Rep* 63:934–936
- Berlinger J, Smith-Spark L, Hoije K (2014) Reports: first confirmed Ebola patient in Mali dies. CNN. <http://www.cnn.com/2014/10/24/world/africa/mali-ebola/>. Accessed 24 Oct 2014
- Berman M (2014) Ebola stricken health care worker flew on a passenger plane a day before being diagnosed. The Washington Post. <http://www.washingtonpost.com/news/post-nation/wp/2014/10/15/ebola-stricken-nurse-flew-on-a-passenger-plane-a-day-before-being-diagnosed/>. Accessed 15 Oct 2014
- Bogoch II, Creatore MI, Cetron MS et al (2015) Assessment of the potential for international dissemination of Ebola virus via commercial air travel during the 2014 west African outbreak. *Lancet* 385:29–35
- Boseley S (2014a) Ebola vaccine trialled in Mali. The Guardian. <http://www.theguardian.com/world/2014/oct/10/ebola-vaccine-mali-trialled-health-workers>. Accessed 10 Oct 2014
- Boseley S (2014b) WHO warns 10,000 new cases of Ebola a week are possible. The Guardian. <https://www.theguardian.com/world/2014/oct/14/who-new-ebola-cases-world-health-organisation>. Accessed 28 May 2017
- Botelho G, Smith-Spark L, Maestro LP (2014) Hospital worker: Spaniard exposed in ER for 8 hours after positive Ebola test. CNN. <http://www.cnn.com/2014/10/08/world/europe/ebola-spain/>. Accessed 14 May 2017
- Brinded L (2014) Ebola outbreak: hundreds of dead farmers leads to 24% jump in food prices. International Business Times. <http://www.ibtimes.co.uk/ebola-outbreak-hundreds-dead-farmers-leads-24-jump-food-prices-1470570>. Accessed 31 May 2014
- Brumfield B, Levs J (2014) Spain has outbreak's 1st known case of contracting Ebola outside of Africa. CNN. [http://www.cnn.com/2014/10/06/health/ebola-us/index.html?hpt=hp\\_t2](http://www.cnn.com/2014/10/06/health/ebola-us/index.html?hpt=hp_t2). Accessed 6 Oct 2014
- Burns R (2014) Pentagon orders 21-day Ebola quarantine for troops. Associated Press, ABC News. <http://abcnews.go.com/Politics/wireStory/hagel-approves-21-day-ebola-quarantine-troops-26541976?page=2>. Accessed 29 Oct 2014
- Business Journals (2014) Dallas residents flock to Twitter to discuss Ebola. The Business Journals. <http://www.bizjournals.com/dallas/news/2014/10/01/twitterverse-a-sample-of-the-reaction-to-the-ebola.html>. Accessed 1 Oct 2014
- Casert R (2014) EU wants massive increase in staff to fight Ebola. Associated Press, NBC 29. <http://www.nbc29.com/story/27025247/eu-wants-massive-increase-in-staff-to-fight-ebola>. Accessed 27 Oct 2014
- Casule K (2014) Macedonia checking for Ebola after Briton dies, hotel sealed off. Reuters. <http://in.reuters.com/article/2014/10/09/health-ebola-macedonia-idINKCN0HY24220141009>. Accessed 9 Oct 2014

- CBS DC and Associated Press (2014a) Report: 75 hospital workers who came in contact with Ebola patient placed on no-fly list. CBS DC. <http://washington.cbslocal.com/2014/10/17/report-75-hospital-workers-who-came-in-contact-with-ebola-patient-placed-on-no-fly-list/>. Accessed 17 Oct 2014
- CBS DC and Associated Press (2014b) Ebola scare at Pentagon after woman who was recently in Africa vomits on tour bus. CBS DC. <http://washington.cbslocal.com/2014/10/17/ebola-scare-at-pentagon-after-woman-who-was-recently-in-africa-vomits-on-tour-bus/>. Accessed 17 Oct 2014
- CBS DFW (2014a) Uncertainty continues at apartments where Ebola patient stayed. CBS DFW. <http://dfw.cbslocal.com/2014/10/01/uncertainty-continues-at-apartments-where-ebola-patient-stayed/>. Accessed 1 Oct 2014
- CBS DFW (2014b) Family of U.S. Ebola carrier moves into donated home. CBS DFW. <http://dfw.cbslocal.com/2014/10/03/family-of-u-s-ebola-carrier-moves-into-donated-home/>. Accessed 3 Oct 2014
- CBS DFW (2014c) Dallas County deputy recounts Ebola scare. CBS DFW. <http://dfw.cbslocal.com/2014/10/10/dallas-county-deputy-recounts-ebola-scare/>. Accessed 10 Oct 2014
- CBS DFW (2014d) CDC plane safely transports Ebola patient Nina Pham to Maryland. CBS DFW. <http://dfw.cbslocal.com/2014/10/16/presbyterian-hospital-prepares-to-move-ebola-patient-nina-pham/>. Accessed 28 May 2017
- CBS New York and Associated Press (2014) New York, New Jersey set up mandatory quarantine requirement amid Ebola threat. CBS New York, Associated Press. <http://newyork.cbslocal.com/2014/10/24/new-york-new-jersey-set-up-mandatory-quarantine-requirement-amid-ebola-threat/>. Accessed 24 Oct 2014
- CBS News (2014a) Ebola could cost global economy \$32.6B, World Bank says. CBS News, CBC News. <http://www.cbc.ca/news/business/ebola-could-cost-global-economy-32-6b-world-bank-says-1.2792485>. Accessed 8 Oct 2014
- CBS News (2014b) Dallas officials vow to care for Ebola patient Nina Pham's dog. CBS News. <http://www.cbsnews.com/news/dallas-officials-vow-to-care-for-ebola-patient-nina-phams-dog/>. Accessed 25 May 2017
- CBS News (2014c) U.S. soldiers returning from Liberia monitored for Ebola in Italy. CBS News. <http://www.cbsnews.com/news/ebola-outbreak-u-s-soldiers-returning-from-liberia-placed-in-isolation-in-italy/>. Accessed 27 Oct 2014
- Centers for Disease Control and Prevention (2014a) Enhanced Ebola screening to start at five U.S. airports and new tracking program for all people entering U.S. from Ebola-affected countries. 8 Oct 2014
- Centers for Disease Control and Prevention (2014b) CDC Expands Passenger Notification. 16 Oct 2014
- Centers for Disease Control and Prevention (2014c) Tightened guidance for U.S. healthcare workers on personal protective equipment for Ebola. 20 Oct 2014
- Centers for Disease Control and Prevention (2014d) Interim U.S. guidance for monitoring and movement of persons with potential Ebola virus exposure. 27 Oct 2014
- Charlton C (2014) Liberian officials accused of muzzling reporters trying to draw worldwide attention to Ebola crisis after banning journalists from health clinics. The Daily Mail. <http://www.dailymail.co.uk/news/article-2789350/liberian-officials-accused-muzzling-reporters-trying-draw-worldwide-attention-ebola-crisis-banning-journalists-health-clinics.html>. Accessed 12 Oct 2014
- Chazan D (2014) France introduces Ebola screening at airport. The Telegraph. <http://www.telegraph.co.uk/news/worldnews/ebola/11171620/France-introduces-Ebola-screening-at-airport.html>. Accessed 31 May 2017
- Chicago Tribune (2014) Illinois orders mandatory Ebola quarantine for high-risk travelers. Chicago Tribune. <http://www.chicagotribune.com/news/local/breaking/chi-illinois-ebola-quarantine-20141025-story.html>. Accessed 25 Oct 2014

