



National Ambulance Service (NAS)

Ambulance Operations Procedure

Emergency Call for Suspected Ebola Virus Disease Patient

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POLICY STATEMENT

- 1.1 The National Ambulance Service (NAS) is committed to providing the resources and support systems required to promote quality patient care and provide a safe environment for staff, patients, visitors and others affected by the work of the Service. This commitment is endorsed by the introduction of this Procedure.

2.0 OVERVIEW/PURPOSE

- 2.1 Viral Haemorrhagic Fever agents include numerous zoonotic diseases, all of which may cause a severe haemorrhagic syndrome in humans. These include Lassa, Ebola, Marburg and Crimean/Congo Fevers
- 2.2 These diseases are the subject of Health Protection Surveillance Centre guidelines, and as such dictate strict compliance with this nationally agreed Procedure.
- 2.3 The assessment, management and transportation of patients with infectious diseases are a common occurrence for the National Ambulance Service. Most of these cases are managed using standard precautions.
- 2.4 On occasion, circumstances may arise where the patient fits the criteria to be suspect for Ebola Virus Disease.
- 2.5 These circumstances may be identified at the call taking stage or when the patient is being assessed by the ambulance practitioner.
- 2.6 Should this occur, special measures need to be taken to protect the health and safety of practitioners and ensure the patient is transported to an appropriate facility.
- 2.7 Patients will be taken to designated Emergency Departments as per the agreed lists.
- 2.8 In some circumstances, if the call is in the Dublin area the patient may be taken directly to the National Isolation Unit.

3.0 SCOPE

- 3.1 This Policy applies to all NAS staff.
- 3.2 This Policy is a specific Procedure relating to a call received from a member of the public or General Practitioner for a case which fits the criteria for a suspected EVD.

4.1 LEGISLATION/OTHER RELATED POLICIES

- A. National Ambulance Service Staff Induction Process
- B. National Ambulance Service Parent Safety Statement
- C. PHECC Training and Education Standards
- D. Safety, Health and Welfare at Work Act 1989 and 2005
- E. Safety, Health and Welfare at Work (General Regulations) 2007
- F. Ambulance Service Guidelines for Situations Associated with Biological Threats
- G. Policy - NASP003 - Dress and Personal Appearance at Work
- H. Procedure – NASOE001 – Personal Protection Equipment Kit
- I. Procedure – NASOP002 – Daily Vehicle Inspection and Inventory Check
- J. HSE Infection Control Guideline Manual 2010
- K. Policy – NASP001 – Control of Infection and Communicable Diseases
- L. The Management of Viral Haemorrhagic Fevers in Ireland (2012)
- M. Clinical Advisory Ebola Virus Disease-Control, Medical Director August 2014
- N. Clinical Advisory Ebola Virus Disease-Practitioners, Medical Director August 2014
- O. Clinical Advisory Ebola Virus Disease-Receiving Hospitals October 2014
- P. Ebola Virus Disease Risk Assessment for use by Ambulance Personnel Version 2.2 24112014
- Q. EPRR CRG Opinion on Appropriate Emergency Department Care for suspected or Confirmed Ebola patients October 2014
- R. Guidance Note H1402 – Packaging and Transport of waste from suspect and confirmed cases of the Ebola Virus.

5.0 GLOSSARY OF TERMS AND DEFINITIONS

- **OSRM** Operational Support and Resilience Manager
- **ORM** Operational Resource Manager
- **VHF** Viral Haemorrhage Fever
- **NIU** National Isolation Unit
- **NEOC** National Emergency Operations Centre
- **QHSC** Quality, Health and Safety Committee
- **ETA** Estimate Time Arrival
- **EVD** Ebola Virus Disease
- **EPRR CRG** Clinical Reference Group for Emergency Preparedness Resilience and Response

6.0 ROLES AND RESPONSIBILITIES

6.1 MANAGERIAL RESPONSIBILITIES

- 6.1.1 The Operational Support and Resilience Manager has executive responsibility for implementation of this Procedure.
- 6.1.2 The Quality, Safety and Risk Manager in each NAS Area is the lead Manager for Infection Control and is responsible for the ongoing development of Infection Prevention/Control processes within the NAS and accountable for ensuring best practice regarding infection prevention/control and control of communicable diseases.
- 6.1.3 Quality, Health and Safety Committees (QHSC) in consultation with the Infection Prevention/Control Service will be responsible for ensuring that procedures are in place and working effectively.
- 6.1.4 It is the responsibility of all Managers to ensure the implementation of this policy throughout their areas of responsibility.
- 6.1.5 It is the responsibility of the Education and Competency Assurance Team to ensure that all records relating to training resulting from this Procedure are maintained and available for internal and external review.
- 6.1.6 It is the responsibility of each Operations Resource Manager to undertake a monthly Quality Audit within their area to ensure equipment boxes are stocked and available.
- 6.1.7 All staff of the NAS are accountable for adhering to this policy in the execution of their duties.

