



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)

- 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

- 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

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

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

ACDP Subcommittees

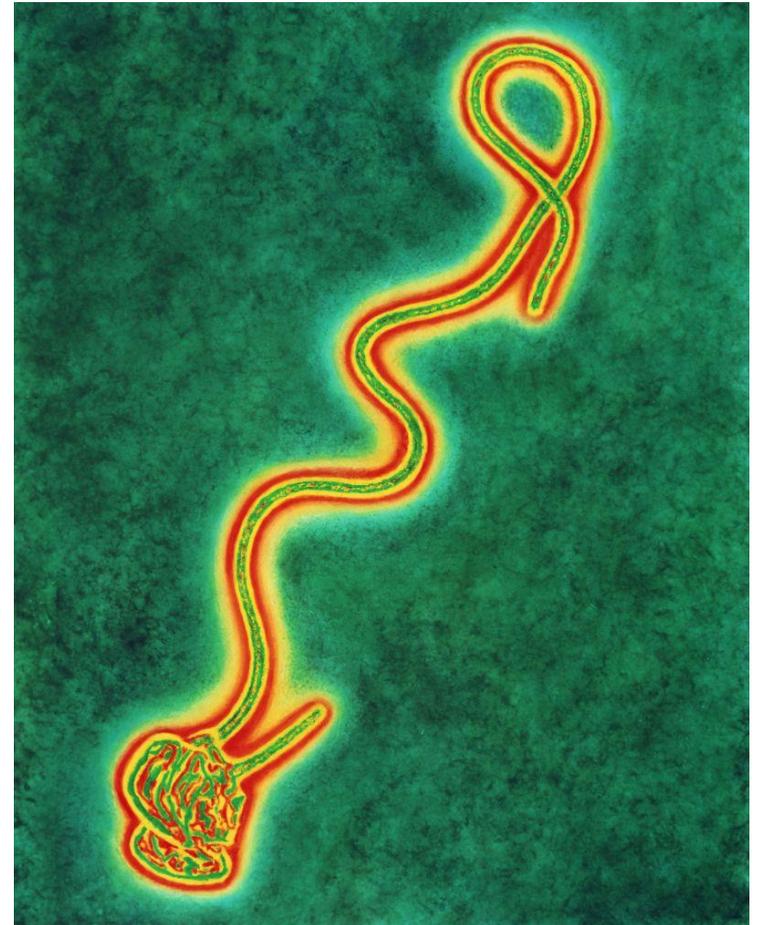
- Prion disease
- Research:
 - 1 in 2000 tonsillar tissues prion positive
 - 1 in 2500 appendix specimens prion positive

? clinical significance

- Pet passports
 - Rabies vaccination
 - ? Hydatid treatment

EBOLA

- 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

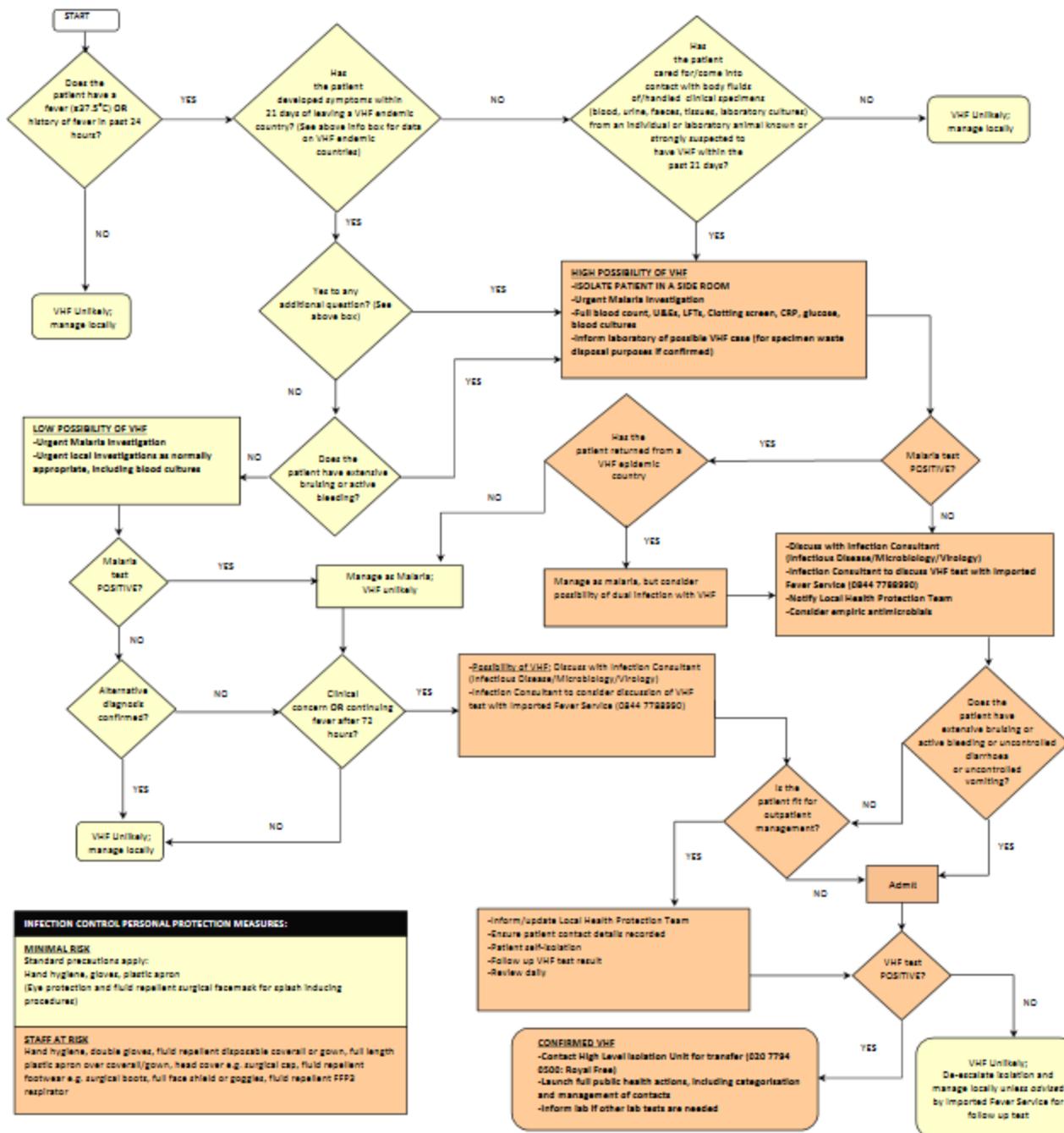


Management of Hazard Group 4 viral haemorrhagic fevers and similar human infectious diseases of high consequence

Advisory Committee on Dangerous Pathogens

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

- 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:	
MINIMAL RISK	Standard precautions apply: Hand hygiene, gloves, plastic apron (Eye protection and fluid repellent surgical facemask for splash inducing procedures)
STAFF AT RISK	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



Containment



Containment



EBOLA epidemics

- 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



EBOLA: UK Response

- 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

- 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



Screening and clinical facilities for EBOLA in UK

- 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

- 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

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