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**ACDP/86/P4**

## **ADVISORY COMMITTEE ON DANGEROUS PATHOGENS**

### **Secretariat Report for the 86<sup>th</sup> meeting of the ACDP, and matters arising from the 85<sup>th</sup> meeting**

1. This paper includes reports on progress made with matters arising from the last meeting, reports from ACDP Working Groups and other relevant advisory committees, as well as other items that may be of interest to members.

#### **Matters arising from the 84<sup>th</sup> meeting**

##### Letter from the Chair to the CMO regarding serological surveillance in UK outbreaks of avian influenza

2. The Chair wrote to the CMO following discussions at the last ACDP meeting, raising the issue of preparedness for detailed sero-epidemiological surveillance of outbreaks of infection. The particular context addressed was data which could be collected from a longitudinal study of poultry workers exposed to H5N1 during the outbreak in Suffolk.
3. The CMO has responded and thanked the Chair for raising this issue, and for the work done by ACDP in considering the wider public health risks of avian influenza. CMO has agreed that sero-epidemiological surveillance studies are important, and that the Department reminded the HPA in February that it expected such studies to form part of the routine public health response to outbreaks. HPA are currently taking forward such a study in relation to the Suffolk H5N1 outbreak, and guidance has been given on the priority groups that should be included for follow up. CMO anticipates that the results of this study will be presented to the ACDP in due course.

##### Q fever studies in Northern Ireland

4. Following discussions on the Q fever outbreak in Scotland at the last meeting, Dr. Skan will report on Q fever serological studies carried out in Northern Ireland.
5. It is hoped that Dr. Skan's colleague who has conducted these studies will attend the next ACDP meeting to present his studies in full to the committee.

#### **Reports from ACDP Working Groups**

##### Steering Group for revision of the ACDP guidance on blood-borne viruses

6. The virology and health & safety legislation sections are in the process of being re-drafted. Despite some delay in obtaining contributions, it is anticipated that these sections will be circulated to expert members of the steering group before the ACDP meeting in June. The intention is to produce a final draft of the guidance by spring 2008.

## TSE Working Group

7. The TSE Working Group has met twice since the February ACDP meeting, on the 20<sup>th</sup> February and the 16<sup>th</sup> May 2007.

### Part 4 – Infection control of CJD and related disorders in the healthcare setting

8. Part 4 of the TSE Working Group guidance “Transmissible spongiform encephalopathy agents: safe working and the prevention of infection” has been updated to include information on the now 4 cases of vCJD infection via blood transfusion. In addition, new information on the Standards for Better Health has been added, and the formatting of the clinical algorithms was updated.
9. These changes were approved by the ACDP TSE Working Group, and by the ACDP Chair, and are now on the guidance website: <http://www.advisorybodies.doh.gov.uk/acdp/tseguidance/>

### Annex F – Decontamination of endoscopes

10. Annex F of the TSE Working Group guidance (referenced above) has been revised to take into account the TSE Working Group's decision that a negative post-mortem finding for an asymptomatic patient at risk of CJD could not exclude the possibility of infectivity being present due to the sensitivity of the current tests used for detection of PrPSc. It was thus agreed that the text in Annex F should be revised to state that endoscopes used in a patient at risk of CJD should be removed from use immediately, not "quarantined pending diagnosis". Endoscopes used on possible CJD or vCJD patients may be quarantined until the diagnosis is confirmed as they are symptomatic and have not be identified as at risk of CJD for public health purposes.
11. In addition, a new paragraph has been added outlining the decontamination of endoscope cleaning equipment.
12. These changes were approved by the ACDP TSE Working Group, and by the ACDP Chair, and are now on the guidance website: <http://www.advisorybodies.doh.gov.uk/acdp/tseguidance/>

### Information sheet for funeral directors, relatives and others following a CJD death

13. This is a new document produced in conjunction with the CJD Support Network and the National CJD Surveillance Unit in Edinburgh. It has been produced as a guidance note for relatives, and for funeral directors, when dealing with a CJD death. It addresses issues such as viewing, dressing and washing the hair of the deceased, and transportation of the body. Guidance already exists on these topics in a few HSE and DH publications, but it was hoped that this simple guidance note, summing up all the issues in one document, would go some way in helping in the difficult situations some relatives are currently facing when wishing to view their deceased relatives.
14. This document has been approved by the ACDP TSE Working Group, the CJD Support Network and the ACDP Chair, and has been put up on the guidance website as an adjunct to Annex H – “After Death”. This document will also be disseminated to funeral directors and other relevant bodies.

