

# Welcome to Viruses in May

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NSW Ministry of Health

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Health

# Emerging viral threats

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# Preparedness

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- Preparedness remains a high priority for NSW Health
- We continue to review and update our plans as new evidence and technologies emerge to help understand and manage the threat of emerging viruses
- With new diagnostic technologies to identify novel viruses comes the need to rapidly distinguish pathogenic from harmless
- Increased understanding of the process of emergence and spread of viruses provides more potential for predicting risk
- New risk assessment approaches needed to identify those viruses most likely to cause human disease

# Responses for emerging viruses

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- Emergence of new pathogenic viruses is inevitable if not fully predictable
- Effective responses rely heavily on virology expertise to detect and characterise novel viruses and guide action
- Effective response also require:
  - effective surveillance systems
  - excellent epidemiological and laboratory investigations
  - surge capacity for labs, health care and public health
  - effective and regular communication systems
  - flexible response and recovery plans.

# Some response examples...

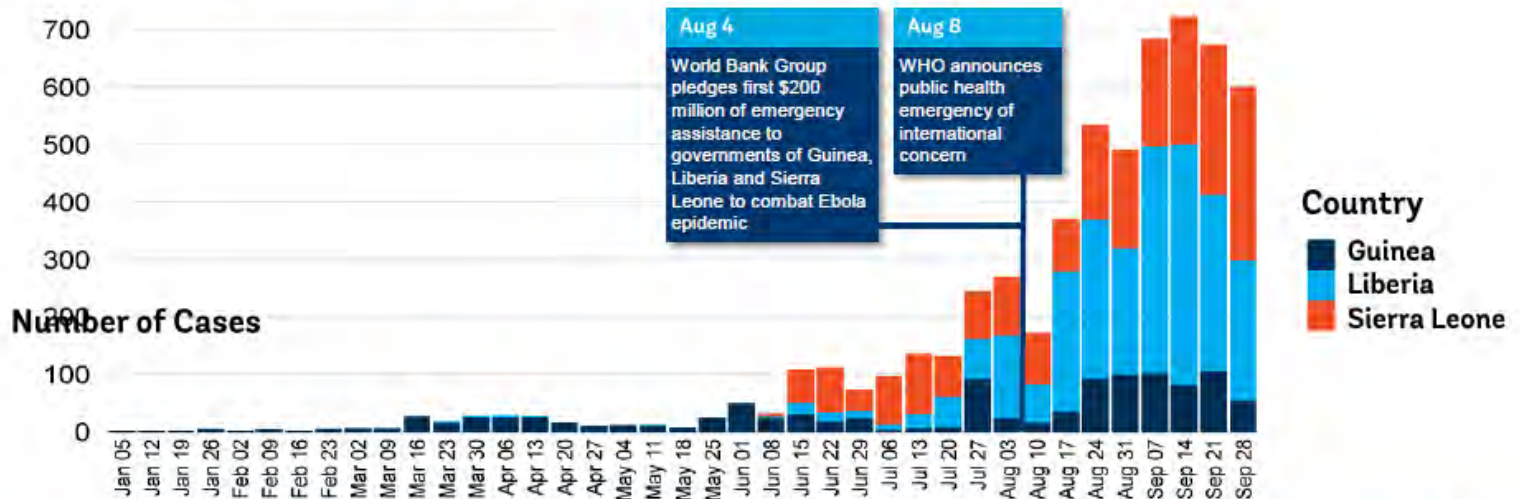
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# Ebola virus disease

- Monitoring of the West African outbreak from early 2014

## Timeline of Ebola Epidemic of 2013-2015



Dec 13	Mar 22	Mar 30	Apr 1	May 26	Mid-June	Jun 23	End of July	Aug 12	Sep 08
Outbreak begins in Méliandou, Guinea	WHO reports confirmed Ebola outbreak in Guinea	WHO reports two confirmed Ebola cases in Liberia	MSF calls outbreak in Guinea "unprecedented"	WHO reports Ebola outbreak confirmed in Sierra Leone	Over 100 new infections per week reported to WHO	MSF calls Ebola epidemic "out of control" in Guinea, Liberia and Sierra Leone	Over 200 new infections per week reported to WHO	WHO reports that more than 1000 total deaths from Ebola epidemic	Over 700 new infections per week reported to WHO

