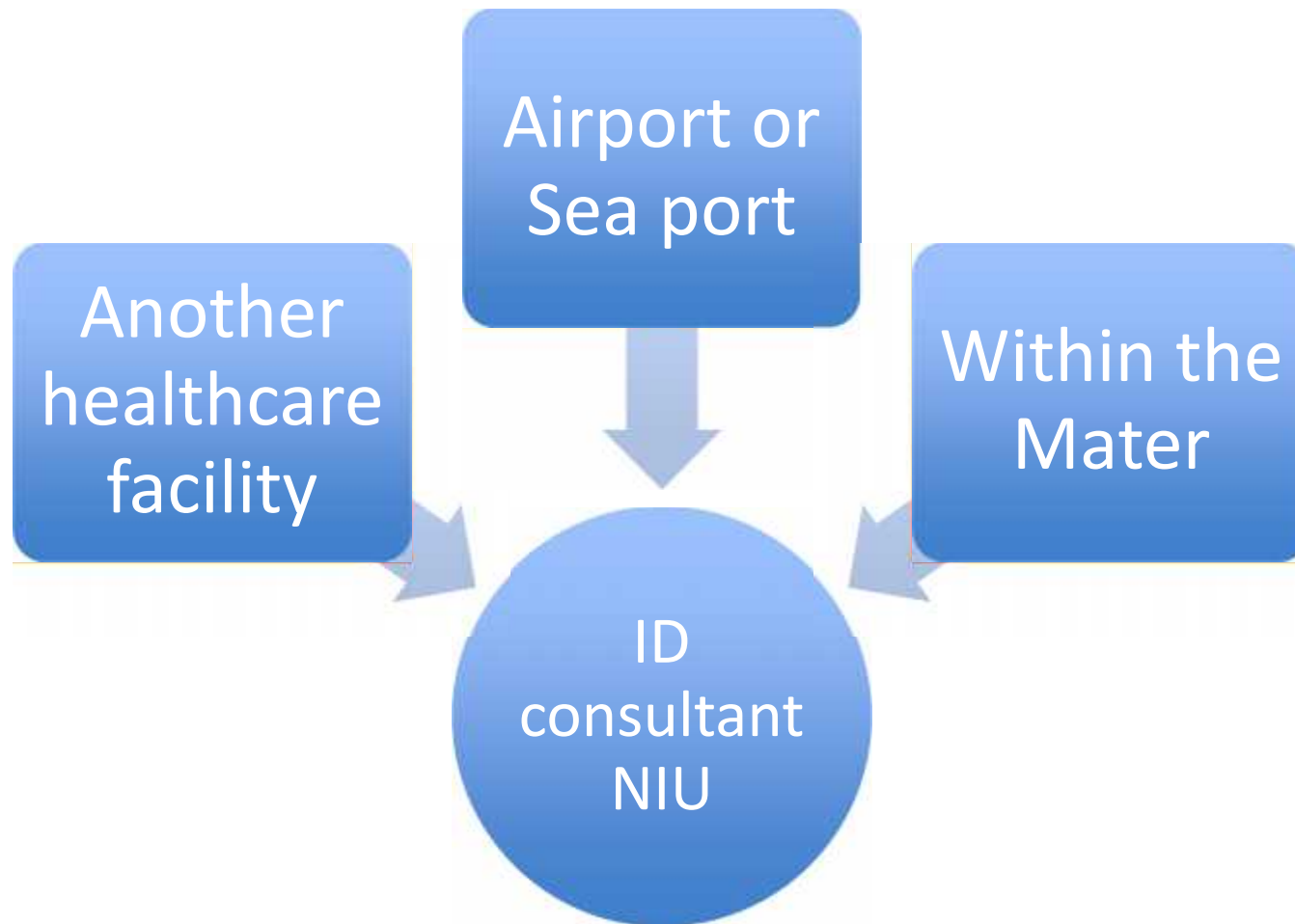


The NIU Plan for an Adult with EVD



Deirdre Morley
Infectious Disease Specialist Registrar
Mater Hospital

Referral and transfer to National Isolation Unit



Case

Phone call from Emergency Department

40 year old nurse from Madrid

Presented to Emergency Department with 4 day history of fever, chills, muscle aches

Involved with caring for patient with Ebola in Carlos III hospital Madrid 2 weeks previously

EVD Algorithm

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 checked="" 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 checked="" type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	
History of fever in the previous 24 hours								Yes <input checked="" 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 checked="" type="checkbox"/>	No <input type="checkbox"/>	Unknown <input type="checkbox"/>	
	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	<input checked="" 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"/>	<90 mmHg*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Myalgia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Haematemesis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Respiratory	<input checked="" 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"/>	rate >20/min*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharyngitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bleeding	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pulse >90bpm*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vomiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bruising	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>								
If other symptoms, please specify: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>											
Was onset of symptoms sudden or gradual? <input type="checkbox"/> Sudden onset <input type="checkbox"/> Gradual onset											
Date of onset of first symptoms: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input 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.											