### Brainstem extraction techniques

15. The TSE Working Group has been consulted on alternative methods for brainstem extraction in cattle. An alternative method to brainstem extraction by spoon has been sought by several cattle processing plants. These were proposed in an attempt to minimise the risk of damage to brainstems during removal, resulting in the sample being classified as unsuitable to test.
16. Two methods: water extraction and air extraction were presented to Members, and the hazards to workers discussed. A visit to an abattoir is planned for Members in the near future, to observe these techniques in this setting.

### Infectivity in urine

17. The issue of prion infectivity in urine was discussed at a recent TSE Working Group meeting. The Secretariat had prepared a review paper on this subject, outlining recent studies on prion infectivity in urine, and prion detection in the kidney.
18. The possible excretion of prions in urine has been considered for some time, and the presence of infectivity in urine may have implications for:
  - the collection of urine for the manufacture of therapeutic gonadotrophin;
  - disease transmission and the nursing care of patients with CJD;
  - the potential development of a diagnostic test that would rule out the need for invasive testing and perhaps allow earlier diagnosis
19. Members reassessed the possibility of prion infection in urine, and agreed that, at the present time, there was not enough evidence to suggest that human prion infectivity was definitely present in urine.

### Preventing endoscope contamination

20. Annex F of the TSE Working Group guidance (referenced above) recommends that any endoscopic procedure that could contaminate the working channel of an endoscope with tissues including lymphoid aggregates should lead to quarantining of the endoscope used. There have been concerns, particularly from endoscopy units serving haemophilia centres, that their pool of endoscopes could become depleted with no readily available funding for replacement. There is also concern from the UK Haemophilia Centre Doctors' Association that their patients may be denied optimal endoscopic diagnosis and treatment.
21. At the last meeting of the TSE Working Group, Members were asked to consider whether there are ways of reducing the risk of contaminating the working channel during an invasive endoscopic procedure, and whether there might be ways of refurbishing an endoscope as an alternative to quarantining. This work is currently ongoing.

### Revision of the 1996 ACDP guidance *Management & Control of Viral Haemorrhagic Fevers*

22. The first meeting of the ACDP VHF Clinical Management subgroup was held on the 16<sup>th</sup> April 2007. The meeting comprised ACDP members, representatives from the two high security infectious disease units in London and Newcastle (HSIDU), and from the fields of patient transportation, virology, microbiology and

public health. The draft minutes of this meeting are included in this document as Annex A for Members' information. Please note that these are subject to comments from members of the subgroup, so may be amended in due course.

23. Following this first Clinical Management subgroup meeting, there are still some outstanding issues to be addressed by the group, including:

- Waste disposal from the HSIDU
- Laundry from the HSIDU
- Last offices – the care given to a deceased person
- Room ventilation
- PPE for healthcare workers
- Transportation of patients (including by ambulance)
- A review of respiratory care
- Terminal cleaning

The work plan for the group, including the timeline for drafting the guidance, and the way forward to address the issues above, is currently being finalised by the Secretariat and colleagues at HSE and DH.

24. The first meeting of the ACDP VHF Diagnostic subgroup is now due to take place on the 26<sup>th</sup> June 2007, having been postponed from an earlier meeting date. This meeting will address the proposed two risk category system and its implications for diagnostics, routine testing of patients, testing for Hazard Group 4 viruses in the laboratory, and transportation of specimens.

