Ebola outbreak

The current Ebola outbreak is the largest since the virus was discovered in central Africa in 1976. Thousands have already died as health workers battle to contain the epidemic and treat those exposed. Extensive public health measures seen as the key to ending the crisis, meanwhile researchers are fast-tracking trials of experimental drugs and vaccine candidates in the hope that they will help reduce the death toll and protect those on the front line of the outbreak. Nature reporter Erika Check Hayden travelled to Sierra Leone in December 2014 to report on the outbreak and efforts to bring it to an end.

Here you can follow Nature's full, up-to-date coverage of the crisis as it unfolds, read a selection of stories about Ebola from our archive, and see recent research papers related to Ebola.

Image credit: Tommy Trenchard

- Dispatches
- Webinar
- Highlights
- News
- News feature
- Commentary
Dispatches

- [Ebola: An eyewitness account from Sierra Leone](#)

  *Nature* reports from the front line of the epidemic.

  *Nature* (01 December 2014)

Webinar

- [Understanding the Ebola virus](#)

  *Nature* (17 December 2014)

Highlights

- [Ebola experts seek to expand testing](#)

  Rapid local diagnosis is essential for curbing spread.

  *Nature* (10 December 2014)

- [Positive results spur race for Ebola vaccine](#)
With trials under way, scientists are working out how to give vaccines in affected regions.

_Nature_ (02 December 2014)

- **Models overestimate Ebola cases**

Rate of infection in Liberia seems to plateau, raising questions over the usefulness of models in an outbreak.

_Nature_ (04 November 2014)

- **The Ebola questions**

Scientists know a lot about the virus that causes Ebola — but there are many puzzles that they have yet to solve.

_Nature_ (29 October 2014)

**News**

- **Ebola experts seek to expand testing**

Rapid local diagnosis is essential for curbing spread.

_Nature_ (10 December 2014)
• **Positive results spur race for Ebola vaccine**

With trials under way, scientists are working out how to give vaccines in affected regions.

*Nature* (02 December 2014)

• **US Ebola vaccine trial reports positive results**

A related vaccine is due to be tested in West Africa in 2015.

*Nature* (26 November 2014)

• **Ebola trials to start in December**

Experimental treatments to be tested in Guinea at Médecins Sans Frontières sites.

*Nature* (13 November 2014)

• **Ethical dilemma for Ebola drug trials**

Public-health officials split on use of control groups in tests of experimental treatments.

*Nature* (11 November 2014)

• **Leader of European virus-response network unseated**
Critics say timing of move could hamper response to Ebola epidemic.

*Nature* (10 November 2014)

- **Models overestimate Ebola cases**

  Rate of infection in Liberia seems to plateau, raising questions over the usefulness of models in an outbreak.

  *Nature* (04 November 2014)

- **Ebola controls at US medical meeting spark protest**

  Researchers say that exclusion of those recently in affected areas could undermine Ebola response.

  *Nature* (30 October 2014)

- **WHO plans for millions of doses of Ebola vaccine by 2015**

  Hundreds of thousands of doses should be available to help affected countries before the end of June.

  *Nature* (24 October 2014)

- **Ebola by the numbers: The size, spread and cost of an outbreak**

  As the virus continues to rampage in West Africa, Nature’s graphic offers a guide to the figures that matter.
Nature (15 October 2014)

- **Spanish Ebola case highlights risks to health-care workers**

A nurse who cared for an Ebola patient repatriated to a Madrid hospital has contracted the disease. But the news is, unfortunately, not surprising.

Nature (07 October 2014)

- **Ethnography could help in Ebola crisis**

Tapping into local cultures is key to curbing outbreak, says anthropologist Sharon Abramowitz.

Nature (03 October 2014)

- **How disease detectives are fighting Ebola's spread**

Rapid 'contact tracing' will be key to containing the disease in west Africa.

Nature (02 October 2014)

- **Ebola outbreak shuts down malaria-control efforts**

Public-health experts fear that one epidemic may fuel another in West Africa

Nature (01 October 2014)

- **First US Ebola case diagnosed**
Man in Dallas, Texas, is first person diagnosed outside Africa with the Zaire species of virus.

*Nature* (30 September 2014)

- **Global Ebola response kicks into gear at last**

  US and UN mobilizations are welcome but overdue

  *Nature* (23 September 2014)

- **UN Security Council says Ebola is security threat**

  International action needed to tackle “greatest peace-time challenge the United Nations have ever faced”.

  *Nature* (19 September 2014)

- **Ebola economic impacts to hit $359 million in 2014**

  The Ebola outbreak in West Africa is devastating the economies of Liberia, Guinea, and Sierra Leone.

