



## TECHNICAL GUIDANCE DOCUMENT

### PROCEDURE FOR COMMUNICATION TO MEMBER STATES AND THE COMMISSION ABOUT WEST NILE VIRUS DISEASE

#### **Background**

Countries within and around Europe have seen sporadic West Nile Virus (WNV) activity over the last 40 years involving human, mammalian, avian and vector infections. Human and equine outbreaks have been reported in Europe since 1996, notably in Romania, Italy and France<sup>12</sup>. During the summer of 2004 Ireland reported two cases of WNV infection in Irish citizens thought to have been exposed in the Algarve Region of Portugal and France identified a cluster of equine cases in the Camargue. Most of this activity has to date involved WNV which is different and less pathogenic than that seen recently in North America though it certainly is a threat to humans<sup>34</sup>.

These events have been rapidly communicated to Member States and the Commission through the EU Early Warning and Response System (EWRS). Some Member States have adopted measures to minimize the risk for their citizen travelling to Portugal and to reduce the risk of WNV infections transmitted by blood donations. Portugal and France have reinforced surveillance of WNV in animals and humans<sup>5</sup>.

Although the last events do not impact significantly on levels of public health risk, rapid communication of WNV infections in humans is essential to help Member

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<sup>1</sup> Opinion of the Scientific Committee on Veterinary Measures relating to Public Health on West Nile Virus (WNV); adopted on 14-15 April 2003.

<sup>2</sup> Opinion of the Scientific Committee on Medicinal Products and Medical Devices on “The Impact of Arthropod Borne Diseases (including WNV) on the Safety of Blood Used for Transfusion as well as Organs Used for Transplantation in the European Community”; adopted on 16 October 2003.

<sup>3</sup> Connell J, McKeown P, Garvey P, Cotter S, Conway A, O’Flanagan D, O’Herlihy B, Morgan D, Nicoll A and Lloyd G. Two linked cases of West Nile Virus (WNV) acquired by Irish tourists in the Algarve, Portugal. *Eurosurveillance Weekly* 2004 ; 8 (32): 05/08/2004

<sup>4</sup> Zeller H, Zientara S, Hars S, Languille J, Mailles A, Tolou H, Paty M-C, Schaffner F, Armengaud A, Gaillan P, Legras J-F and Hendrickx P. West Nile outbreak in horses in Southern France: September 2004. *Eurosurveillance Weekly* 2004 ; 8 (41): 07/10/2004

<sup>5</sup> Commission Directive 2004/33/EC of 22 March 2004 implementing Directive 2002/98/EC of the European Parliament and of the Council as regards certain technical requirements for blood and blood components. OJ L 91, 30.3.2004, p.25

States and the Commission be aware of and change in the range of infection and prepare common positions and to alert properly their relevant authorities and organisations (including blood authorities), so that measures can be implemented timely when and if necessary.

A case definition for WNV disease has been proposed by Ireland and it has been discussed during the ESCON Meeting of the 7 December 2004 in Luxembourg. This includes indications for considering the diagnosis of WNV and requesting a WNV test, and probable and confirmed case definitions. In addition recommendations are being prepared concerning recommended laboratory diagnostic methods. We therefore propose that information on WNV cases be communicated to Member States and the Commission through the EWRS as described below.

**A: Procedure to communicate human cases**

*1. First new WNV case in a country:*

Probable case should be reported.

The EWRS Member communicates the information immediately to the EWRS, when information on a case (as defined in Annex 1) is obtained. The information indicated in the reporting form should be included at the earliest opportunity (see Annex 2).

*2. Following cases acquired in the same area/region:*

Confirmed and probable cases should be reported.

The EWRS Member communicates the information immediately to the EWRS, when information on a case (as defined in Annex 1) is obtained. The information indicated in the reporting form should be included at the earliest opportunity (see Annex 2).

**B: Additional information**

*WNV activity identified in sentinel animals*

Information on WNV activity documented by sentinel surveys (horses, birds and mosquitoes) is considered useful to assess the risk to acquire the infection in specific geographical setting. Therefore the delivery of this information through EWRS, when available from National surveillance programs is welcomed.