## ADVISORY COMMITTEE ON DANGEROUS PATHOGENS

### DRAFT minutes of the first VHF Clinical Management subgroup meeting held on 16<sup>th</sup> April 2007

<b>Chair</b>	Professor George Griffin	ACDP (Chair)
<b>Members</b>	Dr Barbara Bannister	Royal Free Hospital
	Dr David Brown	HPA CfI
	Professor Richard Elliott	St Andrew's University
	Dr Andrew Freedman	Cardiff University School of Medicine
	Wing Commander Andy Green	Ministry of Defence
	Mr Peter Hoffman	HPA CfI
	Ms Karen Jones	ACDP member
	Dr Steve Lever	Dstl
	Dr Graham Lloyd	HPA CEPR
	Dr Dilys Morgan	HPA CfI
	Ms Sheila Morgan	Newcastle General Hospital
	Dr Ed Ong	Newcastle General Hospital
	Dr Mike Painter	ACDP member
	Dr Geoff Ridgway	UCLH
<b>Officials</b>	Dr Steve Copping	HSE
	Ms Amanda Gatto	DH
	Mr Ken Holmes	DH
	Dr Mike Paton	HSE
	Ms Maggie Tomlinson	DH
	Mr Nigel Tomlinson	DH
<b>Secretariat</b>	Miss Charlotte Mirrielees	HPA

#### **Agenda item 1 – Welcome, introductions and apologies**

The Chair welcomed everyone to the first Clinical Management subgroup meeting to discuss the revision of the Advisory Committee on Dangerous Pathogens' guidance on the management of viral haemorrhagic fevers, published in 1996. He reminded members that at the Key Players meeting in May 2006, it had been decided that two subgroups would be set up to revise the guidance, one on clinical management of patients and the other on and diagnostics and laboratory aspects. The diagnostics and laboratory subgroup meeting is set for the 23<sup>rd</sup> May 2007.

Apologies were received from Ms. Breda Athan from the Royal Free Hospital, Dr. Sara Hedderwick from Royal Victoria Hospital, Belfast, Dr. Simon Clarke from Frimley Park

Hospital and Mr. Ian Bullimore from the London Ambulance Service. Mr. Bullimore and Dr. Clarke will be present at the next meeting to contribute to discussions on A&E and ambulance transportation.

**Agenda item 2 – Overview, proposed scope and format of the new guidance**

**ACDP/VHF/CMSG/P2**

The scope of the proposed review and the key issues for consideration for change had been set out in the paper circulated to members (referenced above).

Members were invited to discuss and comment in detail. It is envisaged that a more generic document to encompass all Hazard Group 4 (HG4) agents will be produced. However, smallpox, Nipah and Hendra viruses will be excluded as separate DH guidance has been published on these. The new guidance will be in a web-based format, with hard copy summaries available for GPs, and clinicians in a variety of situations.

Members agreed the proposed scope and issues to be considered as outlined in the paper.

**Agenda item 3 – The risk posed by Category 4 viruses**

**a) Survival and transmission of HG4 agents**

**ACDP/VHF/CMSG/P3a**

HPA gave a presentation on the survival and transmission of HG4 viruses, and the implications for the management of infected patients. The presentation focussed on the need to separate experimental evidence from anecdotal evidence in order to assess the real risk to healthcare workers and others from a patient infected with a HG4 agent.

**Transmission**

Members were reminded that the general lack of clinically generated data has resulted in reliance upon experimental data and this has led to policies recommending stringent precautions for these viruses. Given that experimental situations rarely accurately mimic the clinical reality, policies based on experimental results may greatly overstate the actual risk from infected patients

Evidence from previous imported cases of viral haemorrhagic fevers to Europe since 2000 indicate no secondary transmission cases to date. Diagnosis in these cases was

often delayed, and healthcare workers thus came into contact with the patient before stringent isolation precautions were enforced.

It is well established that haemorrhagic fever viruses are primarily transmitted through contact with infected blood and bodily secretions of patients. Patients pose no risk of infection to others during the incubation period of the disease, i.e. in the period prior to onset of fever. There is no evidence of family contact spread. The risk of transmission increases as the patient's viral load increases and clinical state worsens, often with haemorrhagic manifestations. Severe blood loss can lead to contamination of surfaces and the floor and expose healthcare workers to risk of infection.

