



# Preparation for Infectious Hazards affecting the Community

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Chair UK Advisory Committee on Dangerous Pathogens

# United Kingdom Advisory Committee on Dangerous Pathogens (ACDP)

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- Advises Government on infection hazards proleptically and in emergency
- Tripartite Expert Committee
  - Department of Health
  - Health and Safety Executive
  - Department of Environment and Rural Affairs
- Wide expertise across Human and Animal Health
- Meets three times per year
  - Ad hoc subcommittees

# Advisory Committee on Dangerous Pathogens

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- Established 40 years ago
  - Primarily for workplace infection
- Strategic remit
  - Risk assessment
- Statutory Remit
  - Annual National Risk Assessment of Infection
  - Maintenance of Microbiological Hazard Categories CL2, CL3, and CL4
  - Management of Group 4 viral haemorrhagic fevers and similar infections

# Microbiological Hazards Group

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## **Containment Level 3 (CL3)**

- Influenza
- Lethal infection but vaccine and antiviral chemotherapy
- Zoonosis

## **Containment Level 4 (CL4)**

- Viral haemorrhagic fevers
- EBOLA, LASSA
- No vaccine, supportive treatment (mortality around 50-60%)
- New infections – SARS, ZIKA

# Influenza: Zoonosis

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- Poultry principal vector
  - Culling intensive poultry farms
- Mutation renders humans susceptible
- Serological classification on haemagglutinin & neuraminidase (e.g. H5N7, H1N1)
- Best assessment of animal prevalent strain for vaccine

# ACDP Subcommittees

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- Prion disease
- Research:
  - 1 in 2000 tonsillar tissues prion positive
  - 1 in 2500 appendix specimens prion positive

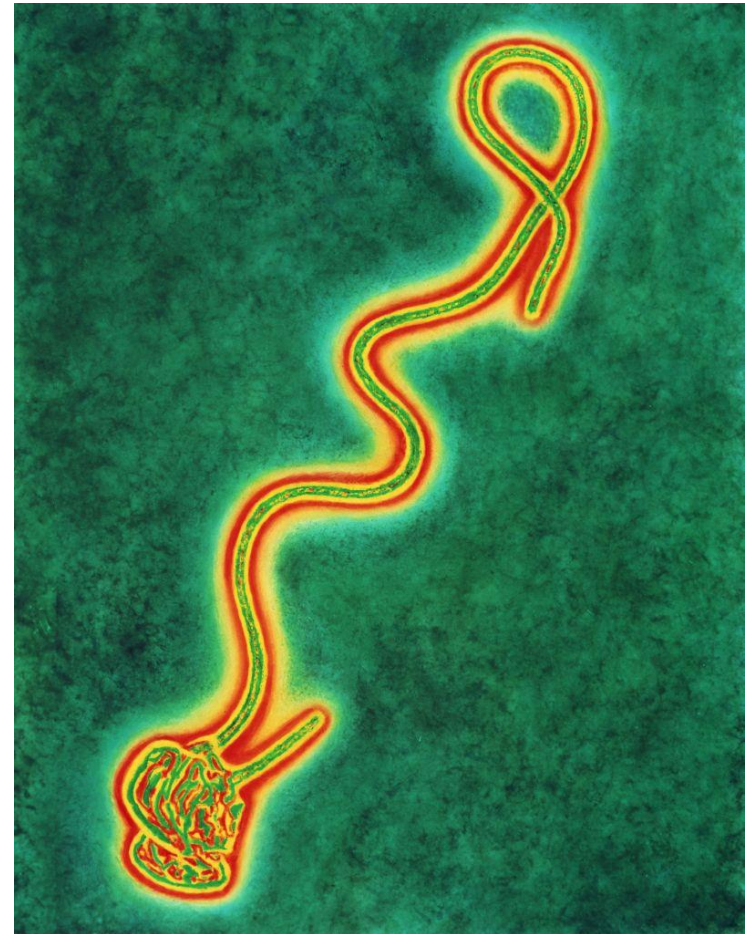
## **? clinical significance**

- Pet passports
  - Rabies vaccination
  - ? Hydatid treatment

# EBOLA

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- First ACDP guidance 23 years ago
  - Laboratory containment safety
  - Disinfection and air filtration
  - Specialised CL4 laboratories
- Two laboratories in the UK
  - PHE
  - Porton, Colindale
- Research
  - Epidemiology
  - Viral pathogenesis
  - Diagnosis