*Adult definitions; seek local expert guidance for assessment of children.

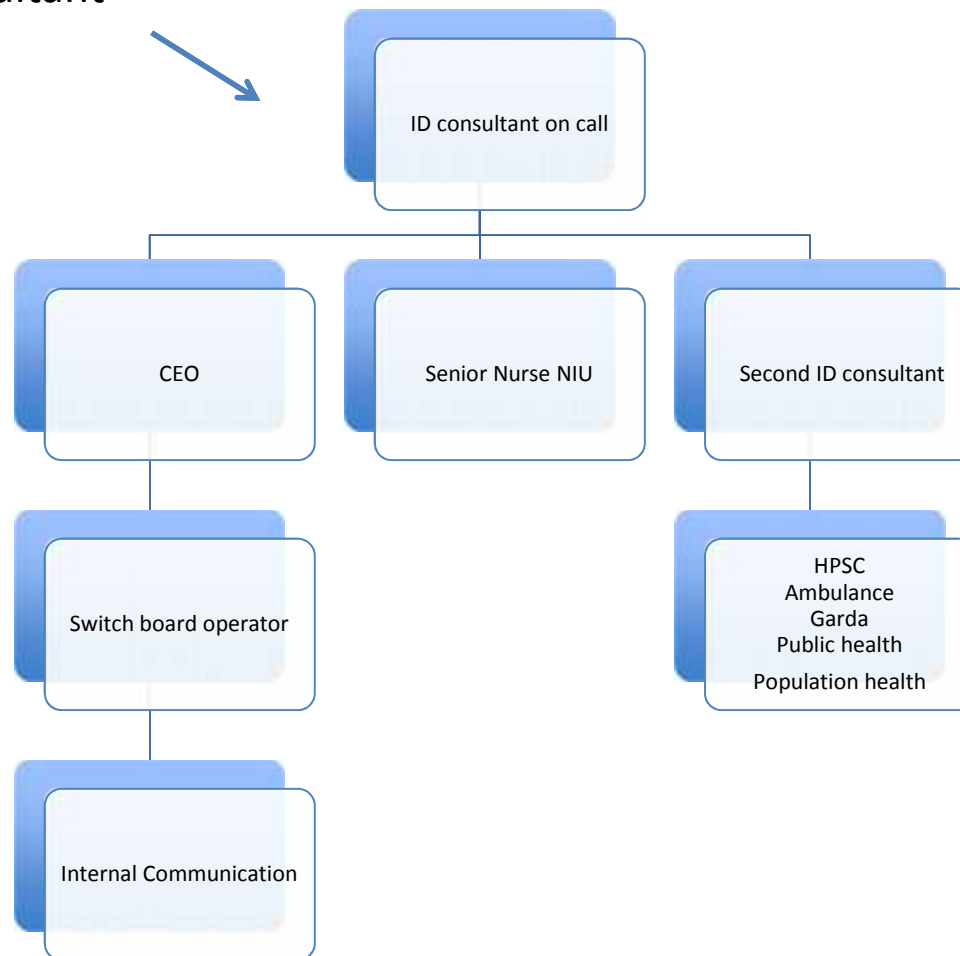
EVD Algorithm

Has the patient...

- | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|--------------------------|
| 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 checked="" 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Been identified as a contact of a probable or confirmed case? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Had unprotected sexual contact with a case up to three months after recovery? | <input checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Alert phase

Call from ED consultant



Activation of NIU

NIU activated by the on call ID consultant

Aim to facilitate safe and efficient transfer of patient

Readily available NIU Policy and “Action cards”

Clearly defined roles for all relevant staff members

National Isolation Unit

Two high specification negative pressure isolation rooms

HEPA filtration

Separate Air handling system

Separated from rest of ward

On street entrance

National Isolation Unit

Clean entrance room and anteroom for decontamination

Rooms equipped with Point of Care testing

Portable Ultrasonography

Can facilitate ICU equipment/ dialysis



National Isolation Unit preparation

Two rooms permanently vacated

Ready to receive patient within 1 hour

All twelve beds will be vacated if confirmed case (4 hours)