The risk of transmission of viral haemorrhagic fever viruses and other HG4 pathogens via the aerosol route is hypothetical. Viruses survive well in aerosols and transmission risks are postulated on the basis of experimental data from non-human primates that developed illness (Lassa fever) from aerosol-generated infectivity. Again these experiments do not reproduce clinical conditions accurately. With regard to potential creation of infected aerosols from blood splashes, experiments have shown that very few airborne particles are left after a droplet has hit a surface. It was also noted that virus is not found to be present in the environment even when working with highly infectious non-human primates.

Based upon human clinical evidence, VHF's present a significantly lower risk of airborne transmission by the natural route than TB. However some clinical procedures (e.g. ventilation of patients) are likely to provide sufficient energy to increase the risk from aerosol transmission.

It was confirmed that *Ebola* virus has been isolated from sweat glands in the skin of patients with the virus, using skin snips from behind the ear. There is thus the possibility of droplet contamination of surfaces from sweat of patients, particularly when many patients are being treated concurrently. However there is no evidence of spread of infection to healthcare workers when barrier precautions are in place even without air flow controls in place.

Evidence from outbreaks in countries where CCHF is endemic shows that risks of transmission occurs through direct blood contact with infected patient, mouth to mouth resuscitation, needle-stick injuries and laboratory exposure to infection.

### **Prevention of infection**

Evidence indicates that adherence to strict barrier precautions will prevent the majority of transmissions of infection. Minimising the risk of infection from contaminated surfaces can be achieved through correct use of personal protective equipment (PPE) for staff. Control of the air flow in the room as a way of minimising transmission risks to healthcare workers has been widely practised in the UK. It was noted that airflows need to be carefully designed so as not to disturb droplets that have settled and make them airborne again. It was reported that research into the protective effects of air circulation in isolation rooms had been commissioned by DH and was currently ongoing, and that this research may impact on the future engineering of isolation rooms for the management of patients with HG4 viral infections.

### **Survival**

The survival of haemorrhagic fever viruses in bodily fluids, blood and on surfaces was discussed. It was noted that VHF viruses are highly sensitive to drying and are susceptible to disinfection.

Some preliminary data on survival in sera was noted – experiments are ongoing but virus has survived for 3 months so far in sera at fridge and room temperatures. In addition, experiments with *Marburg* virus have shown an 11% degradation per minute in droplets, comparable to *Mycobacterium tuberculosis* decay.

### **Stratification of risk**

Members were of the view that a stratification of risk for the agents should be drawn up, as some are known to pose a greater risk to healthcare workers than others. It was agreed that Crimean Congo Haemorrhagic fever (CCHF) posed the least risk of transmission to healthcare workers using barrier precautions.

Comments made on diagnostic tests and laboratory procedures and regulations, will be fed into the diagnostic/laboratory subgroup meeting on the 23<sup>rd</sup> May 2007.

#### **b) The risk to healthcare staff**

#### **ACDP/VHF/CMSG/P3b**

Dr Ong and Dr Bannister presented the essentials of patient management, including the provision of intensive support, within the traditional environment of an isolation tent (Trexler setting) and the hazards to healthcare workers when caring for a patient with a HG4 viral infection. It was emphasised that providing routine intensive care to a patient, including organ support, has proven difficult in the past in such settings.

The sequence of organ failure for a typical patient is typically, circulatory system failure affecting maintenance of blood pressure, through lung and endothelial tissue failure, to loss of renal function. It was noted that the failure of two organs signalled rapid reduction in the patient's chances of survival.

**Respiratory support**

The use of a normal ventilator within an isolation tent is difficult. Alternative strategies have been tested, and one such technology, the Continuous Positive Airway Pressure (CPAP) system, was briefly presented. This disposable 'hood' allows isolated ventilation of the patient without the need for a full isolation tent.

Following a brief discussion it was agreed that specific issues relating to respiratory support of a patient would be revisited by a specialist group in the future.