ANNEX 1

**Proposed indications for considering the diagnosis of WNV infection and requesting a WNV test and EU Case Definitions for WNV Disease**

**A. WNV NEUROLOGICAL SYNDROME (see notes)**

**Indications for considering the diagnosis of WNV infection and requesting a WNV test**

1. Fever over 38°C **AND**
2. Encephalitis or meningoencephalitis, or aseptic meningitis, or acute flaccid paralysis (poliomyelitis-like syndrome or Guillain-Barré-like syndrome) **AND**
3. No alternative microbiological cause identified **AND**
4. Occurring following exposure during a period when arboviral transmission is possible **OR**
5. Occurring following exposure in an area where arboviral transmission is possible **OR**
6. History of exposure to an alternative mode of transmission (for example through blood transfusion/organ donation).

**Probable Case**

A case presenting with indications 1, 2, 3 and 4 or 5 or 6 (as defined above) that has:

1. A positive WNV IgM test on a single serum specimen in absence of a potential alternative cause

**Confirmed Case**

A case that has:

1. Isolation of WNV from serum or CSF **OR**
2. Detection of WNV IgM in the CSF **OR**

3. Detection of WNV genomic RNA sequences in serum or CSF by RT-PCR\*  
**OR**
4. Detection of neutralising antibodies with significant titer in serum or CSF **OR**
5. A fourfold rise or seroconversion in WNV antibody titre in paired serum samples.

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\* It is recognised that isolation of virus or detection of nucleic acid through a PCR is unusual and the most likely confirmatory testing is through detection of neutralising antibodies or a rising antibody titre.

## WNV FEVER

### Indications for considering the diagnosis of WNV infection and requesting a WNV test

1. Fever over 38°C **AND**
2. **At least one** of the following:
  - Myalgia or
  - Arthralgia or
  - Headache or
  - Fatigue or
  - Photophobia or
  - Lymphadenopathy or
  - Maculopapular rash **AND**
3. Occurring during a period when arboviral transmission is possible **OR**
4. Occurring in an area where arboviral transmission is possible **OR**
5. History of exposure to an alternative mode of transmission (for example through blood transfusion/organ donation).

### Probable Case

A case presenting with indications 1, 2 and 3 or 4 or 5 (as defined above) that has:

1. A positive WNV IgM test on a single serum specimen in absence of a potential alternative cause.

### Confirmed Case

A case that has:

1. Isolation of WNV from serum **OR**
2. Detection of WNV IgM in the CSF **OR**
3. Detection of WNV genomic RNA sequences in serum by RT-PCR\* **OR**
4. Detection of neutralising antibodies with a significant titer in serum **OR**
5. A fourfold rise or seroconversion in WNV antibody titre in paired serum samples.

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\* It is recognised that isolation of virus or detection of nucleic acid through a PCR is unusual and the most likely confirmatory testing is through detection of neutralising antibodies or a rising antibody titre.

## Notes on WNV Neurological Syndrome

### Encephalitis

- Altered mental state (altered level of consciousness, agitation, lethargy) and/or other evidence of cortical involvement (e.g., focal neurological findings, seizures) and
- Cerebrospinal fluid (CSF) pleocytosis with predominant lymphocytes and/or elevated protein and no alternative microbiological cause identified.

### Meningitis

- Headache, stiff neck and/or other meningeal signs and
- CSF pleocytosis with predominant lymphocytes and/or elevated protein and no alternative microbiological cause identified.

### Acute flaccid paralysis (most cases are polio-like)

- Asymmetric limb weakness without sensory loss with diminished deep tendon reflexes
- Anterior horn cell disease
- May have facial nerve palsy
- No alternative microbiological cause identified.

## ANNEX 2

**Reporting Form**

In case of communication of new WNV cases the following information should be reported:

<b>Information</b>	
Full name of reporting country	
Unique case identifier	
Date of onset of illness	
Probable / Confirmed case	
If probable, Sent to reference laboratory for confirmation on:	
Identity of the reference laboratory	
Sex	
Age	
Country where infection occurred	
Region of the Country where infection	
Date case reported	
Date of hospital admission	
Short description of the clinical picture	
Contact point for further information (email address and phone)	