- Chuck E (2014) National survey of nurses shows heightened Ebola concerns. NBC News. <http://www.nbcnews.com/storyline/ebola-virus-outbreak/national-survey-nurses-shows-heightened-ebola-concerns-n224491>. Accessed 13 Oct 2014
- Cooper C, Morris N, Walker T (2014) Ebola outbreak: Britain sending 750 soldiers and medics to Western Africa. The Independent. <http://www.independent.co.uk/life-style/health-and-families/health-news/ebola-outbreak-britain-sends-750-soldiers-and-medics-to-western-africa-9783010.html>. Accessed 16 May 2017
- Cowell A (2014) Health worker who may have had contact with Ebola is on a cruise ship. New York Times. [http://www.nytimes.com/2014/10/18/us/ebola-cruise-ship-dallas.html?\\_r=0](http://www.nytimes.com/2014/10/18/us/ebola-cruise-ship-dallas.html?_r=0). Accessed 17 Oct 2014
- Cutlack G (2014) UK government orders 500,000 Ebola protection suits. Gizmodo. <http://www.gizmodo.co.uk/2014/10/uk-government-orders-500000-ebola-protection-suits/>. Accessed 13 Oct 2014
- Dallas News (2014) UPDATE: Ebola patients family being moved as officials lower number of potential contacts from 100 to 50. Dallas News. <http://thescoopblog.dallasnews.com/2014/10/hazmat-cleanup-crew-welcomes-chance-to-clean-up-ebola-with-open-arms.html/>. Accessed 3 Oct 2014
- Dastin J (2014) U.S. airline group to meet with health officials on Ebola. The Star, Reuters. <http://www.thestar.com.my/News/World/2014/10/07/US-airline-group-to-meet-with-health-officials-on-Ebola/>. Accessed 6 Oct 2014
- Day PK (2014) Media react to NBC News' Dr. Nancy Snyderman violating Ebola quarantine. LA Times. <http://www.latimes.com/entertainment/tv/showtracker/la-et-st-media-reacts-nbc-news-nancy-snyderman-ebola-violation-20141014-story.html>. Accessed 14 Oct 2014
- Diarra A, Diagana K (2014) Mauritania closes border with Mali over Ebola fears. Reuters. <http://www.reuters.com/article/2014/10/25/us-health-ebola-mali-idUSKCN0IE0GM20141025>. Accessed 25 Oct 2014
- DiLorenzo S (2014) WHO: number of Ebola-linked cases passes 10,000. Associated Press, Wane. <http://wane.com/2014/10/25/who-number-of-ebola-linked-cases-passes-10000/>. Accessed 3 Jun 2017
- Dinan S (2014) State Department plans to bring foreign Ebola patients to U.S. The Washington Times. <http://www.washingtontimes.com/news/2014/oct/28/state-department-plans-to-bring-foreign-ebola-pati/?page=3>. Accessed 29 Oct 2014
- Djuric B (2014) Many NY hospital staff call in sick after Ebola patient arrives. Newswire <http://newswire.net/newsroom/news/00085750-a-number-of-ny-hospital-staff-call-in-sick-after-ebola-patient-arrives.html>. Accessed 26 Oct 2014
- Donahue C, Tensa K (2014) Connecticut prepares after Yale student shows Ebola-like symptoms. Ridgefield Daily Voice. <http://ridgefield.dailyvoice.com/news/connecticut-prepares-after-yale-student-shows-ebola-symptoms>. Accessed 16 Oct 2014
- Donnelly L, Knapton S (2014) Ebola: NHS hospitals put on standby. The Telegraph. <http://www.telegraph.co.uk/news/worldnews/ebola/11146375/David-Cameron-to-hold-emergency-meeting-over-Ebola.html>. Accessed 7 Oct 2014
- Douglas S (2014) Ebola Sierra Leone is fighting a war against an unseen proliferating virus. The Guardian. <http://www.theguardian.com/commentisfree/2014/oct/12/ebola-sierra-leone-fighting-war-against-unseen-virus>. Accessed 12 Oct 2014
- Douglas J, Owens M (2014) Dog under surveillance while nurse quarantined for Ebola. WMAZ, WFAA. <http://www.13wmaz.com/story/news/health/2014/10/14/dog-under-surveillance-while-nurse-quarantined-for-ebola/17246863/>. Accessed 14 Oct 2014
- Dowsett S (2014) Spain seeks answers as seven more enter Ebola hospital. Reuters. <http://www.reuters.com/article/2014/10/10/us-health-ebola-spain-idUSKCN0HZ0U920141010>. Accessed 10 Oct 2014
- Dribben M (2014) Visitors tell of Ebola struggles in Sierra Leone. Philadelphia Inquirer. [http://www.philly.com/philly/health/20141005\\_Visitors\\_tell\\_of\\_Ebola\\_struggles\\_in\\_Sierra\\_Leone.html](http://www.philly.com/philly/health/20141005_Visitors_tell_of_Ebola_struggles_in_Sierra_Leone.html). Accessed 5 Oct 2014

- Du Lac FJ, Phillip A, Dennis B (2014) Dallas health worker who tested positive for Ebola wore 'full' protective gear. The Washington Post. <http://www.washingtonpost.com/news/post-nation/wp/2014/10/12/dallas-health-care-worker-who-treated-thomas-eric-duncan-has-tested-positive-for-ebola/>. Accessed 12 Oct 2014
- Dwyer D (2014) President Obama convenes emergency Ebola meeting at White House. ABC News. <http://abcnews.go.com/Politics/president-obama-convene-emergency-ebola-meeting-white-house/story?id=26214911>. Accessed 15 Oct 2014
- Eiserer T (2014) Sheriff's officers entered quarantined Ebola patient's apartment. ABC 10. <http://www.news10.net/story/news/nation/2014/10/03/sheriffs-officers-entered-quarantined-ebola-patients-apartment/16634315/>. Accessed 3 Oct 2014
- Evans H, Karni A (2014) Bellevue Hospital ICU patients head to NYU Langone to free up staff for Ebola cases: sources. New York Daily News. <http://www.nydailynews.com/new-york/bellevue-patients-head-nyu-center-free-space-ebola-cases-article-1.1989007>. Accessed 27 Oct 2014
- Evans H, Parascandola R, Smith GB et al (2014) Boy, 5, who traveled to West Africa tests negative for Ebola at Bellevue Hospital. New York Daily News. <http://www.nydailynews.com/new-york/boy-5-returned-west-africa-tested-ebola-bellevue-hospital-article-1.1988468>. Accessed 7 Jun 2017
- Fernandez M, Sack K, Santora M (2014) In Dallas schools, fear of possible Ebola exposure. New York Times. [https://www.nytimes.com/2014/10/03/us/dallas-schools-worry-about-ebola.html?\\_r=0](https://www.nytimes.com/2014/10/03/us/dallas-schools-worry-about-ebola.html?_r=0). Accessed 7 May 2017
- Fink S (2014) In Liberia, a good or very bad sign: empty hospital beds. New York Times. <http://www.nytimes.com/2014/10/29/world/africa/in-liberia-a-good-or-very-bad-sign-empty-beds-.html>. Accessed 28 Oct 2014
- Flegenheimer M, Shear MD, Barbaro M (2014) Under pressure, Cuomo says Ebola quarantines can be spent at home. New York Times. [https://www.nytimes.com/2014/10/27/nyregion/ebola-quarantine.html?\\_r=0](https://www.nytimes.com/2014/10/27/nyregion/ebola-quarantine.html?_r=0). Accessed 4 Jun 2017
- Fox M (2014) CDC promises special Ebola response teams. NBC News. <http://www.nbcnews.com/storyline/ebola-virus-outbreak/cdc-promises-special-ebola-response-teams-n225636>. Accessed 14 Oct 2014
- Fox News (2014a) Health care worker at Dallas hospital tests positive for Ebola. Fox News. <http://www.foxnews.com/health/2014/10/12/health-care-worker-at-dallas-hospital-tests-positive-for-ebola/>. Accessed 12 Oct 2014
- Fox News (2014b) Family identifies Amber Vinson as 2nd health care worker infected with Ebola. Fox News. <http://www.foxnews.com/health/2014/10/15/family-identifies-2nd-health-care-worker-infected-with-ebola/>. Accessed 15 Oct 2014
- Fox News (2014c) New York Gov. Cuomo loosens Ebola quarantine restrictions after criticism. <http://www.foxnews.com/politics/2014/10/27/new-york-gov-cuomo-loosens-ebola-quarantine-restrictions-after-criticism/>. Accessed 27 Oct 2014
- Freyer FJ (2014) R.I. journalist headed to Nebraska for Ebola treatment. The Boston Globe. <http://www.bostonglobe.com/metro/2014/10/03/ebola-stricken-journalist-from-rhode-island-headed-nebraska-for-treatment/9ZJ4SdIKR3allmUjAuPqHO/story.html>. Accessed 4 Oct 2014
- Gallagher J (2014) Ebola nurse William Pooley returns to Sierra Leone. BBC. <http://www.bbc.com/news/health-29680400>. Accessed 19 Oct 2014
- Garza LM, Valdmanis R (2014) Dallas Ebola patient on ventilator and receiving kidney dialysis. Reuters, Yahoo News. <http://news.yahoo.com/jesse-jackson-meet-family-ebola-patient-dallas-153326316.html>. Accessed 7 Oct 2014
- Gbandia S, Gale J (2014) Ebola now reported across Sierra Leone after cases in Koinadugu. Bloomberg. <http://www.bloomberg.com/news/2014-10-16/ebola-now-reported-across-sierra-leone-after-cases-in-koinadugu.html>. Accessed 15 Oct 2014
- Ghebremedhin S, Battiste N, Keneally M (2014) Texas Ebola watch eyes 50 people, 10 at 'high risk'. ABC News. <http://abcnews.go.com/Health/texas-ebola-watch-eyes-50-people-10-high-risk/?id=25938924>. Accessed 3 Oct 2014