**Renal replacement therapies**

Renal support will be given to patients providing they are not experiencing multi-organ failure. Renal replacement therapies produce large volumes of dialysate that requires disposal. The relative advantages and disadvantages of peritoneal dialysis, haemodialysis and convective renal replacement therapies were discussed. Peritoneal dialysis results in the production of 20-40 litres of dialysate per day, which can be disposed of after solidification and autoclaving. However, peritoneal dialysis on a haemorrhagic patient cannot be performed. Haemodialysis is very difficult on such patients, and the fluid throughput is high. Convective renal replacement therapies are possible but in practice would produce 50-60 litres of every day, and the physical handling of the bags would be demanding for healthcare staff. However, if an engineering solution could be found to enable the dialysate to be disposed of straight to drain, then this difficulty would be avoided. Dialysis effluent in hospitals is normally disposed of direct to drain.

The viral load of the dialysate was explored for each therapy as the infective risks posed by this waste would determine its disposal route. Studies on this topic have predominantly focussed on the presence of hepatitis viruses. A list of references on this topic was provided for Members.

It was agreed that issues relating to clinical waste will be discussed in detail at the next Clinical Management subgroup meeting.

**Agenda item 4 – Isolation rooms – engineering considerations**

Dr Tomlinson and Mr Holmes of the Department of Health's Estates and Facilities Division presented current findings on airflow and engineering approaches used to achieve Category 4 protection. At present isolation tents, with their own controlled airflow supply, are used rather than engineering the whole room to achieve the level of protection desired. This enables the patient to be isolated, within the tent, from the healthcare workers. Category 4 protection is therefore achieved only within the tent and not within the room used to house it. Research is currently ongoing to investigate air circulation systems that could achieve the equivalent Category 4 protection within the room(s) of an HSIDU facility.

The Positive-Pressure Ventilation Lobby (PPVL) and associated airflow design has recently been investigated and results from this research were outlined to Members. Further research investigating the performance of negative pressure rooms as currently specified within the NHS is ongoing and it is hoped that a direct comparison of protective performance between the PPVL design and negative pressure rooms will be possible by the autumn. Research is also being undertaken to examine airflows and precise performance of Category 4 isolation facilities with the Trexler in situ to enable full comparisons to be made.

Engineering design considerations for waste disposal were also presented. Current research has highlighted the importance of correct design for preventing infection risks from drainage systems within HSIDUs.

**Agenda item 5 – Risk assessment and patient categorisation****ACDP/VHF/CMSG/P5**

A change in the risk categorisation of patients was proposed in the paper presented to Members. The proposal is to move from the current three risk categories – minimal, moderate and high risk – to two – 'at risk' and 'high risk' , Members generally welcomed the move to a simpler categorisation of risk, and agreed the factors that would designate an individual as either 'at risk' or 'high risk' .

However, there was some concern over whether the two risk categories sufficiently captured the risks as presented to those who have to determine the 'public health risk' as opposed to the 'clinical management risk',

**The 'public health' risk – feverish individual at a Port Health Unit**

Doctors placed at Port Health units at airports are often asked to make quick decisions regarding VHF risk when a feverish patient enters the country on an aircraft. Categorisation of a patient as 'at risk' for a VHF currently results in the immediate quarantining of the aircraft, and an inventory of all the passengers, followed by contact tracing and follow-up. Media involvement is inevitable. The patient is transferred to an HSIDU.

The majority of feverish travellers returning from a country known to be endemic for a VHF are later diagnosed with malaria and the diagnosis of a VHF is a rare event.

It was therefore considered essential that the 'public health' risk should be assessed on the symptoms currently exhibited by the patient, and whether these symptoms were likely to have put other passengers or contacts at risk of contracting the infection.

The 'public health' risk would be the first categorisation made for a patient on arrival in the UK. Symptoms such as vomiting and lack of control of bladder or bowel movements, as well as haemorrhage or bleeding, present a greater risk of communicability. Categorisation of a patient as 'at risk' or 'high risk' for public health purposes would result in the appropriate precautions being taken for the aircraft and passengers, including contact tracing and quarantining of the aircraft.