  *Nature* (17 September 2014)

- **United States commits troops and cash to Ebola fight**
Obama pledges 3,000 personnel and roughly $750 million to stem outbreak in West Africa.

*Nature* (16 September 2014)

- **Explainer: Will the Ebola virus go airborne?**

  Experts say the possibility remains remote.

  *Scientific American* (16 September 2014)

- **Blood transfusion called priority Ebola therapy**

  Data scarce on treatment effectiveness, but experts say it could be tested on large scale.

  *Nature* (05 September 2014)

- **Ebola drug trials set to begin amid crisis**

  Testing drugs in the middle of deadly disease outbreak is challenging but can be done.

  *Nature* (02 September 2014)

- **Ebola drug saves infected monkeys**

  ZMapp is the first treatment to completely protect animals after they show symptoms of disease.

  *Nature* (29 August 2014)
• **Cost to control Ebola shoots up**

World Health Organization projects 20,000 cases and requests $490 million to control epidemic.

*Nature (28 August 2014)*

• **Ebola virus mutating rapidly as it spreads**

Outbreak likely originated with a single animal-to-human transmission.

*Nature (28 August 2014)*

• **Ebola doctor reveals how infected Americans were cured**

Techniques used in the US to treat symptoms and subdue the virus in patients could work overseas, Bruce Ribner says.

*Scientific American (28 August 2014)*

• **World struggles to stop Ebola**

Greater international assistance is needed to quell the epidemic, say health officials.

*Nature (26 August 2014)*

• **Drug saves monkeys from close relative of Ebola**
Animals spared from Marburg virus even when treated three days after infection.

*Nature* (20 August 2014)

- **Should experimental drugs be used in the Ebola outbreak?**

*Nature* examines the risks and benefits of unproven Ebola treatments, as World Health Organization says it is ethical to use them in West African crisis.

*Nature* (12 August 2014)

- **Ebola declared a public-health emergency**

World Health Organization announcement could shift focus to basic public health.

*Nature* (08 August 2014)

- **Largest ever Ebola outbreak is not a global threat**

Although the virus is exerting a heavy toll in West Africa, it does not spread easily.

*Nature* (30 July 2014)

- **Ebola treatments caught in limbo**
Logistics and lack of funds keep experimental drugs and vaccines from being used in Africa outbreak.

_Nature_ (29 July 2014)

**News feature**

- **The Ebola questions**

  Scientists know a lot about the virus that causes Ebola — but there are many puzzles that they have yet to solve.

  _Nature_ (29 October 2014)

- **Infectious disease: Ebola’s lost ward**

  A hospital in Sierra Leone has struggled to continue its research amid the worst Ebola outbreak in history.

  _Nature_ (24 September 2014)

**Commentary**

- **Ebola opportunity**

  A slowdown in new cases offers a chance for control efforts to get ahead of the epidemic.

  _Nature_ (26 November 2014)

- **Infectious disease: Tough choices to reduce Ebola transmission**

  ...
Christopher J. M. Whitty and colleagues explain why the United Kingdom is funding many small community centres to isolate suspected cases in Sierra Leone.

*Nature* (06 November 2014)

- **Ebola: learn from the past**

  Drawing on his experiences in previous outbreaks, David L. Heymann calls for rapid diagnosis, patient isolation, community engagement and clinical trials.

  *Nature* (09 October 2014)

- **Out of Africa**

  The Ebola outbreak in West Africa must be shut down now, or the disease will continue to spread.

  *Nature* (07 October 2014)

- **First response, revisited**

  The Ebola outbreak in West Africa has starkly exposed major gaps in plans to tackle emerging infectious diseases. Lessons must be learned.

  *Nature* (23 September 2014)

- **Make diagnostic centres a priority for Ebola crisis**

  Bottlenecks in testing samples for Ebola leave patients stranded for days in isolation wards and raise fears of seeking treatment, says J. Daniel Kelly.
Nature (09 September 2014)

- **Ebola: time to act**

  Governments and research organizations must mobilize to end the West African outbreak.

Nature (09 September 2014)

- **Scale up the supply of experimental Ebola drugs**

  Estimates of the probable impact of the outbreak show that existing stocks of potentially useful medicines are insufficient, says Oliver Brady.

Nature (20 August 2014)

- **Barriers to trust**

  An outbreak of Ebola highlights the difficulties of implementing public-health measures.

Nature (09 July 2014)

**News Archive**

- **Ebola outbreak tests local surveillance**

  Ugandan laboratory helps to minimize number of cases.