- Giles C (2014) Husband of Spanish Ebola survivor 9 others leave hospital as 21-day observation period ends. Associated Press, 680 News. <http://www.680news.com/2014/10/27/husband-of-spanish-ebola-survivor-9-others-leave-hospital-as-21-day-observation-period-ends/>. Accessed 27 Oct 2014
- Goodwyn W (2014) First U.S. Ebola case confirmed In Dallas. NPR. <http://www.npr.org/2014/10/01/352925378/first-u-s-ebola-case-confirmed-in-dallas>. Accessed 30 Apr 2017
- Govan F (2014) Ebola medics 'better trained in Sierra Leone than Spain'. The Telegraph. <http://www.telegraph.co.uk/news/worldnews/ebola/11155840/Ebola-medics-better-trained-in-Sierra-Leone-than-Spain.html>. Accessed 11 Oct 2014
- Grogan K (2014) GSK chief Ebola vaccine will come too late for outbreak. PharmaTimes. [http://www.pharmatimes.com/Article/14-10-17/GSK\\_chief\\_Ebola\\_vaccine\\_will\\_come\\_too\\_late\\_for\\_outbreak.aspx](http://www.pharmatimes.com/Article/14-10-17/GSK_chief_Ebola_vaccine_will_come_too_late_for_outbreak.aspx). Accessed 17 Oct 2014
- Guardian (2014a) Gatwick begins Ebola screening. The Guardian. <http://www.theguardian.com/world/2014/oct/21/gatwick-begins-ebola-screening>. Accessed 21 Oct 2014
- Guardian (2014b) Ebola case reported in Mali. The Guardian. <http://www.theguardian.com/world/2014/oct/23/mali-first-case-ebola>. Accessed 24 Oct 2014
- Guynn J (2014) Mark Zuckerberg gives \$25M to fight Ebola. USA Today. <http://www.usatoday.com/story/tech/2014/10/14/mark-zuckerberg-facebook-ebola/17244621/>. Accessed 14 Oct 2014
- Harper J (2014) Tallmadge home where Ebola patient Amber Vinson stayed cordoned off by police. Cleveland.com. [http://www.cleveland.com/akron/index.ssf/2014/10/tallmadge\\_home\\_where Ebola\\_pat.html](http://www.cleveland.com/akron/index.ssf/2014/10/tallmadge_home_where Ebola_pat.html). Accessed 15 Oct 2014
- Hartmann M (2014) Everything we know about New York City's Ebola patient. New York Magazine. <http://nymag.com/daily/intelligencer/2014/10/what-we-know-about-new-york-citys-ebola-patient.html>. Accessed 24 Oct 2014
- Hartocollus A (2014) 9 in Connecticut being watched for symptoms of Ebola. New York Times. <http://www.nytimes.com/2014/10/23/nyregion/9-in-connecticut-being-watched-for-symptoms-of-ebola.html?action=click&contentCollection=Health&module=RelatedCoverage&region=Marginalia&pgtype=article>. Accessed 22 Oct 2014
- Hatton B, Giles C (2014) Ebola escapes Europe's defenses; pet dog must die. Associated Press, Lubbock Avalanche-Journal. <http://lubbockonline.com/filed-online/2014-10-07/ebola-escapes-europes-defenses-pet-dog-must-die#.VDQuWrd0zix>. Accessed 7 Oct 2014
- Health Site (2014) Latest Ebola news: Germany treats the third Ebola patient. The Health Site. <http://www.thehealthsite.com/news/latest-ebola-news-germany-treats-the-third-ebola-patient/>. Accessed 10 Oct 2014
- Hellenic Shipping News (2014) Ports tighten ship entry procedures as Ebola fears spread. 9 Oct 2014
- Herriman R (2014) Ashoka Mukpo receives Brincidofovir at Nebraska, NIH releases exposed patient. Outbreak News Today. <http://outbreaknewstoday.com/ashoka-mukpo-receives-brincidofovir-at-nebraska-nih-releases-exposed-patient-39826/>. Accessed 15 May 2017
- Hickox K (2014) UTA grad isolated at New Jersey hospital as part of Ebola quarantine. The Dallas Morning News. <http://www.dallasnews.com/ebola/headlines/20141025-uta-grad-isolated-at-new-jersey-hospital-as-part-of-ebola-quarantine.ece>. Accessed 26 Oct 2014
- Hirschler B (2014) Drugmakers to join forces to make millions of Ebola vaccine doses. Reuters. <http://www.reuters.com/article/2014/10/22/us-health-ebola-johnson-johnson-idUSKC-N0IB0N420141022>. Accessed 22 Oct 2014
- Höje K (2014) Mali rushes to contain Ebola after its first case. The Guardian. <http://www.theguardian.com/global-development/2014/oct/28/mali-rushes-contain-ebola-first-case>. Accessed 28 Oct 2014
- Houston Chronicle (2014) State: Ebola test negative for North Texas deputy. The Houston Chronicle. <http://www.houstonchronicle.com/news/texas/article/Hospital-No-signs-of-Ebola-in-Dallas-area-officer-5811988.php#0>. Accessed 9 Oct 2014

- Hsu SS, Henderson N-M (2014) No mandatory Ebola quarantine for health workers coming to Washington area. The Washington Post. [http://www.washingtonpost.com/national/health-science/no-mandatory-ebola-quarantine-for-health-workers-coming-to-washington-area/2014/10/25/71a9a8c8-5c68-11e4-bd61-346aee66ba29\\_story.html](http://www.washingtonpost.com/national/health-science/no-mandatory-ebola-quarantine-for-health-workers-coming-to-washington-area/2014/10/25/71a9a8c8-5c68-11e4-bd61-346aee66ba29_story.html). Accessed 25 Oct 2014
- Hume J (2014) Canada to screen body temperatures of incoming West African passengers. Well and Tribune. <http://www.wellandtribune.ca/2014/10/08/canada-to-screen-body-temperatures-of-incoming-west-african-passengers>. Accessed 8 Oct 2014
- Hussain M, Arsenault C (2014) Food crisis looms as Ebola rampages through West Africa. Reuters. <http://af.reuters.com/article/topNews/idAFKCN0HR1P420141002?sp=true>. Accessed 2 Oct 2014
- Hylton H (2014) Dallas keeps calm and carries on after Ebola arrives. Time. <http://time.com/3452341/dallas-ebola-texas-ground-zero/>. Accessed 1 Oct 2014
- Independent.ie (2014) Ebola woman touched face with glove. Independent.ie. <http://www.independent.ie/world-news/ebola-woman-touched-face-with-glove-30649259.html>. Accessed 14 May 2017
- Infection Control Today (2014) Free Ebola online courses available from UNMC Nebraska Medicine. Infection Control Today. <http://www.infectioncontrolday.com/news/2014/10/free-ebola-online-courses-available-from-unmc-nebraska-medicine.aspx>. Accessed 27 Oct 2014
- James D (2014) CDC Ebola response team converges on New York City. Pharmacy Times. [http://www.pharmacytimes.com/news/CDC-Ebola-Response-Team-Converges-on-New-York-City?utm\\_source=GoogleNews&utm\\_medium=GoogleNews&utm\\_campaign=PharmacyTimesNews](http://www.pharmacytimes.com/news/CDC-Ebola-Response-Team-Converges-on-New-York-City?utm_source=GoogleNews&utm_medium=GoogleNews&utm_campaign=PharmacyTimesNews). Accessed 24 Oct 2014
- Jansing C (2014) Samantha Power travels to Guinea amid Ebola outbreak. NBC News. <http://www.nbcnews.com/storyline/ebola-virus-outbreak/samantha-power-travels-guinea-amid-ebola-outbreak-n234081>. Accessed 26 Oct 2014
- JTA (2014) Israeli agency sends mobile clinics to Africa to fight Ebola. JTA. <http://www.jta.org/2014/10/05/news-opinion/israel-middle-east/israeli-agency-sends-mobile-clinics-to-africa-to-fight-ebola>. Accessed 5 Oct 2014
- Kalter L (2014) Doctor details life in Ebola-torn Liberia. The Boston Herald. [http://www.bostonherald.com/news\\_opinion/local\\_coverage/2014/10/doctor\\_details\\_life\\_in\\_ebola\\_torn\\_liberia](http://www.bostonherald.com/news_opinion/local_coverage/2014/10/doctor_details_life_in_ebola_torn_liberia). Accessed 19 Oct 2017
- Kamara A (2014) Ebola burial teams in Sierra Leone go back to work. USA Today. <https://www.usatoday.com/story/news/world/2014/10/08/ebola-sierra-leone-spain/16898253/>. Accessed 15 May 2017
- Karimi F (2014) From Guinea to the U.S.: timeline of first Ebola patient in New York City. CNN. <http://www.cnn.com/2014/10/24/health/new-york-ebola-timeline/>. Accessed 24 Oct 2014
- Karimi F, Sutton J (2014) Dallas Ebola patient is in critical condition, hospital says. CNN. <http://www.cnn.com/2014/10/04/health/ebola-us/>. Accessed 10 May 2017
- Kassam A (2014a) Spanish nurse's Ebola infection blamed on substandard equipment. The Guardian. <http://www.theguardian.com/world/2014/oct/07/ebola-crisis-substandard-equipment-nurse-positive-spain>. Accessed 7 Oct 2014
- Kassam A (2014b) Nurse reported Ebola symptoms many times before being quarantined. The Guardian. <http://www.theguardian.com/world/2014/oct/08/spanish-ebola-nurse-symptoms-quarantine>. Accessed 8 Oct 2014
- Kassam A (2014c) Spanish Ebola patient's condition worsens as seven people are quarantined. The Guardian. <https://www.theguardian.com/world/2014/oct/09/ebola-outbreak-six-quarantined-in-spain-madrid-hospital-ramos>. Accessed 16 May 2017
- Kassam A (2014d) Madrid hospital staff quit over Ebola fears. The Guardian. <http://www.theguardian.com/world/2014/oct/10/madrid-hospital-staff-quit-ebola>. Accessed 10 Oct 2014
- Kelto A (2014) CDC issues new Ebola screening protocols for U.S. airports. NPR. <http://www.npr.org/2014/10/08/354639728/cdc-issues-new-ebola-screening-protocols-for-u-s-airports>. Accessed 8 Oct 2014