**Feverish individual presenting at A&E**

The actions to be taken following entry of a feverish individual presenting at A&E was raised. Following admission to hospital, there is some difficulty currently in determining when a risk assessment for VHF should be carried out. It was noted that it is normally only when other diagnoses such as malaria and dengue have been ruled out that a VHF diagnosis is considered, i.e. at least 3 or 4 days after admittance to a hospital. This could be damaging to the patient if they had Lassa fever, as early administration of ribavirin therapy has been shown to improve the patient's chances of survival.

It was agreed that the risk assessment should include a detailed look at the patient's travel history and actions whilst abroad in addition to symptoms presented.

Patients categorised as 'at risk' or 'high risk' should be referred to a diagnostic ID unit. In addition, the criteria for subsequent transferral to an HSIDU need to be clearly set out.

**Other locations**

The issue of the action to be taken following identification of a possible VHF patient via NHS Direct, walk-in centres or private practice was raised, and will need to be dealt with in the updated guidance.

The initial protocol for clinicians, following categorisation into 'at risk' or 'high risk', should be outlined for all locations. It was agreed that the HPA would provide an algorithm, to aid assessment of 'public health risk' and patient categorisation. The actions to be taken at each possible location e.g. Port Health Unit, hospital, GP surgery should be included.

**Agenda item 6 – Transportation of patients****ACDP/VHF/CMSG/P6**

The current procedures for transportation of patients with severe infections to the UK with military assistance were present by Wing Commander Green. The approach taken to repatriate patients to their home countries differs markedly around the world. An information paper (referenced above) had been produced for this item.

**Infection control**

A major consideration during transportation is protection of the airframe or vehicle. Decontamination of an aircraft is difficult as the use of many detergents and microbiocidal products is prohibited. Patient isolators are therefore used in aircraft as primarily to stop contamination of the airframe, rather than to prevent transmission to healthcare workers.

**Movement of the patient**

The issue of whether a patient should be transported or treated locally was discussed. Two factors influence the decision currently: a comprehensive risk assessment of symptoms (a patient would only be transported if they were well enough), and whether adequate facilities for treatment of such a severe infection were absent or difficult to access if the patient were not transferred. Current facilities do not allow for multiple patients requiring transportation.

**Transportation within the UK**

A patient designated as 'high risk' would need to be transported in an appropriately stripped down ambulance, with staff using high level PPE. Need to give clear guidance about how an 'at risk' patient should be transported. The transportation needs of patients designated 'at risk' 'for public health purposes' and those designated 'at risk' for

clinical management purposes' will need to be clarified and arrangements specified in the guidance. These issues will be raised at the next meeting when the ambulance representative will be present.

There could be problems with transportation within the UK if a patient is too sick to be moved to an HSIDU. In this situation, if a definitive diagnosis were confirmed, specialist doctors and nurses from one of the two HSIDU centres would likely travel to the patient's locality to deliver the appropriate care.

Some concerns were raised as to how a patient identified as 'at risk' or 'high risk' in Northern Ireland would be transported, and to where. It was agreed that it would be prudent to fly them straight to the HSIDU in Newcastle.

It was agreed that a detailed algorithm was needed addressing all the transportation issues both within the UK, and from abroad, and that this would be developed by a specialist group.

### **Agenda item 7 – Patient management systems**

**ACDP/VHF/CMSG/P7**

#### **Protocols for 'at risk' or 'high risk'**

Members agreed that management of an 'at risk' patient required only the use of standard PPE and standard infection control procedures.

The management of a 'high risk' patient would depend on the symptoms of the patient and whether they were a hazard to healthcare workers. Patients categorised as 'High risk' prior to confirmation of diagnosis would only need to be placed under isolation conditions should they develop severe symptoms. However, once a patient had a confirmatory diagnosis of a HG4 viral infection, regardless of initial risk categorisation, they should be transferred to full isolation in an HSIDU.

It was noted that the guidance should emphasise that treatment of a patient with a confirmed HG4 viral infection should only occur at either the Royal Free or Newcastle HSIDU.