Department  
of Health



# Management of Hazard Group 4 viral haemorrhagic fevers and similar human infectious diseases of high consequence

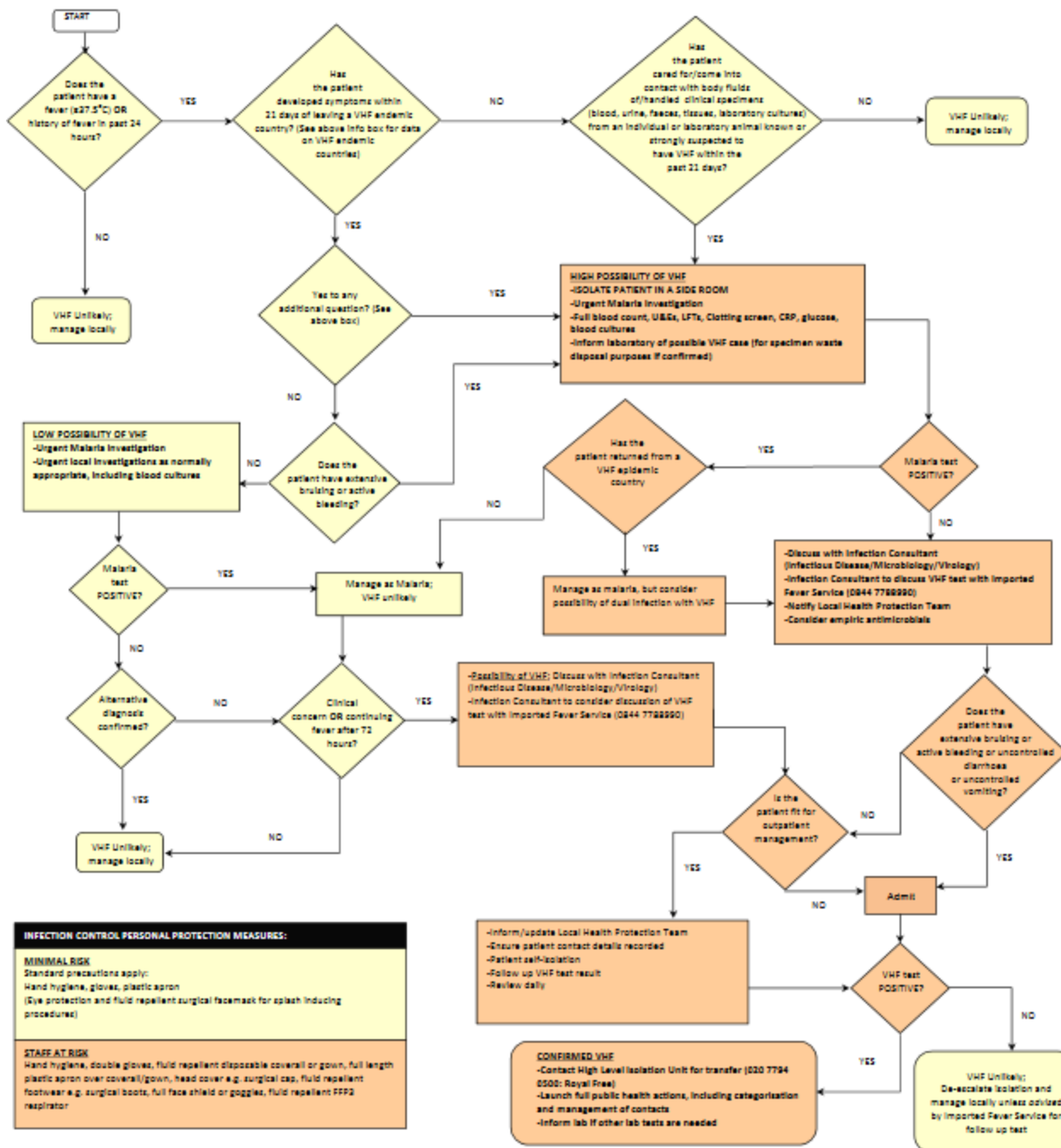
Advisory Committee on Dangerous Pathogens



# Guidance: Management of group 4 viral haemorrhagic fevers and similar infections

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- Regular revisions
- Human containment
  - Awareness and diagnosis
  - Protection of workforce
  - Transport of patients
  - Medical and nursing care
- Establishment of specialised clinical units (mothballed)
- Trexler clinical isolation



INFECTION CONTROL PERSONAL PROTECTION MEASURES:	
<b>MINIMAL RISK</b>	Standard precautions apply: Hand hygiene, gloves, plastic apron (Eye protection and fluid repellent surgical facemask for splash inducing procedures)
<b>STAFF AT RISK</b>	Hand hygiene, double gloves, fluid repellent disposable coverall or gown, full length plastic apron over coverall/gown, head cover e.g. surgical cap, fluid repellent footwear e.g. surgical boots, full face shield or goggles, fluid repellent FFP3 respirator

# Trexler isolation unit

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# Containment

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# Containment

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# EBOLA epidemics

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- Classical cordon sanitaire to contain infection
- 2015 Epidemic City based
  - UK responsible for Sierra Leone
- Guidance from ACDP
  - Provision of UK facilities
  - Provision of diagnostic and clinical facilities in Sierra Leone
  - Department of Health responsible

# Field Hospital

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# EBOLA: UK Response

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- ADDP meet weekly to update guidance in the light of developing epidemic
- Diagnostic Algorithm sent to every doctor in UK
  - (Emergency Centres, GP)
- Close collaboration with Air Force and ambulance service for specialised patient transport