- Keneally M (2014a) US journalist believes he got Ebola while cleaning infected car. ABC News. <http://abcnews.go.com/Health/us-journalist-ebola-nebraska-treatment/story?id=25987193>. Accessed 6 Oct 2014
- Keneally M (2014b) Ebola scare sends Caribbean cruise ship back home. ABC News. <http://abcnews.go.com/Health/ebola-scare-sends-caribbean-cruise-ship-back-home/story?id=26276019>. Accessed 31 May 2017
- Keneally M, Battiste N (2014) Texas Ebola patient Thomas Eric Duncan now getting experimental drug. ABC News. <http://abcnews.go.com/Health/texas-ebola-patient-thomas-eric-duncan-now-experimental/story?id=25998659>. Accessed 14 May 2017
- Kent J (2014) TSA agent at Cleveland Hopkins Airport patted down Ebola patient; now on paid leave. <http://www.clevelandleader.com/node/23242>. Accessed 18 Oct 2014
- Kesling B (2014) Ohio bans international travel for residents being monitored for Ebola. The Wall Street Journal. <http://online.wsj.com/articles/ohio-bans-international-travel-for-residents-being-monitored-for-ebola-1413687948>. Accessed 19 Oct 2014
- Killough A (2014) New York governor on Ebola fears: I'll ride the subway today. CNN. <http://www.cnn.com/2014/10/24/politics/andrew-cuomo-ebola/>. Accessed 4 Jun 2017
- Kocherga A (2014) Fort Bliss families worry as troops prepare to head to West Africa. KHOU. <http://www.khou.com/story/news/health/2014/10/01/families-of-us-soldiers-worry-as-troops-prepare-for-deployment-in-west-africa-to-fight-ebola-epidemic/16567449/>. Accessed 2 Oct 2014
- Korte G, Vanden Brook T (2014) Obama may call on reserves to deal with Ebola in Africa. USA Today. <http://www.usatoday.com/story/news/politics/2014/10/16/obama-ebola-reserves/17363251/>. Accessed 16 Oct 2014
- Larson K (2014) Liberia short on ambulances for Ebola patients. US World & News Report. <https://www.usnews.com/news/world/articles/2014/10/01/liberia-short-on-ambulances-for-ebola-patients>. Accessed 30 Apr 2017
- Leitsinger M (2014) The E-Team: pentagon announces special Ebola support squad. NBC News. <http://www.nbcnews.com/news/us-news/e-team-pentagon-announces-special-ebola-support-squad-n229266>. Accessed 19 Oct 2014
- Leitsinger M, Jamieson A (2014) Texas Ebola watch ends for 48 contacts of Thomas Eric Duncan. NBC News. <http://www.nbcnews.com/storyline/ebola-virus-outbreak/texas-ebola-watch-ends-48-contacts-thomas-eric-duncan-n229491>. Accessed 20 Oct 2014
- Levy A (2014) 101st Airborne to take over in Africa deployment. <http://www.14news.com/story/26883766/101st-airborne-to-take-over-in-africa-deployment>. Associated Press, 14 News. Accessed 24 Oct 2014
- Liping G (2014) China pledges 500m yuan Ebola aid to Africa. China Daily, ECNS. <http://www.ecns.cn/2014/10-25/139949.shtml>. Accessed 24 Oct 2014
- Livingston D, Powell C (2014) Ebola patient who visited Summit County might have been contagious longer than first believed; 7 in county quarantined. Akron Beacon J. <http://www.ohio.com/news/break-news/ebola-patient-who-visited-summit-county-might-have-been-contagious-longer-than-first-believed-7-in-county-quarantined-1.532246#>. Accessed 30 May 2017
- Loftus M (2015) The long, extraordinary recovery of Ian Crozier. *Emory Med Spring* 2015:9
- Lomax S (2014) Liberia health workers abandon Ebola ETU in Bong County over pay. AllAfrica. <http://allafrica.com/stories/201410061344.html>. Accessed 4 Oct 2014
- Lopez R (2014) Confusion concern where Ebola patient stayed. WFAA. <http://www.wfaa.com/story/news/health/2014/10/01/ivy-apartments-ebola-reaction/16569917/>. Accessed 1 Oct 2014
- Lupkin S (2014) Texas health workers use Tabasco to help train for Ebola. ABC News. <http://abcnews.go.com/Health/texas-health-workers-tabasco-train-ebola/story?id=26385702>. Accessed 23 Oct 2014
- Malo S (2014) Ebola screening starts at New York's JFK airport. Reuters. <http://www.reuters.com/article/us-health-ebola-jfk-idUSKCN0I004U20141011>. Accessed 17 May 2017

- Mangan D (2014) Texas college rejects Nigerian applicants, cites Ebola cases. NBC News. <http://www.nbcnews.com/storyline/ebola-virus-outbreak/texas-college-rejects-nigerian-applicants-cites-ebola-cases-n226291>. Accessed 15 Oct 2014
- Marcos C (2014) Lawmakers call for official Ebola response coordinator. The Hill. <http://thehill.com/blogs/floor-action/house/219936-lawmakers-call-for-official-ebola-response-coordinator>. Accessed 7 Oct 2014
- Margason G (2014) Texas juvenile arrested after posting false Ebola report on Twitter. NewsOK. <http://newsok.com/frisco-student-arrested-for-creating-false-ebolascare/article/5348040>. Accessed 2 Oct 2014
- Marowitz R (2014) Air Canada allows flight attendants to wear gloves to protect against Ebola. Canadian Occupation Safety. <http://www.cos-mag.com/emergency-management/emergency-management-stories/4162-air-canada-allows-flight-attendants-to-wear-gloves-to-protect-against-ebola.html>. Accessed 20 Oct 2014
- Martin B (2014) Travel shares drop on Ebola fears. The Telegraph. <http://www.telegraph.co.uk/finance/markets/11145573/Travel-shares-drop-on-Ebola-fears.html>. Accessed 15 May 2014
- Martinez M (2014) U.S. Ebola patients partner quarantined in apartment with family members. CNN. [http://www.cnn.com/2014/10/02/us/texas-woman-quarantine-ebola-thomas-duncan/index.html?hpt=hp\\_t1](http://www.cnn.com/2014/10/02/us/texas-woman-quarantine-ebola-thomas-duncan/index.html?hpt=hp_t1). Accessed 2 Oct 2014
- Mathis-Lilley B (2014) Kaci Hickox still doesn't have Ebola, might move out of Maine. The Slate. [http://www.slate.com/blogs/the\\_slatest/2014/11/10/kaci\\_hickox\\_ebola\\_nurse\\_likely\\_not\\_infected\\_may\\_leave\\_state.html](http://www.slate.com/blogs/the_slatest/2014/11/10/kaci_hickox_ebola_nurse_likely_not_infected_may_leave_state.html). Accessed 10 Nov 2014
- Mazumdar T (2014) Devastating news from the Ebola clinic. BBC. <http://www.bbc.com/news/health-29507673>. Accessed 7 Oct 2014
- McGuirk R (2014) Australia lifts Ebola donation to \$16 million but won't send personnel for fear of infection. Daily Journal. <http://www.dailyjournal.net/view/story/ba2f515e3c6045deb3761047e5e8728c/AS--Australia-Ebola/>. Accessed 2 Oct 2014
- McNeil DG Jr (2014) Second Ebola outbreak in Mali eclipses early success. New York Times. [https://www.nytimes.com/2014/11/13/health/mali-reports-a-second-larger-ebola-outbreak.html?\\_r=0](https://www.nytimes.com/2014/11/13/health/mali-reports-a-second-larger-ebola-outbreak.html?_r=0). Accessed 4 Jun 2017
- McNeil DG Jr, Shear MD (2014) U.S. plans 21-day watch of travelers from Ebola-hit nations. New York Times. [http://www.nytimes.com/2014/10/23/health/us-to-monitor-travelers-from-ebola-hit-nations-for-21-days.html?\\_r=0](http://www.nytimes.com/2014/10/23/health/us-to-monitor-travelers-from-ebola-hit-nations-for-21-days.html?_r=0). Accessed 22 Oct 2014
- Médecins Sans Frontières (2014) Ebola: Norwegian MSF staff member infected in Sierra Leone. 6 Oct 2014
- Miles T (2014) Update 1 – Mali Ebola victim had contact with 141 people, 57 still sought. Reuters. <http://af.reuters.com/article/commoditiesNews/idAFL5N0SQ3VO20141031?sp=rue>. Accessed 31 Oct 2014
- MINA (2014) Foreigner dies at Clinic of Infectious Disease, doctors think he had Ebola. MINA, Macedonia Online. <http://macedoniaonline.eu/content/view/26226/2/>. Accessed 9 Oct 2014
- Minder R, Belluck P (2014) Spain, amid protests, kills dog of Ebola-infected nurse. New York Times. [http://www.nytimes.com/2014/10/09/science/ebola-dog-excalibur-nurse-spain.html?\\_r=0](http://www.nytimes.com/2014/10/09/science/ebola-dog-excalibur-nurse-spain.html?_r=0). Accessed 8 Oct 2014
- Minder R, Grady D (2014) Ebola Infects Spanish Nurse, a First in West. New York Times. <https://www.nytimes.com/2014/10/07/world/europe/spain-reports-first-case-of-ebola-contracted-outside-west-africa.html>. Accessed 24 Sept 2017
- Monnier O, Rihouay F (2014) WHO said to track 111 people in Mali after Ebola death. Bloomberg. <http://www.bloomberg.com/news/2014-10-28/who-said-to-track-111-people-in-mali-after-ebola-death.html>. Accessed 27 Oct 2014
- Morozova D (2014) Woman who fell ill in Pentagon parking lot doesn't have Ebola. <http://news-maine.net/21056-woman-who-fell-ill-pentagon-parking-lot-doesnt-have-ebola>. Accessed 18 Oct 2014