#### **Management of a patient at an HSIDU**

A presentation was given on the current systems in place at the Royal Free and Newcastle HSIDUs, for isolated patient management. An information paper had been

prepared (referenced above), outlining other options for isolated patient management internationally.

The advantages and disadvantages of the two main management systems – suited PPE and patient isolators – were described. Both systems have significant drawbacks for clinicians in delivering a high quality of care to a severely ill patient.

The use of the Trexlar unit for isolation of a patient in the UK was reviewed in the light of the discussion on transmission risks. It was acknowledged that containment of body fluids within the Trexlar is advantageous, but management of a patient requiring organ support has proven extremely difficult.

Both the Royal Free and Newcastle are currently rebuilding their HSIDU centres, a new solution could be engineered to solve the problem of containment of large volumes of blood from a haemorrhaging patient.

The alternative approach of using “enhanced” PPE, namely waterproof clothing, goggles and FFP3/N99 masks was discussed. ‘Half-suits’, comprising foot and leg protection, were also discussed, and could be used in conjunction with respirators or masks. However, using suits can lead to greater problems than a patient isolator in the long term, due to the maintenance and replacement of equipment, continual training and complicated decontamination required. Staffing issues are also a problem with the use and maintenance of suits.

It was agreed that flexible patient care is needed tailored to their symptoms with all options available to clinicians managing the patient, as this optimised the patient's chance of survival.

The continuing presence of virus in the bodily fluids of convalescent patients was also highlighted – patients who survive the infection remain an infectious hazard for some weeks. Management of this stage of the infection needs to be included in the new guidance.

There was some discussion about possible engineering solutions that might be provided to incorporate the desirable aspects of containment of bodily fluids and the management of the possible airborne transmission risks.

**Agenda item 8 – Advice on anti-virals****ACDP/VHF/CMSG/P8**

Dr Bannister had prepared a paper on this subject. Ribavirin treatment has been proven to increase the chances of survival for Lassa patients if given within the first week of illness. It has also been shown to help in the treatment of CCHF. However, its efficacy for other VHF infections has not been proven to date. Development of vaccines for some HG4 viruses is ongoing, for example Ebola vaccine.

**Agenda item 9 – Public Health actions****ACDP/VHF/CMSG/P9**

Dr. Morgan presented an information paper (referenced above) outlining the current protocol for public health actions following a suspected or confirmed case of VHF entering the UK, and the lessons learnt from previous cases of imported VHF in the UK. It was emphasised that a good patient history including any recent travel is imperative in any case where a HG4 viral infection is suspected.

One point of continual confusion is about when to commence public health actions when investigating a possible case of VHF. It was agreed that the inclusion of a new assessment of risk for 'public health' purposes, as discussed under agenda item 5, would allow a much clearer protocol to be developed for the launching of public health actions.

The use of prophylactic ribavirin was considered, in particular the question of to whom it should be offered. It was suggested that its use should be restricted to those who had received a needlestick injury or had major mucosal exposure. The use of ribavirin for close contacts in the past appeared to be unjustified, given the lack of evidence of transmission even to close family contacts. There remains concern about the appropriate dose for prophylactic use as the current recommended dose is extremely high, and twice what is recommended for Hepatitis C. The recommendations for use of Ribavirin will need to be covered in the guidance and this will need further consideration.

**Agenda item 10 – Proposed timeline for revision of the guidance**

**ACDP/VHF/CMSG/P10**

A timeline for completion of the redrafting of the guidance had been produced by Dr Paton and Mr Copping, with suggested dates for completion of each section, and suggestions for members of the group who would help with drafting process.

It was decided that this item would be covered in more detail at the next meeting on the 23<sup>rd</sup> May, as there was insufficient time left to discuss this item fully.

**Agenda item 11 – AOB**

There was no other business raised by members.

**Agenda item 12 – Date of next meeting**

The next meeting of the Clinical Management subgroup will be on May 23<sup>rd</sup> 2007 at the Department of Health, Richmond House, Whitehall.