6.2 COMMUNICATION WITH STAFF

- 6.2.1 Communication with staff regarding potential infection risks is very important. Staff must understand the risk associated with a suspected Ebola patient once the infection is being considered.
- 6.2.2 The virus may be present:
 - A. Blood
 - B. Body fluid including urine
 - C. Contaminated equipment and instruments
 - D. Waste
 - E. Contaminated clothing/surfaces
- 6.2.3 Exposure may also occur:
 - A. Directly through exposure to blood or bodily fluids during invasive, aerosolising or splash inducing procedures
 - B. Indirectly through exposure to the environment, surfaces, equipment or clothing contaminated with droplets of blood or bodily fluids

7.0 Personal Protective Equipment

- 7.1 The use of PPE when managing patients who have suspected EVD is very important. All staff should be familiar with the correct sequence for the donning and doffing of PPE in order to prevent contamination of the face, mucous membrane or clothing.
- 7.2 The use of the “buddy system” will ensure this is carried out correctly. When donning or doffing PPE, a second person will guide the person who is donning/removing PPE. PPE for the buddy is minimal: scrubs/apron/ gloves
- 7.3 Non-latex gloves should be applied, removed and disposed of in line with the donning and doffing guidelines. Double gloving is advised at all stages of patient contact. Apply a second pair over the first ensuring the second pair are long enough to extend well above the cuffs of the coverall.
- 7.4 Each ambulance practitioner will be issued with a PPE pack which must be carried with them at all times when on duty. This will contain the following equipment:
- Fluid repellent coverall (sized)
 - Disposable long cuffed gloves x 3 pair
 - FFP3 mask
 - Goggles
 - Face visor
 - Disposable apron
 - Hair net
 - Hand sanitiser (must contain 70% alcohol concentration)
 - Clinical Waste Bag (large)
- 7.5 It is each practitioner’s responsibility to ensure that they have sufficient sized coveralls on the emergency vehicle at the commencement of each shift.
- 7.6 In addition to the personal issue PPE which each practitioner will carry, each ambulance will carry sufficient PPE to allow the crew to safely transport the patient to a receiving facility. This should consist of a number of kits containing:
- Fluid Repellent coverall (L or XL)x 1
 - FFP3 face mask x 1
 - Goggles x 1
 - Disposable long cuffed gloves (L & XL) x 3 pair
 - Face visor x 1
 - Hair net
 - Alcohol wipes (must contain 70% alcohol concentration)
 - Hand sanitiser (must contain 70% alcohol concentration)

- 7.7 An equipment box of additional PPE will be stored in each ambulance station. This will consist of the following:
- Fluid repellent Disposable Suits (with hood and feet) x 4
 - Box of disposable gloves extended sleeves (sizes L & XL)
 - FFP3 face mask 4
 - Goggles x 4
 - Face visors x 4
 - Wellington boots (sizes 8x1, 10x2 and 12x1)
 - Clinical waste bags X 1 Roll
 - Cable ties
 - detergent
 - Buckets or basin x 2
 - Heavy duty kitchen gloves (large) x 4 pair
 - Disposable cloths x 12 (j-cloths type- 2 packets)
 - NaDCC disinfectant Titan Chlor Tablets
 - Blood Spill Kit x 2
- 7.8 The nearest available Ambulance Manager, Paramedic Supervisor or available ambulance will also be dispatched to rendezvous with the crew, either at the scene or at the receiving hospital. They will collect the additional PPE from the station and support the crew on scene.

8.0 Ambulance Crew Action on Meeting the Patient

- 8.1 If the ambulance crew have pre-arrival information that the patient fulfils the criteria for suspected EVD, they should don their PPE (as per donning procedure Appendix II/IV) before entering the location of the patient.
- 8.2 If no pre-arrival information is given and the crew identify a suspect case of EVD on assessment (See Appendix V), they should withdraw from the house to the ambulance. They should sanitise their hands and don the PPE.
- 8.3 The crew should inform Ambulance Control of the nature of the call and request assistance on scene.
- 8.4 Through the NEOC, they should facilitate a remote assessment for the NIU Infectious Diseases Consultant on the patient.
- 8.5 A surgical mask should be placed on the patient, if the patient has respiratory symptoms.
- 8.6 If the patient is ambulant and does not require any interventions, it may be appropriate for only one crew person to don the PPE while the other acts as the "buddy." The buddy should have no contact with the patient or enter the rear of the ambulance at any time.
- 8.7 Care must be taken to treat any spillage of blood or bodily fluids immediately, using detergent, disinfectant and absorbent paper rolls if necessary.
- 8.8 In addition, care must also be taken to ensure that all items of ambulance equipment are removed from the address. This includes the removal of any materials that have been used for cleaning spillages etc., which must be stringently collected as clinical waste.
- 8.9 If transporting from a doctor's surgery, all clinical waste and used PPE should be placed in a double bagged clinical waste bags and brought to the hospital.

- 8.10 The crew should attempt to keep well wishers at a distance whilst transferring the patient to the ambulance, particularly where physical contact is anticipated.
- 8.11 Relatives are not to be transported in the NAS vehicle to any receiving hospital; except in the case of a paediatric patient. In this case the parent or guardian should wear a surgical face mask and gloves.
- 8.12 On leaving the patient's room/home, the crew will report mobile to Ambulance Control and provide an ETA to hospital.
- 8.13 Ambulance equipment not required for the call should be secured in presses or given to the supporting Ambulance Manager or Paramedic Supervisor.
- 8.14 Ambulance practitioner driving should doff their PPE as per the doffing guidelines (see appendix III) before resuming driving duties. This should be placed in a clinical waste bag.