- Morris S (2014) Husband of Spanish nurse quarantined. IOL, Reuters. <http://www.iol.co.za/news/world/husband-of-spanish-nurse-quarantined-1.1761458#.VDPqQLd0ziw>. Accessed 7 Oct 2014
- Murray L (2014) Revenue plummets 25 percent at Texas Health Presbyterian after Ebola cases. Dallas Business Journal. [http://www.bizjournals.com/dallas/blog/morning\\_call/2014/10/revenue-plummets-25-percent-at-texas-health.html?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+industry\\_6+\(Industry+Health+Care\)](http://www.bizjournals.com/dallas/blog/morning_call/2014/10/revenue-plummets-25-percent-at-texas-health.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+industry_6+(Industry+Health+Care)). Accessed 23 Oct 2014
- Nadeau BL (2014) Ebola contracted in Madrid hospital could spread in Europe. The Daily Beast. <http://www.thedailybeast.com/articles/2014/10/07/ebola-contracted-in-madrid-hospital-could-spread-in-europe>. Accessed 7 Oct 2014
- NBC DFW (2014) Ebola patient contacted CDC before flight, agency says. NBC DFW. <http://www.nbcdfw.com/news/local/Ebola-Patient-Contacted-CDC-Before-Flight-Agency-Says-279365622.html>. Accessed 15 Oct 2014
- NBC News (2014a) Texas Ebola patient had contact with school age kids Perry Says. NBC News. <http://www.nbcnews.com/storyline/ebola-virus-outbreak/texas-ebola-patient-had-contact-school-age-kids-perry-says-n215976>. Accessed 1 Oct 2014
- NBC News (2014b) NBC News freelancer in Africa diagnosed with Ebola. NBC News. <http://www.nbcnews.com/storyline/ebola-virus-outbreak/nbc-news-freelancer-africa-diagnosed-ebola-n217271>. Accessed 7 May 2017
- NBC News (2014c) U.S. close to solution for how hospitals must dispose of Ebola waste. NBC News. <http://www.nbcnews.com/storyline/ebola-virus-outbreak/u-s-close-solution-how-hospitals-must-dispose-ebola-waste-n216596>. Accessed 2 Oct 2014
- NBC News (2014d) Ebola survivor Dr. Kent Brantly donates blood to Ashoka Mukpo. NBC News. <http://www.nbcnews.com/storyline/ebola-virus-outbreak/ebola-survivor-dr-kent-brantly-donates-blood-ashoka-mukpo-n220811>. Accessed 8 Oct 2014
- NBC News (2014e) Ebola-infected nurse Amber Vinson arrives at Emory for treatment. NBC News. <http://www.nbcnews.com/storyline/ebola-virus-outbreak/ebola-infected-nurse-amber-vinson-arrives-emory-treatment-n226976>. Accessed 28 May 2017
- NBC News (2014f) Airline: CDC warned 'possibility' Ebola nurse had symptoms on plane. NBC News. <http://www.nbcnews.com/storyline/ebola-virus-outbreak/airline-cdc-warned-possibility-ebola-nurse-had-symptoms-plane-n227046>. Accessed 16 Oct 2014
- NBC News (2014g) Dallas considers disaster declaration due to Ebola. NBC News. <http://www.nbcnews.com/storyline/ebola-virus-outbreak/dallas-considers-disaster-declaration-due-ebola-n227571>. Accessed 16 Oct 2014
- Nelson S (2014) Ebola hotline launched in Illinois. WQAD. <http://wqad.com/2014/10/17/ebola-hotline-launched-in-illinois/>. Accessed 17 Oct 2014
- Neuman S (2014) Mali's first Ebola case in current outbreak is 2-year-old girl. NPR, Wyoming Public Media. <http://wyomingpublicmedia.org/post/malis-first-ebola-case-current-outbreak-2-year-old-girl>. Accessed 24 Oct 2014
- New Haven Register (2014) Yale grad student who traveled to Liberia hospitalized with Ebola-like symptoms in New Haven. [http://www.ctnewsjunkie.com/archives/entry/yale\\_grad\\_student\\_who\\_traveled\\_to\\_liberia\\_hospitalized\\_with\\_ebola\\_like\\_symp](http://www.ctnewsjunkie.com/archives/entry/yale_grad_student_who_traveled_to_liberia_hospitalized_with_ebola_like_symp). Accessed 16 Oct 2014
- Newcastle Herald (2014) Ebola epidemic: Australian aid worker Brett Adamson's despair. Newcastle Herald. <http://www.theherald.com.au/story/2603201/ebola-epidemic-horrific-says-aussie-aid-worker-poll/?cs=305>. Accessed 3 Oct 2014
- Nossiter A (2014a) A hospital from hell in a city swamped by Ebola. New York Times. [http://www.nytimes.com/2014/10/02/world/africa/ebola-spreading-in-west-africa.html?\\_r=0](http://www.nytimes.com/2014/10/02/world/africa/ebola-spreading-in-west-africa.html?_r=0). Accessed 1 Oct 2014
- Nossiter A (2014b) Ebola help for Sierra Leone is nearby, but delayed on the docks. New York Times. [http://www.nytimes.com/2014/10/06/world/africa/sierra-leone-ebola-medical-supplies-delayed-docks.html?\\_r=0](http://www.nytimes.com/2014/10/06/world/africa/sierra-leone-ebola-medical-supplies-delayed-docks.html?_r=0). Accessed 6 Oct 2014

- Nossiter A (2014c) Officials admit a defeat by Ebola in Sierra Leone. *New York Times*. [http://www.nytimes.com/2014/10/11/world/africa/officials-admit-a-defeat-by-ebola-in-sierra-leone.html?\\_r=0](http://www.nytimes.com/2014/10/11/world/africa/officials-admit-a-defeat-by-ebola-in-sierra-leone.html?_r=0). Accessed 11 Oct 2014
- NPR (2014) An Ebola success story in northern Liberia. NPR. <http://www.npr.org/2014/10/26/359065316/an-ebola-success-story-in-northern-liberia>. Accessed 7 Jun 2017
- NYC Health + Hospitals (2014) Statement on patient at Bellevue Hospital. 23 Oct 2014
- O'Carroll L (2014a) Ebola: Sierra Leone hospitals running out of basic supplies, say doctors. *The Guardian*. <http://www.theguardian.com/world/2014/oct/03/ebola-sierra-leone-epidemic>. Accessed 3 Oct 2014
- O'Carroll L (2014b) British nurse who survived Ebola on his way back to Sierra Leone. *The Guardian*. <http://www.theguardian.com/world/2014/oct/15/british-nurse-ebola-survivor-sierra-leone-return>. Accessed 15 Oct 2014
- O'Carroll L (2014c) Sierra Leone's fight against Ebola infection: 'the world is not safe.' *The Guardian*. <http://www.theguardian.com/world/2014/oct/30/ebola-sierra-leone-fight-who-disease-fight>. Accessed 30 Oct 2014
- Ohio Department of Health (2014) Ohio Department of Health: 16 October 2014. 16 Oct 2014
- Ohlheiser A (2014) Cut off from school, children in Ebola-stricken Sierra Leone get lessons by radio. *The Washington Post*. <http://www.washingtonpost.com/news/to-your-health/wp/2014/10/09/cut-off-from-school-children-in-ebola-stricken-sierra-leone-get-lessons-by-radio/>. Accessed 9 Oct 2014
- Ohlheiser A, Phillip A (2014) As Spanish Ebola patient's health deteriorates, two doctors who treated her are under observation. *The Washington Post*. <http://www.washingtonpost.com/news/to-your-health/wp/2014/10/09/as-spanish-ebola-patients-health-deteriorates-two-doctors-who-treated-her-are-under-observation/>. Accessed 9 Oct 2014
- Olu-Mammah J, Giahuyue JH (2014) Sierra Leone residents clash with police over Ebola response. *Reuters*. <http://www.globalpost.com/dispatch/news/thomson-reuters/141014/sierra-leone-residents-clash-police-over-ebola-response>. Accessed 14 Oct 2014
- Onishi N (2014) U.S. patient aided pregnant Liberian, then took ill. *New York Times*. <http://www.nytimes.com/2014/10/02/world/africa/ebola-victim-texas-thomas-eric-duncan.html>. Accessed 2 Oct 2014
- Page J (2014) Judge rejects strict limits on U.S. nurse who treated Ebola patients. *Reuters*. <http://www.reuters.com/article/2014/10/31/us-health-ebola-usa-idUSKBN0II1SP20141031>. Accessed 31 Oct 2014
- Paye-Layle J (2014a) Liberia leader seeks more power to fight Ebola, but critics decry measures as heavy handed. *Associated Press, 660 News*. <http://www.660news.com/2014/10/10/liberia-leader-seeks-more-power-to-fight-ebola-but-critics-decry-measures-as-heavy-handed/>. Accessed 10 Oct 2014
- Paye-Layle J (2014b) Beds at Ebola treatment units empty in Liberia. *Associated Press, SF Gate*. <http://www.sfgate.com/news/medical/article/Cremation-fears-leave-empty-Ebola-beds-in-Liberia-5843034.php>. Accessed 24 Oct 2014
- Paye-Layle J (2014c) Liberia opens 1 of largest Ebola treatment centers. *Associated Press, ABC News*. <http://abcnews.go.com/International/wireStory/liberia-opens-largest-ebola-treatment-centers-26597737>. Accessed 31 Oct 2014
- Paye-Layle J, Giles C (2014) U.S. military planes deliver more marines into Ebola hot zone; African leaders plead for help. *Associated Press, Democratic Underground*. <https://www.democraticunderground.com/1014914460>. Accessed 16 May 2017
- Paye-Layle J, Roy-Macaulay C (2014) Dozens quarantined for Ebola in Liberia threaten to break out of isolation for lack of food. *US News & World Report*. <https://www.usnews.com/news/world/articles/2014/10/23/threat-to-break-isolation-in-liberia-over-food>. Accessed 23 Oct 2014
- Penty C, Munoz M (2014) Spanish Ebola patients doctor lays out procedure shortfalls. *Associated Press, The Daily Herald*. <http://www.dailyherald.com/article/20141009/news/141008329/>. Accessed 9 Oct 2014