# Ebola virus disease

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- Rapid review and update of EVD response plans
  - state and national
  - technical advisory groups
- Enhanced surveillance of returned travellers
  - Borders and EDs
  - Public health monitoring
- Review and strengthening of VHF patient management preparedness and diagnostic capacity
  - Westmead Hospital isolation rooms
  - ICPMR PC-4 VHF testing capacity

# Ebola virus disease

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## **Broader health system preparedness**


- Series of updates and technical discussions on EVD preparedness with key clinical groups and stakeholders:
  - ID/Clinical Micro, ICP, ED professionals, Labs
  - HSFACs, Ambulance
- Guidance on and targeted procurement of appropriate PPE
- New ICP training resources for high-level VHF PPE training and infection control
- Statewide consensus on PPE training, VHF exercises
- Resources for ED and GP waiting rooms


#### HEALTHCARE ASSOCIATED INFECTIONS

- ▶ Overview
- ▶ Key Documents
- ▶ HAI Policies & Guidelines
- ▶ Sterilization of Medical Equipment
- ▶ Environmental Cleaning
- ▶ Other HAI Resources
- ▶ PPE Training for VHF
- ▶ M.chlismaera (Heater Coolers)
- ▶ HAI Resource List
- ▶ External Links

#### CONTACT US

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### PERSONAL PROTECTIVE EQUIPMENT TRAINING FOR VIRAL HAEMORRHAGIC FEVER (VHF)

The videos below are available as high resolution videos on YouTube, or the highest resolution possible on our system. If you wish to use high resolution copies locally (same resolution as YouTube), please contact us via email [CEC-HAI@health.nsw.gov.au](mailto:CEC-HAI@health.nsw.gov.au).



Terminal Clean of a VHF Room (Nov 2014)

 [YouTube video](#) (high resolution)

or via [MP4 download](#) ~38 MB



Role of the PPE Buddy (Nov 2014)

 [YouTube video](#) (high resolution)

or via [MP4 download](#) ~34 MB

# Enterovirus 71 – March 2013

- Outbreak in young children of illness associated with severe neurological symptoms during a period of increased HFMD activity
- Notification by astute clinicians – Northern Beaches
- Rapid development of discriminatory testing from other enteroviruses at SEALS