9.0 National Emergency Operations Centre (NEOC)

- 9.1 The NEOC will carry out the following actions initially:
 - 9.1.1 Advise the responding crew of all information related to the call.
 - 9.1.2 Inform an available Manager, paramedic supervisor or available crew, to collect the spare PPE (as per section 7.8) and rendezvous with the crew.
- 9.2 If following practitioner assessment, the patient fulfils the criteria for a suspect case of EVD:
 - 9.2.1 Contact the NIU (01-8308969) and arrange remote assessment (Appendix VI) between practitioner on scene and the Infectious Disease Consultant
 - 9.2.1 Contact the Department of Public Health and inform them of case
 - 9.2.3 Contact the receiving Emergency Department and ascertain where in the hospital the patient is to be transported to.
 - 9.2.4 Seek the name of the Nursing Official (CNM) responsible for the handover
 - 9.2.5 Inform the Medical Director or Assistant Medical Director
 - 9.2.6 Inform the Assistant Chief Ambulance Officer.
- 9.3 If the case is in the Dublin Area the National Isolation Unit may decide to admit the patient directly to the Unit. If this is the case the following should be actioned:**
 - 9.3.1 Contact An Garda Síochána Command and Control Centre and arrange for a Garda Escort to the National Isolation Unit.
 - 9.3.2 The code word for this escort is "ELM" which will be used in all radio communication for the duration of the escort.
 - 9.3.3 The NEOC should provide An Garda Síochána with a contact person who will be the link person in Control for the duration of the call.
 - 9.3.4 Arrange (with An Garda Síochána) for an agreed rendezvous point for the ambulance crew and escorting Gardai.
 - 9.3.5 Garda Escort will remain with the ambulance until crew and ambulance are parked up for decontamination at the Mater Hospital.
 - 9.3.6 Stand Down arrangement will be made between the Garda in charge of the escort and member in charge of the ambulance. Stand Down of escort will be notified to the NEOC.

- 9.4 The NEOC will inform the National Isolation Unit that the crew have left scene and are en route. This will be done via the internal switchboard (01-8308969) requesting the National Isolation Unit to alert the appropriate specialist staff that the NAS vehicle is en route.
- 9.5 The backup numbers direct to the National Isolation Unit are:
8032562 or 8032563.
- 9.6 The NEOC will maintain detailed records of all communications and interactions with the various agencies and hospitals

10.0 DURING TRANSPORTATION

- 10.1 Ensure the inter-communicating window is closed before the patient is loaded into the ambulance.
- 10.2 Monitor the patient as appropriate and document findings.
- 10.3 Change gloves after every patient procedure.
- 10.4 Use disposable equipment if available.

11.0 BREAKDOWN PROCEDURES

- 11.1 Other than for emergency evacuation purposes, the crew must not leave the vehicle under any circumstances. This Procedure must also apply to 'running calls', where a further NAS response should be summoned via the radio.
- 11.2 In the event of a breakdown, the crew will notify the Ambulance Control Centre.
- 11.3 In most instances of vehicle breakdown, the repair can be affected at the roadside without the need for fleet support staff to enter the vehicle.
- 11.4 However, if this is not possible, then arrangements will be made for a replacement vehicle to complete the journey. The specific nature of these arrangements, coupled with any additional measures required, will be co-ordinated by the Ambulance Control Centre. The crew will transfer the patient to the replacement vehicle and continue to the receiving hospital.
- 11.5 Arrangement will be made to bring the defective vehicle to a secure and isolated location where decontamination of the vehicle will take place. This will be determined after due consultation with the crew and overseeing Manager.

12.0 ACTION OF CREW ON ARRIVAL AT RECEIVING HOSPITAL

- 12.1 Ensure arrangements are in place in the Emergency Department for transfer of the patient before the patient leaves the ambulance.
- 12.2 Ambulance Practitioner driving should make contact with the named nursing official responsible and identify the area in which the patient is to be admitted.
- 12.3 Ambulance practitioner driving should don new PPE, if the patient is not ambulant (this PPE may be housed in the front of the ambulance or carried by the Ambulance Manager or Paramedic Supervisor).
- 12.3 Transfer the patient to the care of the hospital staff
- 12.4 Remove the PPE (as per doffing document Appendix III/V) and don new PPE to facilitate decontamination of the ambulance.

- 12.5 The receiving hospital should provide a facility for the donning and doffing of PPE.
- 12.6 The ambulance should be decontaminated in accordance with the enclosed guidelines.
- 12.7 The National Ambulance Service may decide to provide a decontamination team to decontaminate the ambulance and to arrange shower facilities at the hospital for the crew. This will be decided on the day in conjunction with the Ambulance Manager, OPM and ambulance crew.