- Perez C (2014) 5 kids linked to Ebola case held in isolation. The New York Post. <http://nypost.com/2014/10/01/texas-ebola-victim-may-have-infected-another-person>. Accessed 1 Oct 2014
- Phillip A, Ferdman RA (2014) After nurse contracts Ebola Spanish health workers raise concerns about protective equipment. The Washington Post. <http://www.washingtonpost.com/news/to-your-health/wp/2014/10/07/after-nurse-contracts-ebola-spanish-health-workers-raise-concerns-about-protective-equipment/>. Accessed 7 Oct 2014
- Pinckard C (2014) Horseshoe Casino Cleveland customer arrested after comment about Ebola. Cleveland.com. [http://www.cleveland.com/metro/index.ssf/2014/10/horseshoe\\_casino\\_cleveland\\_cus.html](http://www.cleveland.com/metro/index.ssf/2014/10/horseshoe_casino_cleveland_cus.html). Accessed 28 May 2014
- Power S (2014) Twitter, 28 Oct 2014. [https://twitter.com/AmbPower44/status/527070625882726400?ref\\_src=twsrc%5Etfw&ref\\_url=http%3A%2F%2Fwww.masslive.com%2Fnews%2Findex.ssf%2F2014%2F10%2Fgood\\_ebola\\_news\\_out\\_of\\_west\\_af.html](https://twitter.com/AmbPower44/status/527070625882726400?ref_src=twsrc%5Etfw&ref_url=http%3A%2F%2Fwww.masslive.com%2Fnews%2Findex.ssf%2F2014%2F10%2Fgood_ebola_news_out_of_west_af.html). Accessed 8 Jun 2017
- Pudelek J (2014) DEC launches Ebola appeal. Civil Society News. [http://www.civilsociety.co.uk/fundraising/news/content/18468/dec\\_launches\\_ebola\\_appeal](http://www.civilsociety.co.uk/fundraising/news/content/18468/dec_launches_ebola_appeal). Accessed 29 Oct 2014
- Rahmanzadeh S, Mohny G (2014) Deputy who delivered Ebola quarantine order in hospital ER. ABC News. <http://abcnews.go.com/Health/deputy-delivered-ebola-quarantine-order-hospital-er/story?id=26055781>. Accessed 8 Oct 2014
- Rainone C (2014) Ebola in Dallas: what we know about 2nd case diagnosed in U.S. NBC, NBC Bay Area. <http://www.nbcbayarea.com/news/national-international/Ebola-Dallas-Health-Worker-278937901.html>. Accessed 12 Oct 2014
- Rajagopalan M (2014) China is sending an elite army unit to Ebola-hit Liberia. Business Insider. <http://www.businessinsider.com.au/r-china-to-send-elite-army-unit-to-help-fight-ebola-in-liberia-2014-10>. Accessed 30 Oct 2014
- Reuters (2014a) US stocks – Wall St. falls on Ebola concerns; airlines tumble. Reuters, The Daily Mail. <http://www.dailymail.co.uk/wires/reuters/article-2776495/US-STOCKS-Wall-St-falls-Ebola-concerns-airlines-tumble.html>. Accessed 1 Oct 2014
- Reuters (2014b) Dallas Ebola patient throwing up all over the place on way to hospital. Reuters, The Baltimore Sun. <http://www.baltimoresun.com/health/chi-ebola-patient-america-20141002,0,4611727.story>. Accessed 2 Oct 2014
- Reuters (2014c) First French Ebola patient leaves hospital. Reuters. <http://in.reuters.com/article/2014/10/04/health-ebola-france-idINL6N0RZ0DC20141004>. Accessed 4 Oct 2014
- Reuters (2014d) Canada sending second mobile Ebola lab scientists to Sierra Leone. Reuters, Canoe.com. <http://cnews.canoe.ca/CNEWS/Canada/2014/10/04/21985931.html>. Accessed 4 Oct 2014
- Reuters (2014e) Sierra Leone records 121 Ebola deaths in a single day. Reuters. <http://www.reuters.com/article/2014/10/06/us-health-ebola-leone-idUSKCN0HU0ZT20141006>. Accessed 6 Oct 2014
- Reuters (2014f) High risk Ebola could reach France and UK by end-October, scientists calculate. Reuters, NDTV. <http://www.ndtv.com/article/world/high-risk-ebola-could-reach-france-and-uk-by-end-october-scientists-calculate-602254>. Accessed 5 Oct 2014
- Reuters (2014g) Norway will fly its first Ebola patient back from Sierra Leone. Reuters. <http://www.reuters.com/article/us-health-ebola-norway-idUSKCN0HV1IT20141006>. Accessed 14 May 2017
- Reuters (2014h) Liberian healthcare workers want hazard pay. Reuters, Eyewitness News. <http://ewn.co.za/2014/10/07/Ebola-health-care-workers-want-hazard-pay>. Accessed 7 Oct 2014
- Reuters (2014i) Ebola burial teams in Sierra Leone on strike over hazard pay. Reuters, The Huffington Post. [http://www.huffingtonpost.com/2014/10/07/sierra-leone-ebola-strike\\_n\\_5948192.html](http://www.huffingtonpost.com/2014/10/07/sierra-leone-ebola-strike_n_5948192.html). Accessed 7 Oct 2014
- Reuters (2014j) U.N. medic in Liberia tests positive for Ebola. Reuters. <http://www.trust.org/item/20141008110012-vjk35/?source=fiOtherNews2>. Accessed 8 Oct 2014
- Reuters (2014k) Britain says to start screening passengers for Ebola. Reuters. <http://af.reuters.com/article/sierraLeoneNews/idAFL6N0S44D720141009>. Accessed 9 Oct 2014

- Reuters (2014l) Spanish Ebola victim conscious and sitting unaided. Reuters. <http://www.reuters.com/article/2014/10/11/us-health-ebola-spain-idUSKCN0HZ0U920141011>. Accessed 11 Oct 2014
- Reuters (2014m) Healthcare crippled as Ebola overwhelms hospitals in Liberia. Reuters, Fox News. <http://www.foxnews.com/health/2014/10/10/healthcare-crippled-as-ebola-overwhelms-hospitals-in-liberia/>. Accessed 10 Oct 2014
- Reuters (2014n) Third Ebola patient released from Atlanta's Emory University Hospital. Reuters. <http://www.reuters.com/article/us-health-ebola-usa-emory-idUSKCN0I927720141020>. Accessed 2 Jun 2017
- Reuters (2014o) US restricts entrants from Ebola hit nations to five airports. Reuters, KFGO. <http://kfgo.com/news/articles/2014/oct/21/us-restricts-entrants-from-ebola-hit-nations-to-five-airports/>. Accessed 21 Oct 2014
- Reuters (2014p) As virus spreads insurers exclude Ebola from new policies. Reuters, Jamestown Sun. <http://www.jamestownsun.com/content/virus-spreads-insurers-exclude-ebola-new-policies>. Accessed 22 Oct 2014
- Reuters (2014q) Liberians fast, pray for three days to break Ebola 'curse.' Reuters, Fox News. <http://www.foxnews.com/health/2014/10/30/liberians-fast-pray-for-three-days-to-break-ebola-curse/>. Accessed 30 Oct 2014
- Ritchie A (2014) Ebola is 'disaster of our generation' says aid agency. AFP, Yahoo News. <http://news.yahoo.com/obama-calls-end-ebola-hysteria-110006011.html>. Accessed 18 Oct 2014
- Robinson M (2014) British Army medics from 22 Field Hospital in Aldershot arrive in Sierra Leone as part of UK's response in fight against Ebola crisis. The Daily Mail. <http://www.dailymail.co.uk/news/article-2795151/british-army-medics-22-field-hospital-aldershot-arrive-sierra-leone-uk-s-response-fight-against-ebola-crisis.html>. Accessed 16 Oct 2014
- Román D (2014) Spain struggles to address concern over Ebola case. The Wall Street J. <http://online.wsj.com/articles/spain-struggles-to-address-concern-over-ebola-case-1412678870>. Accessed 7 Oct 2014
- Rudra G (2014) Ebola-infected doctor's fiancée back in their home. ABC News. <http://abcnews.go.com/Health/ebola-infected-doctors-fiancee-back-home/story?id=26450510>. Accessed 25 Oct 2014
- Saavedra M (2014) Photos offer insight after Ebola decontamination. KHOU. <http://www.khou.com/story/news/local/texas/2014/10/21/photos-offer-insight-after-ebola-decontamination/17655803/>. Accessed 21 Oct 2014
- Sannah B (2014) Ebola – as seen through the eyes of a 13-year-old from Sierra Leone. The Guardian. <http://www.theguardian.com/world/2014/oct/11/bintu-sannah-ebola-sierra-leone-eyewitness>. Accessed 12 Oct 2014
- Santora M (2014a) Doctor in New York City is sick with Ebola. New York Times. [http://www.nytimes.com/2014/10/24/nyregion/craig-spencer-is-tested-for-ebola-virus-at-bellevue-hospital-in-new-york-city.html?\\_r=0](http://www.nytimes.com/2014/10/24/nyregion/craig-spencer-is-tested-for-ebola-virus-at-bellevue-hospital-in-new-york-city.html?_r=0). Accessed 24 Oct 2014
- Santora M (2014b) New York State offers protections for medical workers joining Ebola fight. New York Times. [http://www.nytimes.com/2014/10/31/nyregion/new-york-state-offers-protections-for-medical-workers-joining-ebola-fight.html?\\_r=0](http://www.nytimes.com/2014/10/31/nyregion/new-york-state-offers-protections-for-medical-workers-joining-ebola-fight.html?_r=0). Accessed 30 Oct 2014
- Schechter D (2014) Dallas diocese provided secret Ebola isolation home. WFAA. <http://www.wfaa.com/story/news/health/2014/10/20/ebola-isolation-duncan-family-catholic-church/17637929/>. Accessed 21 Oct 2014
- Schieffelin JS, Shaffer JG, Goba A et al (2014) Clinical illness and outcomes in patients with Ebola in Sierra Leone. *N Engl J Med* 371:2092–2100
- Schluz S (2014) New Ebola containment facility comes to north Texas. NBC DFW. <http://www.nbcdfw.com/news/health/Perry-to-Announce-Change-to-Texas-Ebola-Preparedness-Response-279914872.html>. Accessed 21 Oct 2014
- Schnirring L (2014) Feds unveil Ebola screening steps; Texas patient dies. CIDRAP. <http://www.cidrap.umn.edu/news-perspective/2014/10/feds-unveil-ebola-screening-steps-texas-patient-dies>. Accessed 15 May 2017