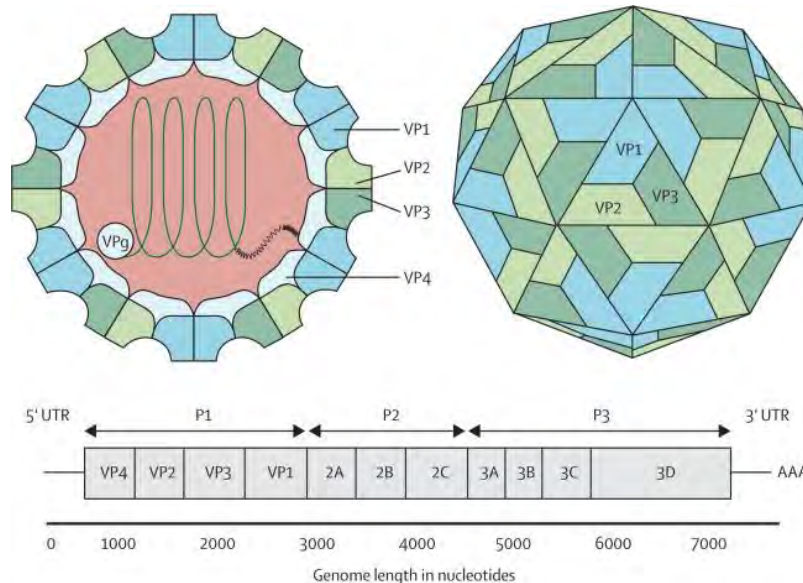
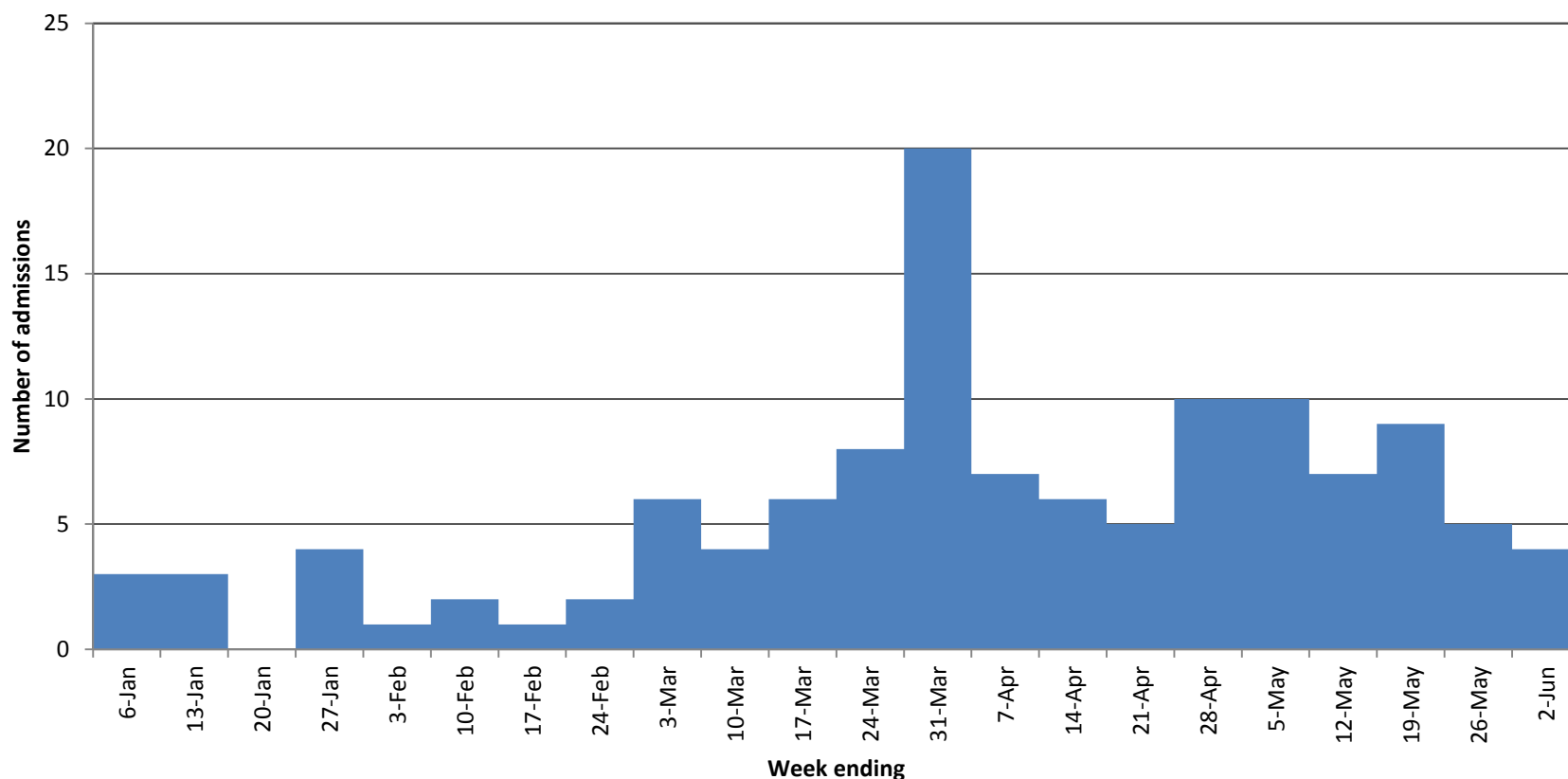


Image: Science Direct

**Weekly number of cases aged less than 10 years, admitted to the Sydney Children's Hospital Network with clinical features of meningitis, encephalitis, meningoencephalitis, acute flaccid paralysis or transverse myelitis and suspected or confirmed enterovirus infection  
1 January 2013 to 2 June 2013**