13.0 Vehicle Cleaning and Disinfection Procedures

- 13.1 On arrival at the area of decontamination, all blankets, sheets and consumables should be placed in double bagged clinical waste bags as per the Guidance Note H1402 "Packaging and Transport of waste from suspect and confirmed cases of the Ebola Virus"
- 13.2 All appropriately packaged clinical waste should be left at the hospital.
- 13.3 Equipment for decontamination of the ambulance will be conveyed to the hospital by the Ambulance Manager or Paramedic Supervisor
- 13.4 All exterior work surfaces, fixtures and fittings, stretcher, seats, handrails and equipment should be washed with water and detergent.
- 13.5 The doors and windows of the ambulance should be left open to assist drying.
- 13.6 It is imperative that all surfaces are thoroughly cleaned and disinfected, irrespective of whether any direct contamination of blood or body fluids has occurred.
- 13.7 The cloths should be placed in a yellow clinical waste bag. Dry off all equipment with paper towels and dispose of all used paper towels in yellow clinical waste bags.
- 13.8 Ensure proper personal protective equipment is worn while carrying out the cleaning procedures.
- 13.9 Clean the floor, stretcher mattress and work surfaces with new clean cloths using Titan Chlor Plus with the following strength Outbreak disinfection 10000ppm (ten tablets per litre of water).
- 13.10 Leave for 30 minutes to dry.
- 13.11 Re-wash down work surfaces, stretcher, seats, handrails and equipment with detergent and cloths. Dry off all equipment with paper towels and dispose of all used paper towels in yellow clinical waste bags.
- 13.12 All clinical waste should be double bagged and in accordance with the Guidance Note H1402 Packaging and Transport of waste from suspect and confirmed cases of the Ebola Virus.
- 13.13 Following decontamination of the ambulance, the crew will remove their PPE and place it in clinical waste bags.
- 13.14 They should wash themselves thoroughly, including shampooing their hair and change into their uniform.
- 13.15 If showering facilities are not available at the hospital, the crew should return to station to facilitate this.
- 13.16 Once the crew and ORM are satisfied that any outstanding matters have been addressed, the crew should report their status to the NEOC.
- 13.17 The crew will then go to an Ambulance Station holding the remaining items of equipment, in order for the vehicle to be fully replenished.

- 13.18 Once this has been completed, the vehicle will be available to return to normal operational duties.
- 13.19 The cloths should be placed in a yellow clinical waste bag. Dry off all equipment with paper towels and dispose of all used paper towels in yellow clinical waste bags.
- 13.20 Ensure proper personal protective equipment is worn while carrying out the cleaning procedures.
- 13.21 Clean the floor, stretcher mattress and work surfaces with new clean cloths using ActiChlor Plus using the following strength Outbreak disinfection 10000ppm (ten 1.7g tablets per litre of water).
- 13.22 Leave for 30 minutes to dry.
- 13.23 Re-wash down work surfaces, stretcher, seats, handrails and equipment with detergent and cloths. Dry off all equipment with paper towels and dispose of all used paper towels in yellow clinical waste bags.
- 13.24 All clinical waste should be double bagged and in accordance with the Guidance Note H1402 Packaging and Transport of waste from suspect and confirmed cases of the Ebola Virus.
- 13.25 Following decontamination of the ambulance, the crew will remove their PPE and place it in clinical waste bags.
- 13.26 They should wash themselves thoroughly, including shampooing their hair and change into their uniform.
- 13.27 If showering facilities are not available at the hospital, the crew should return to station to facilitate this.
- 13.28 Once the crew and ORM are satisfied that any outstanding matters have been addressed, the crew should report their status to the Ambulance Control Centre.
- 13.29 The crew will then go to an Ambulance Station holding the remaining items of equipment, in order for the vehicle to be fully replenished.
- 13.30 Once this has been completed, the vehicle will be available to return to normal operational duties.

14.0 MANAGEMENT OF BLOOD SPILLS

- 14.1 In the event of a blood spill, cover the spill with absorbent paper towels, discard towels into clinical waste bags. The contaminated area should again be liberally covered with 10000ppm hypochlorite solution and left for 2 minutes before wiping up with paper towels.
- 14.2 The surface should then be wiped down with detergent wipes.
- 14.3 Discard all paper towels and PPE into clinical waste bags.
- 14.4 For larger spills, cover the area with hypochlorite granules. If possible ensure good ventilation in the area. Allow 2-3 minutes for the granules to gel, then using scoop from Spill Kit remove the gel, place in yellow clinical waste bag.
- 14.5 Clean area with detergent wipes followed by hypochlorite solution 10000ppm as above.

15.0 Clinical and Environmental Waste

- 15.1 All waste including, discarded PPE, clinical waste, disposable equipment, used cleaning material (paper towels, cloths, gels), sheets and blankets a must be placed and secured in double yellow clinical waste bags and given to staff at the receiving hospital.

Role of the Ambulance Officer - Operations

- 16.1 In the absence of an Ambulance Manager, a paramedic supervisor or second ambulance crew can assume the role of the Ambulance Manager.
- 16.2 Following notification from the NEOC, the Manager should carry out the following duties:
 - A. Collect crate of PPE from a predetermined storage area.
 - B. Liaise with the transporting crew at the house or receiving hospital.
 - C. If the patient is to be transported to the NIU, the manager should liaise with An Garda Síochána in relation to the escort. An arranged rendezvous point will be agreed with the Garda escort and the Manager.
 - D. Liaise with the staff at the receiving hospital to facilitate the smooth transfer of the patient
 - E. Liaise with the crew at the decontamination area of the hospital when the patient has been transferred to the receiving hospital.
 - F. Supply the crew with cleaning and disinfection equipment.
- 16.3 The Manager will then oversee the remainder of the cleaning and disinfection procedure.