Nature (14 August 2012)
• **Antibody cocktail cures monkeys of Ebola**

  Regime extends treatment window from minutes to hours.

  *Nature* (13 June 2012)

• **Ebola outbreak has experts rooting for answers**

  Virus subtype suspected in Philippine swine.

  *Nature* (21 January 2009)

• **'Safe' form of Ebola created**

  Advance could help increase research into deadly virus.


**Research papers**

• **A comprehensive database of the geographic spread of past human Ebola outbreaks**

  Adrian Mylne, Oliver J. Brady, Zhi Huang, David M. Pigott, Nick Golding, Moritz U.G. Kraemer & Simon I. Hay.

  *Scientific Data* (23 October 2014)

• **Chimpanzee adenovirus vaccine generates acute and durable protective immunity against ebolavirus challenge**

  Daphne A Stanley, Anna N Honko, Clement Asiedu, John C Trefry, Annie W Lau-Kilby, Joshua C Johnson, Lisa Hensley, Virginia Ammendola, Adele Abbate, Fabiana Grazioli, Kathryn E Foulds, Cheng Cheng, Lingshu Wang, Mitzi M Donaldson, Stefano Colloca,

*Nature Medicine* (07 September 2014)

- **Reversion of advanced Ebola virus disease in nonhuman primates with ZMapp**

  *Nature* (29 August 2014)

- **Protection against filovirus diseases by a novel broad-spectrum nucleoside analogue BCX4430**

  *Nature* (02 March 2014)

- **A new player in the puzzle of filovirus entry**
  Judith M. White & Kathryn L. Schornberg.

  *Nature Reviews Microbiology* (11 April 2012)

- **Ebola virus entry requires the cholesterol transporter Niemann-Pick C1**

  *Nature* (24 August 2011)

**See other News & Comment articles from *Nature***

- **Undersea robot explores life below Arctic ice**
Curiosity rover sniffs Martian methane

Scientific method: Defend the integrity of physics

Features of the year

Putin’s Russia divides and enrages scientists
First trials of blood-based Ebola therapy kick off

Lima talks map out path to climate treaty

US budget deal gives small increases to research

Superconductivity record breaks under pressure
• NIH ends longitudinal children’s study

• Cloud monitor to hitch a ride on the space station

• Major cloud-seeding test gives mixed results

• Flock of geneticists redraws bird family tree
• Fate of ocean plastic remains a mystery

• In retrospect: Elective Affinities

• Genetics: Genius on the fly

• Biodiversity: Life – a status report
Microbiology: Ditch the term pathogen

Stem cells: The black box of reprogramming

Seven days: 5–11 December 2014

Social Media Box - AML

- E-alert
- RSS
- Facebook
- Twitter
Recent

1. Undersea robot explores life below Arctic ice
   Nature 16 December 2014

2. Curiosity rover sniffs Martian methane
   Nature 16 December 2014

3. Scientific method: Defend the integrity of physics
   Nature 16 December 2014

4. Features of the year
   Nature 16 December 2014

5. Putin’s Russia divides and enrages scientists
   Nature 16 December 2014

Read

1. Nature promotes read-only sharing by subscribers
   Nature 02 Dec 2014

2. Natural gas: The fracking fallacy
   Nature 03 Dec 2014

3. Harsh reality
4. *Homo erectus* made world's oldest doodle 500,000 years ago
   Nature 03 Dec 2014

5. **Publishing: The peer-review scam**
   Nature 26 Nov 2014

**Commented**

1. **Publishing: The peer-review scam**
   Nature 26 Nov 2014 31 comments

2. Open access is tiring out peer reviewers
   Nature 25 Nov 2014 26 comments

3. Nature makes all articles free to view
   Nature 02 Dec 2014 20 comments

4. Science should keep out of partisan politics
   Nature 02 Dec 2014 19 comments

5. Harsh reality
   Nature 03 Dec 2014 12 comments

**Emailed**

1. Advertising link causes blogger strike
   Nature 21 Jul 2010

2. Geology: A trip to dinosaur time
3. **Robotic roach creates order from chaos**  
Nature 17 Jan 2010

4. **Natural gas: The fracking fallacy**  
Nature 03 Dec 2014

5. **Immune cells boost cancer survival from months to years**  
Nature 10 Dec 2014

Science jobs from nature jobs

- **Scientist Position in Epigenetics**  
  University of Toronto

- **Scientist Position in Human Molecular Genetics**  
  University of Toronto

- **Graduate Program**  
  Janelia Research Campus

- **Interventional Gastroenterology Physician Job**  
  Kalispell Gastroenterology

- **Journal Manager – Physics, Chemistry or Biology**