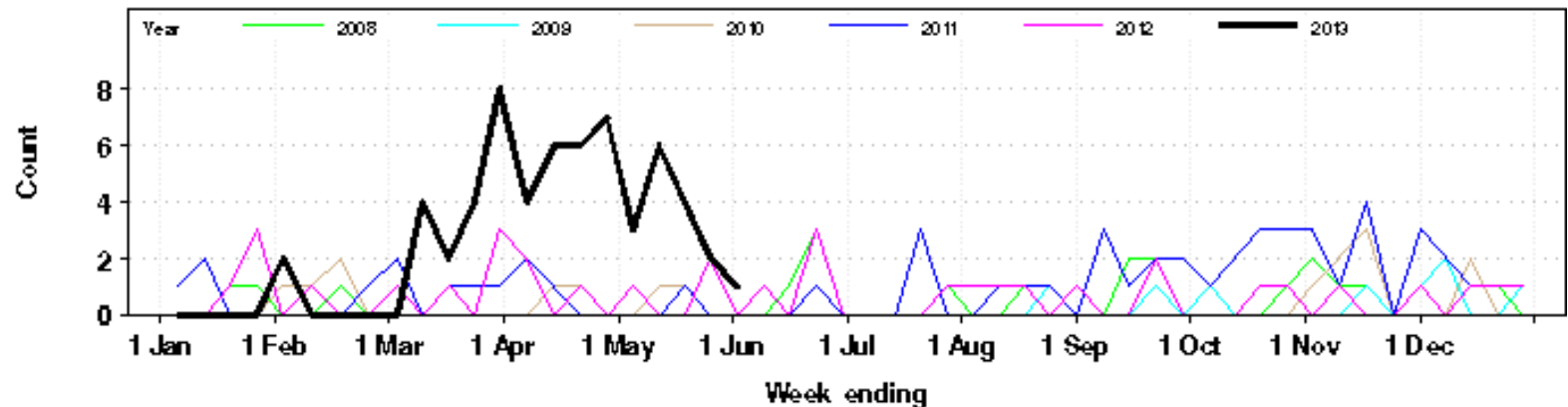
# Enterovirus 71

## Response measures

- Clinical and public health collaboration for alerts for heightened surveillance and clinical management guidance
- Validation of ED near real-time surveillance (PHREDSS) as a valuable on-going surveillance tool

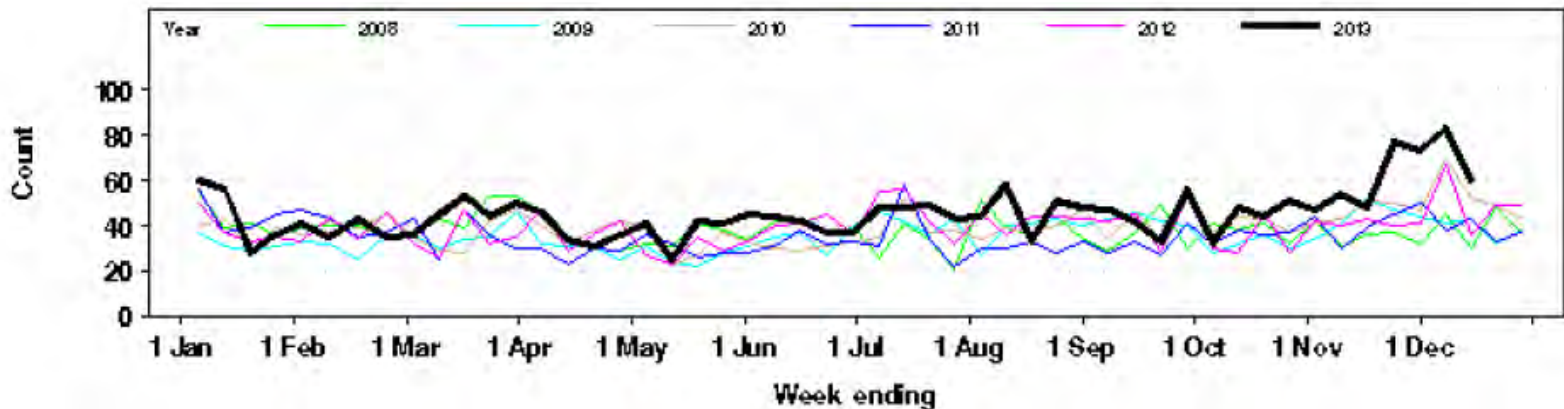
Total weekly counts of ED admissions for HFMD, for 2013 up to 2 June (black line), compared with 5 previous years (coloured lines), children aged <10 years

Total 1-week counts



# Parechovirus (HPeV)

- Children's Hospital Westmead alert November 2013. Infants < 1 year with fever, rash, irritability.
- Supported by a refined PHREDSS ED report: **Fever/unspecified infection that were admitted, children aged under 1 year (2013 – black line)**



- Clinical testing identified HPeV genotype 3
- Enhanced case surveillance: SCH, CHW and JHH. 183 infant cases confirmed up to February 2014

# Zoonoses



# Collaboration on zoonoses

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- Close collaboration with DPI and other animal health agencies remains vital in the detection and assessment of emerging animal viruses that may pose a threat to humans
- Zoonotic diseases need to be a key concern of:
  - human health agencies (including virologists)
  - animal health authorities
  - agriculture producers
  - wildlife resource managersand all should be working collaboratively.

# Thank you

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