17.0 POST TRANSPORTATION PROCEDURES

- 17.1 NAS crews will receive initial advice and support from hospital staff, together with any treatment deemed necessary.
- 17.2 The NEOC will maintain detailed records of all suspected EVD transportations. It is therefore essential that crews keep Ambulance Control updated with all developments as they occur, which should also include details of any advice and/or treatment provided by the receiving hospital.
- 17.3 Such information must also be discussed by both the NEOC and the Ambulance Manager, in order that a clear plan of communication and support can be established for the individual crew members involved.
- 17.4 The initial responsibility for formulating and actioning this plan will rest with the relevant Operations Resource Manager responsible for the staff involved who will ensure that all relevant details are passed to the local Occupational Health Service. Consequently, all relevant details should be passed to the relevant ORM at the earliest opportunity.
- 17.5 As soon as circumstances allow, the responsibility for managing subsequent communication and support measures will be by the relevant ORM responsible for the staff involved.
- 17.6 He/she will continue to liaise with the crew, as well as co-ordinating the involvement of the Occupational Health Service, and any other associated authority.
- 17.7 Crews concerned about their health following an infectious removal can seek advice at any time from the Occupational Health Service.
- 17.8 A database detailing NAS personnel who have transported patients with suspected Ebola Virus Disease patients should be maintained at the relevant NAS Area Headquarters.

18.0 IMPLEMENTATION PLAN

- 18.1 On approval, this Procedure will be circulated electronically to all Managers, Supervisors and Staff.
- 18.2 This Procedure will be available electronically in each Ambulance Station for ease of retrieval and reference.
- 18.3 Each Operational Support and Resilience Manager will ensure that the Manager/Supervisor responsible for updating Policies and Procedures will return the Confirmation Form to NAS Headquarters to confirm document circulation to all staff.

19.0 REVISION AND AUDIT

- 19.1 The effectiveness of infection control measures will be monitored by Quality, Health and Safety Committees in consultation with the Infection Control Managers to ensure changing circumstances do not alter risk priorities.
- 19.2 The NAS Medical Directorate are responsible for ensuring the maintenance, regular review and updating of this policy.
- 19.3 Revisions, amendments or alterations to the policy can only be implemented after consideration and approval by the Director, following consultation with the National Isolation Unit.
- 19.4 Compliance with this policy will be assessed through the ongoing supervision of staff at all times.
- 19.5 It is in the interest of all staff members to ensure that this policy is adhered to in order to enhance staff safety.
- 19.6 Any incident involving a Disease case should undergo a specific review with assistance from the HSE Quality and Patient Safety Directorate and Infection Control Managers

Revision History: (This captures any changes that are made to a SOP when it has been revised. This may be placed at the back or close to the front of the document according to local preference.)

No	Revision No	Date	Section Amended	Approved by

20.0 REFERENCES

None applicable

21.0 APPENDICES

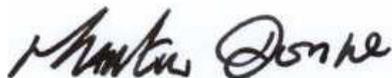
- **Appendix I** – Infectious Disease P.P.E. Donning - Chemsplash
- **Appendix II** – Infectious Disease PPE Doffing – Chemsplash
- **Appendix III** - Infectious Disease P.P.E. Donning - Viroguard
- **Appendix IV** – Infectious Disease PPE Doffing – Viroguard
- **Appendix V** – Risk Assessment for use by Ambulance Personell
- **Appendix VI** – Clinical Risk Assessment Form
- **Appendix VII**- Procedure – Acknowledgement Form

22.0 Signatures of Approval



National Ambulance Service Medical Director
On Behalf of the National Ambulance Service

Date 3rd January 2017



National Ambulance Service Director
On Behalf of the National Ambulance Service

Date 3rd January 2017

APPENDIX I

**Infectious Disease Personal Protective Equipment
Donning – Chemsplash**

Date: ____/____/____ **Time:** _____ **Incident No:** _____
Crew: _____ **Pin:** _____/_____ **Pin:** _____

Incident supervisor: _____ **Pin:** _____

Donning Personal Protective Equipment

<i>ACTION</i>		<i>Completed</i>
1	Remove personal clothing and items	
2	Inspect PPE prior to donning	
3	Perform hand hygiene	
4	Put on coverall	
5	Put on FFP3 mask	
6	Put on Goggles	
7	Hood up and seal applied	
8	Put on inner gloves and ensure under cuff	
9	Put on apron	
11	Put on Face Shield/Visor	
12	Put on outer gloves and ensure over cuff	
13	Inspect PPE prior to patient contact	

Comments:		

APPENDIX II

**Infectious Disease Personal Protective
Equipment Doffing –
Chemsplash**

<i>Doffing Personal Protective Equipment</i>		
	<i>ACTION</i>	<i>Completed</i>
1	Inspect PPE	
2	<i>Disinfect</i> outer gloves	
3	Remove apron	
4	Inspect PPE	
5	<i>Disinfect</i> gloves and top of disinfectant dispenser	
6	Remove outer gloves	
7	Inspect and <i>Disinfect</i> inner gloves	
8	Remove face shield/visor	
9	<i>Disinfect</i> inner gloves	
10	<i>Disinfect</i> collar flap of coverall by wiping down using an alcohol wipe	
11	Break seal on coverall and upzip coverall fully	
12	Remove hood from the head grasping hood at top of head	
13	<i>Disinfect</i> inner gloves	
14	Remove coverall touching outside only	
15	<i>Disinfect</i> inner gloves and top of disinfectant dispenser	
16	Remove inner gloves and <i>Disinfect</i> hands	
17	Apply new gloves	

