Appendix 2: VHF Regional Response Co-ordinators

Dr Marie Laffoy
Director of Public Health
Eastern Regional Health Authority
Dr Steeven's Hospital
Dublin 8
Tel: 01-635 2170
Fax: 01-635 2103
marie.laffoy@erha.ie

Dr Orlaith O'Reilly
Director of Public Health
South Eastern Health Board
Head Office
Lacken
Dublin Road
Kilkenny
Tel: 056-84142
Fax: 056-84393
oreillyo@sehb.ie

Dr Declan McKeown
Director of Public Health
Western Health Board
Merlin Park
Galway
Tel: 091-775200
Fax: 091-758283
declan.mckeown@bsi.ie

Dr Rosaleen Corcoran
Director of Public Health
North Eastern Health Board
Kells
Co Meath
Tel: 046-49145
Fax: 046-49297
Rosaleen.Corcoran@nehb.ie

Dr Pat Doorley
Director of Public Health
Midland Health Board
Arden Road
Tullamore
Tel: 0506-46105
Fax: 0506-46223
patrick.doorley@mhb.ie
elaine.barry@mhb.ie

Dr Sean Denyer
Director of Public Health
North Western Health Board
Manorhamilton
Co Leitrim
Tel: 072-20459
Fax: 072-20502
sean.denyer@nwhb.ie

Dr Kevin Kelleher
Director of Public Health
Mid Western Health Board
31-33 Catherine Street
Limerick
Tel: 061-483337
Fax: 061-483211
kkelleher@mwhb.ie

Dr Elizabeth Keane
Director of Public Health
Southern Health Board
Sarsfield House
Sarsfield Road
Wilton
Cork
Tel: 021-4346060
Fax: 021-4346063
keanee@shb.ie

VHF National Response Co-ordinator

Dr Darina O'Flanagan
Director
National Disease Surveillance Centre
25-27 Middle Gardiner Street
Dublin 1
Tel: 01-8765300
Fax: 01-8561299
darina.oflanagan@ndsc.ie

National Virus Reference Laboratory

Professor William Hall
Director
National Virus Reference Laboratory
Belfield
Dublin 4
Tel: 01-716 1350
Fax: 01-269 7611
william.hall@ucd.ie

Potential Use of Haemorrhagic Fever Viruses as Bioterrorism Agents

The Scientific Advisory Committee of the NDSC produced the document *The Management of Viral Haemorrhagic Fevers in Ireland* prior to the terrorist attacks in New York and Washington on September 11th, 2001 and the subsequent mailing of milled anthrax spores in the United States.

Amongst the agents that have been identified as being Category A agents (those most likely to have greatest impact), are the haemorrhagic fever viruses (HFVs). It seems unlikely that Ireland would be a primary target for the release of such agents, but victims of exposure could travel to Ireland during the incubation period of these diseases.[1] In the United States, Consensus statements on the medical and public health management of all Category A agents have been developed and are published in the *Journal of the American Medical Association.* In the Consensus Statement on HFVs,[2] the US Working Group on Civilian Biodefense has identified certain criteria for the identification and management of suspect cases of VHF. We would endorse the use of these guidelines, which appear below, in the unlikely event of primary HFV release within Ireland. Were cases arising from the deliberate release of these agents in another country to appear in Ireland, then the guidance as laid out in *The Management of Viral Haemorrhagic Fevers in Ireland* would apply. Recommendations on the use of Ribavirin in managing cases of clinically evident VHF are included at the end of this document. These are the same as those given in *The Management of Viral Haemorrhagic Fevers in Ireland,* but include a proposed dosage regimen for use in the improbable event of a mass casualty setting. The drug of choice in these settings is Ribavirin.

Key Medical and Public Health Interventions After Identification of Suspected Index Case of VHF (adapted from Borio *et al*).[2]

*Identification**

- Suspected index case:
- Temperature ≥101°F (38.3°C) of <3 weeks' duration;
- Severe illness, and no predisposing factors for haemorrhagic manifestations; and
- At least 2 of the following haemorrhagic symptoms: haemorrhagic or purple rash, epistaxis, haematemesis, haemoptysis, blood in stools, other, and no established alternative diagnosis.

Reporting

Report immediately to Director of Public Health.
Report immediately to infection control professionals and laboratory personnel.

Treatment

Initiate supportive and Ribavirin therapy (see below) immediately while diagnostic confirmation is pending.
If infection with arenavirus or bunyavirus is confirmed, continue 10-day course of ribavirin.
If infection with filovirus or flavivirus is confirmed, or if the diagnosis of VHF is excluded or an alternative diagnosis is established, discontinue ribavirin.

Infection Control Measures

Initiate VHF-specific barrier precautions.
Initiate airborne precautions, with negative-pressure rooms if resources are available.

Public Health Measures

- Confirm or exclude diagnosis.
- Designated public health authority begins epidemiological investigation.
- Identify close and high-risk contacts and place under medical surveillance for 21 days from day of suspected/known exposure.
- If contact does not have temperature ≥101°F (38.3°C) or signs or symptoms of VHF by the end of 21 days, discontinue medical surveillance.
- If contact has temperature ≥101°F (38.3°C) or signs or symptoms consistent with VHF, initiate diagnostic workup and treatment, infection control, and public health interventions described for index case.

*Criteria are adapted from the World Health Organization's surveillance standards for acute haemorrhagic fever syndrome.

Recommendations for Ribavirin Therapy in Patients With Clinically Evident VHF of Unknown Aetiology or Secondary to Arenaviruses or Bunyaviruses (adapted from Borio *et al*).[2]*

	Contained casualty setting	**Mass casualty setting†**
Adults	Loading dose of 30mg/kg IV stat (max 2G) followed by 16 mg/kg IV (max 1G per dose) every 6H for 4 days followed by 8 mg/kg IV (max 500mg per dose) every 8H for 6 days	Loading dose of 2000 mg PO followed by 1200 mg/day PO in 2 divided doses (if weight >75kg) or 1000 mg/day PO in 2 divided doses (400 mg in am, 600 mg in pm) (if weight ≤75kg for 10 days.
Pregnant women	Same as for adults	Same as for adults
Children	Same as for adults, dosed according to weight	Loading dose of 30 mg/kg PO stat followed by 15 mg/kg PO in 2 divided doses for 10 days.

*Has not been approved for use by FDA in the US for any of these indications – should be administered under an investigational new drug protocol. In a mass casualty setting, these requirements may need to be modified to permit timely administration of the drug.
†The threshold number of cases at which parental therapy becomes impossible depends on a variety of factors including local health care resources.

References
1 The Expert Committee – Contingency Planning for Biological Threats. Biological threats: A Health Response for Ireland. Department of Health and Children. Dublin: 2002. http://www.doh.ie/publications/biothreat.html. Accessed 25/6/02.
2 Borio L, Inglesby T, Peters CJ *et al,* The Working Group on Civilian Biodefense. *JAMA* 2002; 287**(18):** 2391-405.