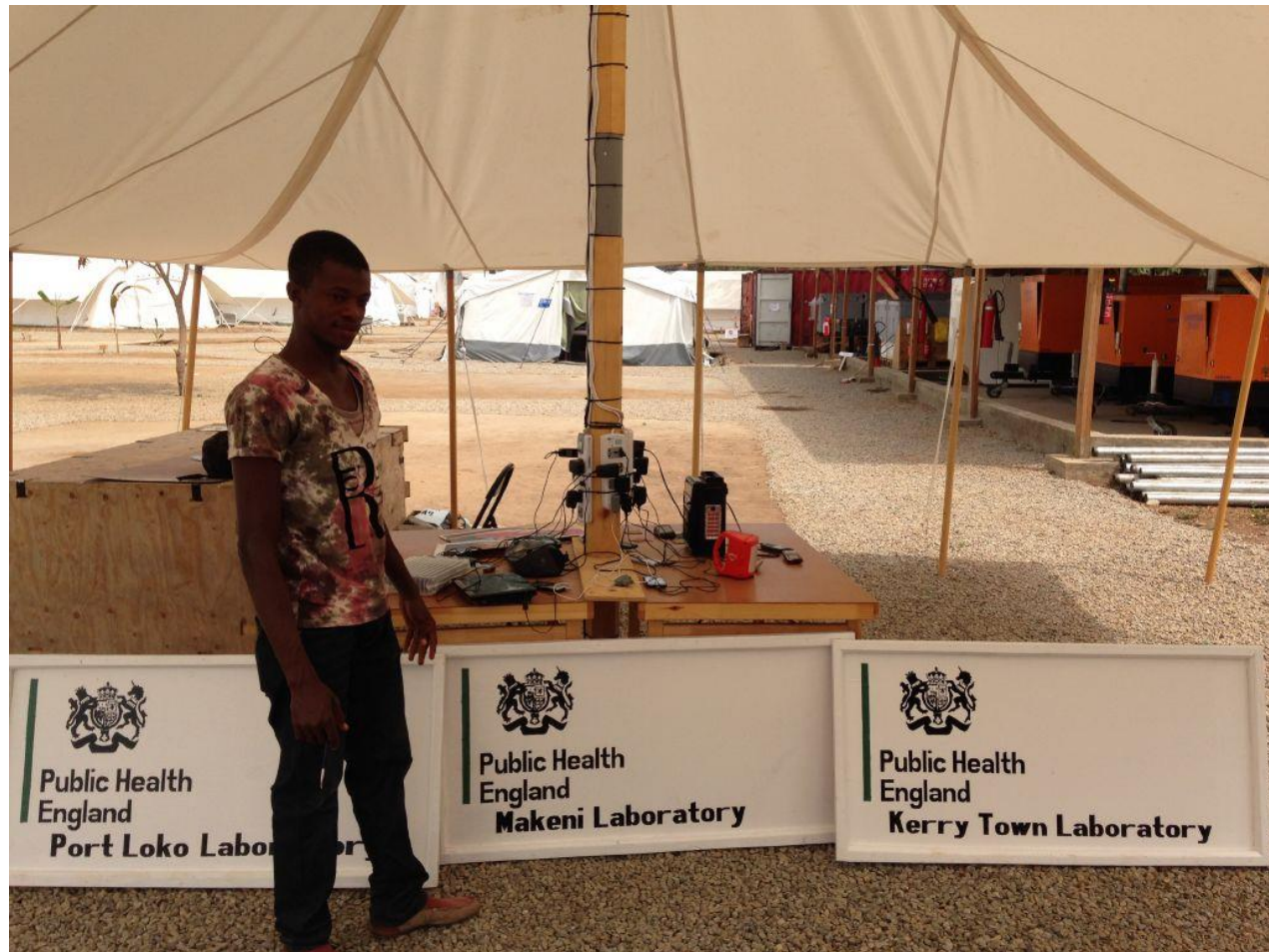
# EBOLA: Sierra Leone

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- ACDP guidance
  - Detailed, enabled rapid procurement of equipment
- Public Health England
  - Responsible for establishing rapid diagnosis
  - Established regional service based on PCR
- Massive local response
  - 3000 individuals from UK involved

# PHE response

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# Screening and clinical facilities for EBOLA in UK

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- Only rapid screening: body temperature
- Introduced at airports after political decision
- Insensitive – incubation period
- Rapid PCR diagnosis established
- Emergency overflow clinical facilities in six centres throughout UK

# Challenges during Epidemic

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- Routine blood diagnostics: FBC, biochemistry
- Roche advised their diagnostic equipment should not be used
- ACDP immediately entered into discussion with Roche
- Disinfection solutions for laboratory equipment problem

# Conclusions

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- 'Better safe than sorry'
- ACDP establishes core strategies to protect communities and workforce against infection
- ACDP responds to emerging situations advising Government response