18	Remove goggles	
19	Disinfect gloves	
20	Remove FFP3 mask	
21	Disinfect gloves	
22	Disinfect top of disinfectant dispenser	
23	Remove gloves	
24	Disinfect hands (perform hand hygiene)-use new	
25	With gloved hands dispose of dispenser along	
	Signature:	
	Date:	

APPENDIX III

**Infectious Disease Personal Protective Equipment
Donning - Viroguard**

Date: ____/____/____ **Time:** _____ **Incident No:** _____
Crew: _____ **Pin:** _____/_____ **Pin:** _____

Incident supervisor: _____ **Pin:** _____

Donning Personal Protective Equipment - Viroguard without feet

<i>ACTION</i>		<i>Completed</i>
1	Remove personal clothing and items	
2	Inspect PPE prior to donning	
3	Remove shoes	
4	Perform hand hygiene	
5	Put on coverall	
6	If weather clement - put back on shoes	
7	If weather inclement - put on wellington boots	
8	Extend legs of coverall over wellington boots	
9	Put on boot covers and extend to top of shins	
10	Put on FFP3 mask	
11	Put on Goggles	
12	Place coverall hood up and apply seal	

APPENDIX IV

**Infectious Disease Personal Protective
Equipment Doffing –
Viroguard**

<i>Doffing Personal Protective Equipment - Viroguard without feet</i>		
<i>ACTION</i>		<i>Completed</i>
1	If available, step into XL clinical waste bag	
2	Inspect PPE	
3	<i>Disinfect</i> outer gloves	
4	Remove apron	
5	Inspect PPE	
6	<i>Disinfect</i> gloves and top of disinfectant dispenser	
7	Remove outer gloves	
8	Inspect and <i>Disinfect</i> inner gloves	
9	Remove face shield/visor	
10	<i>Disinfect</i> inner gloves	
11	Remove hood ensuring to grasp at top of head.	
12	Disinfect inner gloves	
13	Break seal on coverall and unzip coverall fully	
14	Remove coverall hood from the head by grasping both sides, pulling the hood outwards, upwards and back over the head - ensure inside of hood is turned outward during process	
15	Extend arms behind and remove arms from coverall	
16	Disinfect inner gloves	

17	Remove the coverall and boot covers as one piece by bringing it down over the boots as far as the ankles.	
18	Step backward out of the boots onto a clean area (eg incontinent pads)	
19	Roll up the coverall and place it along with the boots into clinical waste bag	
	If using XL clinical waste bag, step backward out of this bag onto a clean area, roll up the bag removing	
21	Disinfect inner gloves and top of disinfectant dispenser	
22	Remove inner gloves	
23	Disinfect hands - use new dispenser if available	
24	Apply new gloves	
25	Remove goggles	
26	Disinfect gloves	
27	Remove FFP3 mask	
28	Disinfect gloves	
29	Disinfect top of disinfectant dispenser	
30	Remove gloves	
31	Disinfect hands	
32	With gloved hands dispose of dispenser along contaminated PPE	

	Signature: Date:	
--	------------------	--

Appendix V: Ebola Virus Disease Risk Assessment for use by Ambulance Personnel

Ebola Virus Disease Risk Assessment for use by Ambulance Personnel

Please note background colour coding indicates infection control precautions as per right-hand panel

If attending a patient on an aircraft see additional steps below[#] before assessing patient.
[^]Clinical: Does the patient have a fever (≥38.6°C/101.5°F) or history of fever in the previous 24 hours?
AND
[^]Travel History: Has the patient returned from (or is currently residing in) an area affected by current outbreak in the 21 days before onset of symptoms? (Contact Control for up-to-date list: www.hpsc.ie) **OR** [^]Epi-link: Has the patient had contact with a confirmed or probable case of EVD?

If patient in close proximity to other people, remove patient to less crowded area for assessment.
 Patients with respiratory symptoms should wear a surgical mask, if tolerated.
 Ambulance Control to contact National Isolation Unit (NIU) on 01 830 8969 & ask for Infectious Disease Consultant.
 Ambulance Control to initiate direct phone contact between Paramedics and NIU to facilitate risk assessment.

Remote Risk Assessment by NIU physician

No

Assessment Outcome = No Risk
EVD Unlikely
 - EVD test not routinely indicated
 - De-escalate infection prevention & control precautions
 - Waste to be managed as standard

Transport to nearest Emergency Department

Assessment Outcome = No High Risk Exposure, likely alternative diagnosis
 Ambulance Service EVD Procedures activated
 Control to notify Director of Public Health/MOH of case at risk of EVD if patient from aircraft^{**}.

Transport patient to nearest EVT receiving hospital <http://bit.ly/vthosp>

Assessment Outcome = High Risk Exposure
 Ambulance Service EVD Procedures activated
 Control to notify Director of Public Health/MOH of all cases at high risk of EVD^{**}. See side panel for contact details.

Transport patient to location as advised by NIU physician (may be local ED, NIU etc.)

[#] On attending a patient on an aircraft:

Before entry on airplane, ensure standard, droplet and contact precautions as per side panel. Ambulance Personnel should assess the patient and ask the clinical and travel questions given above[^].