- Schwartz C (2014) Nurse under Ebola quarantine hires civil rights lawyer. The Huffington Post. [http://www.huffingtonpost.com/2014/10/26/kaci-hickox-lawyer\\_n\\_6050450.html](http://www.huffingtonpost.com/2014/10/26/kaci-hickox-lawyer_n_6050450.html). Accessed 4 Jun 2017
- Serna J (2014) California issues quarantine policy for Ebola Exposure. LA Times. <http://www.latimes.com/local/lanow/la-me-ln-california-orders-ebola-quarantine-protocols-20141029-story.html>. Accessed 8 Jun 2017
- Shankar S (2014) Sierra Leone peacekeepers quarantined after one soldier tests positive for Ebola. International Business Times. <http://www.ibtimes.com/sierra-leone-peacekeepers-quarantined-after-one-soldier-tests-positive-ebola-1704488>. Accessed 14 Oct 2014
- Sharkov D (2014) Spanish nurse infected with Ebola receives blood transfusion from recovered patient. Newsweek. <http://www.newsweek.com/spanish-nurse-infected-ebola-receives-blood-transfusion-recovered-patient-275813>. Accessed 15 May 2017
- Sheets CA (2014) US government Has Ebola 'do not fly list' of exposed people: report. International Business Times. <http://www.ibtimes.com/us-government-has-ebola-do-not-fly-list-exposed-people-report-1705808>. Accessed 28 May 2017
- Shoichet CE (2014) Nurses' union slams Texas hospital for lack of Ebola protocol. CNN. [http://www.cnn.com/2014/10/15/health/texas-ebola-nurses-union-claims/index.html?hpt=hp\\_t1](http://www.cnn.com/2014/10/15/health/texas-ebola-nurses-union-claims/index.html?hpt=hp_t1). Accessed 15 Oct 2014
- Shoichet CE, Levs J, Yan H (2014) CDC: U.S. health worker with Ebola should not have flown on commercial jet. CNN. [http://www.cnn.com/2014/10/15/health/texas-ebola-outbreak/index.html?hpt=hp\\_t1](http://www.cnn.com/2014/10/15/health/texas-ebola-outbreak/index.html?hpt=hp_t1). Accessed 15 Oct 2014
- Sia SJ (2014) What movie night means to patients in an Ebola ward. [http://qz.com/287442/what-movie-night-means-to-patients-in-an-ebola-ward/?utm\\_medium=App.net&utm\\_source=PourOver](http://qz.com/287442/what-movie-night-means-to-patients-in-an-ebola-ward/?utm_medium=App.net&utm_source=PourOver). Quartz, International Medical Corps. Accessed 27 Oct 2014
- Sickles J (2014) Ebola quarantine ends for Thomas Eric Duncan's fiancée, but not her heartache. Yahoo News. <https://news.yahoo.com/ebola-quarantine-ends-for-thomas-eric-duncans-fiancee-but-not-grief-163314541.html>. Accessed 20 Oct 2014
- Sieff K (2014) As Ebola patients vanish in Liberia's health system, survivors go on a desperate search. The Washington Post. [http://www.washingtonpost.com/world/africa/as-ebola-patients-vanish-in-liberias-health-system-survivors-go-on-a-desperate-search/2014/10/20/274acf48-08dd-4a76-9f58-8c35dfb22312\\_story.html](http://www.washingtonpost.com/world/africa/as-ebola-patients-vanish-in-liberias-health-system-survivors-go-on-a-desperate-search/2014/10/20/274acf48-08dd-4a76-9f58-8c35dfb22312_story.html). Accessed 20 Oct 2014
- Sifferlin A (2014) Emory's 'sickest' Ebola patient, now in recovery, reveals identity. Time. <http://time.com/3622735/ebola-emory-university-hospital-ian-crozier/>. Accessed 7 Dec 2014
- Silver M (2014) Ebola diary: the grave diggers, the mistress, the man on the porch. NPR. <http://www.npr.org/blogs/goatsandsoda/2014/10/12/354626252/ebola-diary-the-grave-diggers-the-mistress-the-man-on-the-porch>. Accessed 12 Oct 2014
- Sputnik International (2014) Liberia suspends senate elections amid Ebola outbreak: reports. Sputnik International. <http://en.ria.ru/society/20141009/193869208/Liberia-Suspends-Senate-Elections-Amid-Ebola-Outbreak-Reports.html>. Accessed 9 Oct 2014
- Stanglin D (2014a) Liberia says Dallas Ebola patient lied on exit documents. USA Today. <http://www.usatoday.com/story/news/nation/2014/10/02/liberia-ebola-patient-thomas-duncan-airport-screening/16591753/>. Initially accessed 2 Oct 2014
- Stanglin D (2014b) Rwanda to screen US visitors for Ebola. USA Today. <http://www.usatoday.com/story/news/world/2014/10/21/rwanda-united-states-ebola-screening/17653947/>. Accessed 21 Oct 2014
- Styles R (2014) Shunned by their families evicted from their homes and paid next to nothing: plight of African nurses risking their lives to treat Ebola patients revealed. The Daily Mail. <http://www.dailymail.co.uk/femail/article-2810935/Shunned-families-evicted-homes-paid-Plight-African-nurses-risking-lives-treat-ebola-patients-revealed.html>. Accessed 28 Oct 2014
- Sullivan P (2014) House Dems call for US troops to give direct Ebola care. The Hill. <http://thehill.com/blogs/blog-briefing-room/220832-house-dems-call-for-us-troops-to-give-direct-ebola-care>. Accessed 15 Oct 2014

- Sun L, Dennis B, Achenbach J (2014) Rate of new Ebola infections in Liberia is slowing, WHO says. *The Washington Post*. [https://www.washingtonpost.com/national/health-science/rate-of-new-ebola-infections-in-west-africa-is-slowing-who-says/2014/10/29/74e70a86-5fa0-11e4-9f3a-7e28799e0549\\_story.html?utm\\_term=.d23874794eac](https://www.washingtonpost.com/national/health-science/rate-of-new-ebola-infections-in-west-africa-is-slowing-who-says/2014/10/29/74e70a86-5fa0-11e4-9f3a-7e28799e0549_story.html?utm_term=.d23874794eac). Accessed 28 May 2017
- Svan JH, DeMotts J (2014) Germany-based aircraft take supplies to Liberia for Ebola fight. *Stars and Stripes*. <http://www.stripes.com/news/germany-based-aircraft-take-supplies-to-liberia-for-ebola-fight-1.307072>. Accessed 7 Oct 2014
- Szabo L (2014a) Family of Dallas Ebola patient quarantined. *USA Today*. <https://www.usatoday.com/story/news/nation/2014/10/02/ebola-family-quarantined/16579953/>. Accessed 30 Apr 2017
- Szabo L (2014b) Doctors: school closings in Texas, Ohio, unnecessary. *USA Today*. <https://www.usatoday.com/story/news/nation/2014/10/16/solon-ohio-ebola-school-closings/17343431/>. Accessed 28 May 2017
- Szabo L (2014c) Cameraman declared Ebola free after treatment. *USA Today*. <http://www.usatoday.com/story/news/nation/2014/10/21/ebola-cameraman-tweeting/17678173/>. Accessed 22 Oct 2014
- Tapper J (2014) Obama will name Ron Klain as Ebola Czar. *CNN*. <http://www.cnn.com/2014/10/17/politics/ebola-czar-ron-klain/index.html>. Accessed 17 Oct 2014
- Tharoor I (2014) The awful lack of Ebola supplies in Liberia. *The Washington Post*. <http://www.washingtonpost.com/news/morning-mix/wp/2014/10/15/liberia-needs-79940-more-body-bags/>. Accessed 17 Oct 2014
- The Health Site (2014) Ebola in Sierra Leone Norwegian doctor with Ebola cured and discharged. <http://www.thehealthsite.com/news/ebola-in-sierra-leone-norwegian-doctor-with-ebola-cured-and-discharged/>. Accessed 21 Oct 2014
- The Local (2014) Germany has 50 beds ready for Ebola cases. *The Local*. <http://www.thelocal.de/20141013/germany-has-50-beds-ready-for-ebola-cases-liberia>. Accessed 13 Oct 2014
- Tommy E (2014) Sierra Leone news: cumulative number of 8,478 households under isolation since May. *Awareness Times*. [http://news.sl/drwebsite/publish/article\\_200526320.shtml](http://news.sl/drwebsite/publish/article_200526320.shtml). Accessed 3 Oct 2014
- Townsend M (2014) Ebola deaths in Liberia are far higher than reported' as officials downplay epidemic. *The Guardian*. <http://www.theguardian.com/world/2014/oct/19/ebola-liberia-death-toll-data-soriosis-samura>. Accessed 18 Oct 2014
- Tsiaperas T (2014) First person to come out of quarantine after direct contact with Ebola patient Thomas Eric Duncan. *The Scoop Blog, Dallas News*. <http://thescoopblog.dallasnews.com/2014/10/hospital-workers-who-cared-for-countrys-first-ebola-patient-asked-to-limit-movement.html/>. Accessed 18 Oct 2014
- Udland M (2014) Hazmat suit company goes wild. *The Business Inside*. <http://www.businessinsider.in/Hazmat-Suit-Company-Goes-Wild/articleshow/44634220.cms>. Accessed 7 Oct 2014
- United Nations (2014) Ebola: back from outbreak epicentre, UN official says survivors now helping with care. 17 Oct 2014
- UNMEER (2014a) UN Mission for Ebola Emergency Response statement for clarification: no threat that Ebola is airborne. 3 Oct 2014
- UNMEER (2014b) UN mission for Ebola response: external situation report. 8 Oct 2014
- Vanden Brook T, Jackson D (2014) More U.S. troops being sent to battle Ebola. *USA Today*. <http://www.usatoday.com/story/news/world/2014/10/03/ebola-pentagon/16650617/>. Accessed 3 Oct 2014
- Villacorta N (2014) Hundreds of calls, but no new US Ebola cases – Did a computer raise risks of Ebola's spread? *Politico*. <http://www.politico.com/politicopulse/1014/politicopulse15564.html>. Accessed 6 Oct 2014
- Wagner M (2014) Dr. Nancy Snyderman, Ebola-exposed NBC News crew violates self-quarantine, placed in mandatory isolation. *Daily News*. <http://www.nydailynews.com/life-style/health/ebola-exposed-nbc-news-crew-violates-self-quarantine-isolation-article-1.1970958>. Accessed 11 Oct 2014