Ongoing maintenance

- Negative pressure gauge

- POCT equipment calibration

- Fully stocked – checklist maintained by Nursing staff

Staff preparation

Nursing staff

ID Consultant/Registrar

ICU consultant

“Buddy” system PPE donning



Three staff members prepare for arrival of patient

Two nurses for isolation room per shift

Two nurses “Runners”

“Closed” Unit

Internal communication via ID consultant / CNM

External communication via CEO/ ID consultant 2

Restriction on non-essential staff

24 hour security

Log of all persons entering room and isolation facility

Transfer of patient

Ambulance transfer coordinated by HSE ambulance control

Designated ambulance and crew

Garda escort plus on street precautions

Ambulance Contact NIU with ETA

Transfer of patient

Transfer to entrance direct to NIU on Berkeley Road

Patient escorted by NIU staff to Isolation room



Initial patient assessment

Nursing staff/ ID doctor assessment

Early ICU consultant involvement

Early large bore IV access

Initial bloods

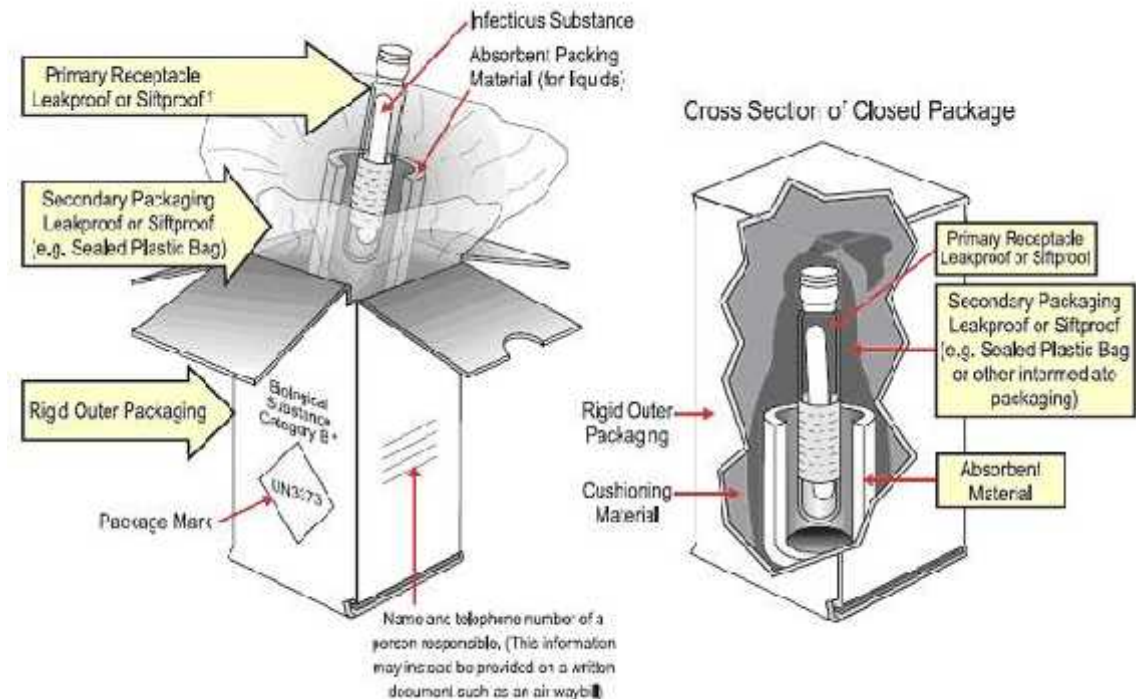
ABG/FBC/Clinical Chemistry/Coagulation profile

Transfer of specimens to NVRL

Staff trained in removal of specimen from room

24 hour on-call microbiologist NVRL

Courier transfer coordinated by medical staff



Training

Intensive targeted staff training

PPE “Buddy” system PPE donning and removal

Point of Care Testing training

Continual competency assessment

Deteriorating patient

Waste management



Training scenarios

24th October

ED activation – transfer and Admission to NIU

29th October

External transfer by ambulance and Garda – admission

POCT – Waste management – Staffing rotation

Debriefing following all drills – Internal and External

Root cause analysis

Maintaining competency

EVD committee meets every two weeks

CEO/Management

Medical/Nursing/ ICU

Laboratory staff

Infection Control staff

Waste management

Technical staff

Update Newsletter weekly