On the advice of Specialist in Public Health Medicine/MOH, Ambulance Personnel should:

- A. **PRIORITY.** Distribute and collect Passenger Locator Cards (PLC)^{##} for (i) passengers seated one seat in each direction from the ill person (see picture opposite^{*)} (ii) persons who reported direct contact with patient, (iii) crew serving that section. HSE NAS will forward these PRIORITY cards with report copy directly to the Public Health Specialist.
- B. Request the airline cabin crew to, where practicable:
 - i. Announce the Travel Health Alert Announcement - template is available
 - ii. Distribute and collect Passenger Locator Cards^{##} from all other passengers and crew (to fill in and be collected by airline)
 - iii. Distribute a copy of the Travel Health Alert Announcement Leaflet^{##} to all passengers and crew.
 - iv. Completed Passenger Locator Cards should be provided to the local Dept of Public Health by the airline

All well passengers should then be allowed to disembark, using exits without passing the patient.

^{##} paper copies of PLC and Announcement available at airports for airport duty manager/airline via Public Health local arrangements

^{*} Relevant area for trace-backs, viral haemorrhagic fevers (Lassa, Marburg, Ebola) ECDC Risk assessment guidelines for diseases transmitted on aircraft 2nd ed, Stockholm: ECDC, 2010

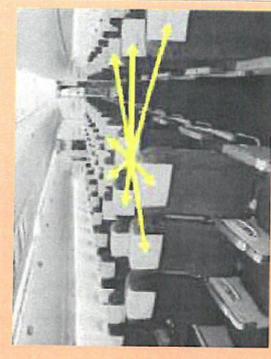
^{**} Requirement to contact Director of Public Health/Medical Officer of Health under Infectious Disease Act, Regulations. See side panel for contact details.

Precautions	Infection Control
Standard Precautions (SP). Transmission-based precautions may be required to manage other suspected infections/colonisation	Precautions Standard Precautions (SP). Transmission-based precautions may be required to manage other suspected infections/colonisation
Standard, Droplet & Contact Precautions: Hand hygiene, gloves, fluid repellent surgical face mask, long sleeved fluid repellent/resistant gown, goggles or visor. Use airborne precautions for aerosol generating procedures (FFP3 mask plus PPE outlined above).	Precautions: Hand hygiene, gloves, fluid repellent surgical face mask, long sleeved fluid repellent/resistant gown, goggles or visor. Use airborne precautions for aerosol generating procedures (FFP3 mask plus PPE outlined above).

Public Health Contact Details

- HSE.E: 01 635 2145
- HSE.M: 057 935 9891
- HSE.MW: 061 483 338
- HSE.NE: 046 907 6412
- HSE.NW: 071 985 2900
- HSE.SE: 056 778 4142
- HSE.S: 021 492 7601
- HSE.W: 091 775 200

^{*}Out of hours contact public health via Ambulance Control



For use during outbreak of EVD in West Africa, 2014

 Feidhmeannacht na Seirbhíse Sláinte Health Service Executive	Ebola Virus Disease Clinical Risk Assessment Form Version 1.0, 10/09/2014																																																																																																	
Section A - Patient Details																																																																																																		
Enter the details in section A or attach patient label in space provided in section B																																																																																																		
Surname: <input style="width: 150px;" type="text"/> Forename: <input style="width: 150px;" type="text"/>																																																																																																		
Address: <input style="width: 500px;" type="text"/> <input style="width: 500px;" type="text"/>																																																																																																		
Sex: F <input type="checkbox"/> M <input type="checkbox"/> NK <input type="checkbox"/> Date of Birth: <input style="width: 100px;" type="text"/> Age: <input style="width: 50px;" type="text"/>																																																																																																		
Emergency Dept/Ward: <input style="width: 150px;" type="text"/> Patient's Hospital Number: <input style="width: 150px;" type="text"/>																																																																																																		
Section B - Patient label	Section C - Assessed by																																																																																																	
Place patient label below <input style="width: 300px; height: 50px;" type="text"/>	Name of assessor: <input style="width: 150px;" type="text"/> MCRN: <input style="width: 100px;" type="text"/> Date of assessment: <input style="width: 100px;" type="text"/>																																																																																																	
Section D - Travel history																																																																																																		
Has the patient returned from an area affected by the current outbreak (www.hpsc.ie) in the 21 days before onset of symptoms?																																																																																																		
Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/>																																																																																																		
If yes, which country <input style="width: 150px;" type="text"/> City/Region/Town <input style="width: 150px;" type="text"/>																																																																																																		
Section E - Signs & Symptoms																																																																																																		
Fever $\geq 38.6^{\circ}\text{C}$ Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> History of fever in the previous 24 hours Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Fever $\geq 38.6^{\circ}\text{C}$ persisting 72 hours after use of antimalarials or antimicrobials Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/>																																																																																																		
<table border="0"> <tr> <td></td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> <td style="text-align: center;">Unknown</td> <td></td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> <td style="text-align: center;">Unknown</td> <td></td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> <td style="text-align: center;">Unknown</td> </tr> <tr> <td>Headache</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>Diarrhoea</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>BP systolic <90 mmHg*</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Rash</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>Retrosternal pain</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>Respiratory rate >20/min*</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Myalgia</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>Haematemesis</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>Pulse >90bpm*</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Cough</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>Melaena</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pharyngitis</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>Bleeding</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Vomiting</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>Bruising</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Yes	No	Unknown		Yes	No	Unknown		Yes	No	Unknown	Headache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Diarrhoea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BP systolic <90 mmHg*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rash	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Retrosternal pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Respiratory rate >20/min*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Myalgia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Haematemesis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pulse >90bpm*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Melaena	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					Pharyngitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bleeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					Vomiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bruising	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>										
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Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																																																																															
If other symptoms, please specify: <input style="width: 500px; height: 20px;" type="text"/>																																																																																																		
Was onset of symptoms sudden or gradual? <input type="checkbox"/> Sudden onset <input type="checkbox"/> Gradual onset																																																																																																		
Date of onset of first symptoms: <input style="width: 100px;" type="text"/>																																																																																																		
Fever + travel to area affected by current outbreak + bleeding or signs of bleeding increase the likelihood of EVD diagnosis. Please complete questions overleaf to assess exposure.																																																																																																		
Approved by EVD Advisory Sub-Committee, HPSC, September, 2014																																																																																																		