- Warner G (2014) Africa's Switzerland bans Ebola – but at what cost? NPR, WKNO. <http://wknofm.org/post/africas-switzerland-bans-ebola-what-cost>. Accessed 1 Oct 2014
- Washington Examiner (2014) CDC now watching 125 people for Ebola signs. Washington Examiner, NewsOK. <http://newsok.com/cdc-now-watching-125-people-for-ebola-signs/article/5353833>. Accessed 15 Oct 2014
- Wayne A (2014) Bill for Ebola adds up as care costs \$1,000 an hour. Bloomberg. <http://www.bloomberg.com/news/2014-10-07/bill-for-ebola-adds-up-as-care-costs-1-000-an-hour.html>. Accessed 8 Oct 2014
- Wheaton O (2014) Spain threatens to kill dog of nurse infected with Ebola sparking campaign to save it. Metro. <http://metro.co.uk/2014/10/08/outcry-as-spanish-government-threatens-to-kill-dog-of-nurse-infected-with-ebola-4897216/>. Accessed 8 Oct 2014
- Whitely J (2014) Paramedics, ER staff under Ebola observation in Dallas. First Coast News. <http://www.firstcoastnews.com/story/news/health/2014/10/01/paramedics-er-staff-ebola-observation-dallas/16520713/>. Accessed 1 Oct 2014
- Wiley J (2014) Dallas Ebola patient mourned as others are monitored for signs of disease. Sacramento Bee, Fort Worth Star-Telegram. <http://www.sacbee.com/2014/10/09/6771916/dallas-ebola-patient-mourned-as.html>. Accessed 9 Oct 2014
- Wines M (2014) Waste from Ebola poses challenge to hospitals. New York Times. [http://www.nytimes.com/2014/10/18/us/waste-from-ebola-poses-challenge-to-hospitals.html?\\_r=0](http://www.nytimes.com/2014/10/18/us/waste-from-ebola-poses-challenge-to-hospitals.html?_r=0). Accessed 17 Oct 2014
- Winter M (2014) Family: Amber Vinson free of Ebola virus. USA Today. <https://www.usatoday.com/story/news/nation/2014/10/22/ebola-amber-vinson-recovery/17742417/>. Accessed 3 Jun 2017
- WKYC (2014) Ebola patient had CDC OK to fly to Cleveland. <http://www.wkyc.com/story/news/local/akron/2014/10/15/ebola-patient-who-was-in-akron-identified/17304331/>. Accessed 15 Oct 2014
- Wolter O (2014) Lying about Ebola could bring \$300k fine says Masse. Windsorite. <http://windorite.ca/2014/10/lying-about-ebola-could-bring-300k-fine-says-masse/>. Accessed 20 Oct 2014
- Wonacott P (2014) In Sierra Leone, ambulances carry Ebola patients, big questions. Wall Str J. <http://online.wsj.com/articles/in-sierra-leone-ambulances-carry-ebola-patients-big-questions-1414686785>. Accessed 30 Oct 2014
- Worland J (2014) Obama hugs nurse who survived Ebola. Time. <http://time.com/3537430/obama-hugs-nurse-ebola-survivor/>. Accessed 4 Jun 2017
- World Health Organization (2014a) Ebola response roadmap situation report. 1 Oct 2014
- World Health Organization (2014b) Ebola response roadmap situation report. 3 Oct 2014
- World Health Organization (2014c) Ebola response roadmap situation report. 8 Oct 2014
- World Health Organization (2014d) Ebola response roadmap update. 10 Oct 2014
- World Health Organization (2014e) WHO Director-General's speech to the Regional Committee for the Western Pacific. 13 Oct 2014
- World Health Organization (2014f) Are the Ebola outbreaks in Nigeria and Senegal over? Ebola situation assessment. 14 Oct 2014
- World Health Organization (2014g) Ebola response roadmap situation report. 15 Oct 2014
- World Health Organization (2014h) Ebola response roadmap update. 17 Oct 2014
- World Health Organization (2014i) The outbreak of Ebola virus disease in Senegal is over. 17 Oct 2014
- World Health Organization (2014j) WHO congratulates Senegal on ending Ebola transmission. 17 Oct 2014
- World Health Organization (2014k) Nigeria is now free of Ebola virus transmission. 20 Oct 2014
- World Health Organization (2014l) Ebola response roadmap situation report. 22 Oct 2014
- World Health Organization (2014m) Mali confirms its first case of Ebola. 24 Oct 2014
- World Health Organization (2014n) Mali case, Ebola imported from Guinea. 10 Nov 2014
- World Health Organization (2014o) Ebola response roadmap situation report. 29 Oct 2014

- World Health Organization (2014p) Ebola response roadmap situation report. 31 Oct 2014
- World Health Organization (2014q) Personal protective equipment in the context of filovirus disease outbreak response, rapid advice guideline. October 2014
- WSOCTV (2014) Charlotte Ebola survivor donates plasma to NYC doc with virus. WSOCTV. <http://www.wsocvtv.com/news/update-charlotte-ebola-survivor-donates-plasma-nyc/113029728>. Accessed 4 Jun 2017
- Wulfhorst E, Malo S (2014) Doctor with Ebola in New York hospital after return from Guinea. Yahoo News. <http://news.yahoo.com/york-doctor-tests-positive-ebola-ny-times-004857476.html>. Accessed 24 Oct 2014
- Yan H (2014a) 1st Ebola diagnosis in the United States: should we worry? CNN. <http://www.cnn.com/2014/10/01/health/ebola-us-no-reason-to-panic/>. Accessed 7 Apr 2017
- Yan H (2014b) 2nd health care worker tests positive for Ebola at Dallas hospital. CNN. [http://www.cnn.com/2014/10/15/health/texas-ebola-outbreak/index.html?hpt=hp\\_t1](http://www.cnn.com/2014/10/15/health/texas-ebola-outbreak/index.html?hpt=hp_t1). Accessed 15 Oct 2014
- Yan H, Shoichet CE (2014) Texas hospital official: we are 'deeply sorry' about Ebola mistakes. CNN. [http://www.cnn.com/2014/10/16/health/us-ebola/index.html?hpt=hp\\_t1](http://www.cnn.com/2014/10/16/health/us-ebola/index.html?hpt=hp_t1). Accessed 16 Oct 2014
- Zeeble (2014) Following 2nd Ebola nurse diagnosis, Dallas' village reacts with caution, Concern. KERA News. <http://keranews.org/post/following-2nd-ebola-nurse-diagnosis-dallas-village-reacts-caution-concern>. Accessed 28 May 2017
- Zoroya G (2014) Pentagon builds units to transport Ebola patients. USA Today. <https://www.usa-today.com/story/news/world/2014/10/26/ebola-transport-military-patients-aircraft-phoenix-air/17669025/>. Accessed 7 Jun 2017
- Zwirko W (2014) CDC: 114 people tested for Ebola in Texas. KHOU. <http://www.khou.com/story/news/local/texas/2014/10/04/cdc-114-people-tested-for-ebola-in-texas/16718861/>. Accessed 4 Oct 2014