Appendix VI: Ebola Virus Clinical Risk Assessment Form (page 2)

For use during outbreak of EVD in West Africa, 2014

 <small>Fidilwasmacht na Scríobh Síolta Health Service Executive</small>	Page 2 of 2 Clinical Risk Assessment Form v1.0		
Section F - Exposure			
Has the patient...			
	Yes	No	Unknown
1. Had close face to face contact (e.g. within 1 metre) without appropriate personal protective equipment (including eye protection) with a probable or confirmed case who was coughing/ vomiting/ bleeding/ had diarrhoea?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Had direct contact (without appropriate personal protective equipment) with any material soiled by body fluids from a probable/confirmed case of EVD?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Been identified as a contact of a probable or confirmed case?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Had unprotected sexual contact with a case up to three months after recovery?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Had a percutaneous injury (e.g. with a needle) or mucosal exposure to bodily fluids, tissues or laboratory specimens of a probable or confirmed case?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Participated in funeral rites with direct exposure to <u>any</u> human remains (not just those of a probable/confirmed case) in/from an affected area without appropriate personal protective equipment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Had direct contact with Fruit bats / rodents / primates, living or dead, in/from affected areas, or bushmeat?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assessed category of EVD risk			
If YES to <u>ANY</u> of questions 1-7 AND FEVER . See EVD algorithm for immediate actions.	→	High Risk Exposure	
If NO to <u>ALL</u> of the above; AND YES to TRAVEL from an area affected by the current outbreak in the 21 days before onset of symptoms AND FEVER ; EVD is possible, but malaria more likely	→	No high risk exposure. Likely alternative diagnosis.	
If NO to <u>ALL</u> of the above; AND NO to TRAVEL ; AND YES to FEVER ; EVD is unlikely.	→	No Risk	
Reassess if fails to improve, e.g. nosebleed, bloody diarrhoea, sudden rise in ASK or CK, sudden fall in platelets, fall in BP, rapidly increasing O ₂ requirements in absence of diagnosis. Consider bioterrorism related VHF if symptoms suggestive but no travel history.			
Approved by EVD Advisory Sub-Committee, HPSC, September, 2014			

Appendix VII

Document Control No. 1 (to be attached to Master Copy)

NASCG019 Emergency Call for Suspected Ebola Virus Disease Patient

Reviewer: The purpose of this statement is to ensure that a Policy, Procedure, Protocol or Guideline (PPPG) proposed for implementation in the HSE is circulated to a peer reviewer (internal or external), in advance of approval of the PPPG. You are asked to sign this form to confirm to the committee developing this Policy or Procedure or Protocol or Guideline that you have reviewed and agreed the content and recommend the approval of the following Policy, Procedure, Protocol or Guideline:

Title of Policy, Procedure, Protocol or Guideline:

NASCG019 Emergency Call for Suspected Ebola Virus Disease Patient

I acknowledge the following:

- I have been provided with a copy of the Policy, Procedure, Protocol or Guideline described above.
- I have read Policy, Procedure, Protocol or Guideline document.
- I agree with the Policy, Procedure, Protocol or Guideline and recommend its approval by the committee developing the PPPG.

Name

Signature (Block Capitals)

Date

Please return this completed form to:

Name: Niamh Murphy
Contact Details: Corporate Office
National Ambulance Service
Rivers Building
Tallaght Cross
Dublin 24
email niamhf.murphy1@hse.ie

Document Control No. 2 (to be attached to Master Copy)

**Key Stakeholders Review of Policy, Procedure, Protocol or
Guidance Reviewer Statement**

Reviewer: The purpose of this statement is to ensure that a Policy, Procedure, Protocol or Guideline (PPPG) proposed for implementation in the HSE is circulated to Managers of Employees who have a stake in the PPPG, in advance of approval of the PPPG. You are asked to sign this form to confirm to the committee developing this Policy or Procedure or Protocol or Guideline that you have seen and agree to the following Policy, Procedure, Protocol or Guideline:

Title of Policy, Procedure, Protocol or Guideline:

NASCG019 Emergency Call for Suspected Ebola virus Disease Patient

I acknowledge the following:

- I have been provided with a copy of the Policy, Procedure, Protocol or Guideline described above.
- I have read Policy, Procedure, Protocol or Guideline document.
- I agree with the Policy, Procedure, Protocol or Guideline and recommend its approval by the committee developing the PPPG.

Name

Signature (Block Capitals)

Date

Please return this completed form to:

Name: Niamh Murphy
Contact Details: Corporate Office
National Ambulance Service
Rivers Building
Tallaght Cross
Dublin 24
email niamhf.murphy1@hse.ie

