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Risk Assessment Group

# PRIMARY RISK ASSESSMENT

Increase Hantavirus cases

Date of the signal	Date of the RA	Signal provider	Experts consultation	Method
27/06/2017	27/06/2017	AViQ	<b>Permanent membres:</b> Dr Sophie Quoilin, Dr Daniel Reynders, Dr. Valeska Laisnez, Dr Carole Schirvel, Dr Romain Mahieu, Mme Mireille Thomas  Dr Laurence Nick, Dr. Caroline Theugels, Dr P. Demol, M. P. Guilmin.  <b>Specific experts :</b> Sofie Patteet, Katrien Lagrou (NRC Hanta)	eMail consultation
<b>Date of update</b>	<b>Closing date</b>			

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**PRIMARY RISK ASSESSMENT  
OF POTENTIAL PUBLIC  
HEALTH EVENT**

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<b>Signal</b>	<p>Since the beginning of the year, an increase of hantavirus cases, compared to last year, is reported in several EU countries: Austria, France, Germany, Luxembourg ...</p> <p>AViQ was informed of an unusual number of hospitalisations for haemorrhagic fever with renal syndrome (HFRS) due to hantavirus: 11 cases (7 men, median age 39y [ranging 24-66] and 4 of them required dialysis), all in the district of Mons, between January and June 2017.</p> <p>For Belgium, sentinel labs network detected a pic in April (11 cases) with a total of 26 cases (Jan-May 2017) while the number of cases the previous whole years was N=41 (2016), 47 (2015), 76 (2014), 24 (2013). Most of the cases are located in the provinces Namur, Luxembourg, Antwerpen and Hainaut.</p> <p>The National Reference Centre has received 276 samples for confirmation since January and among them 52 was positive (19%). A majority of men is affected and 38 cases are located in Wallonia (18 in Hainaut and 18 in Liège). In 2016, the NRC confirmed 13 cases on 233 samples (5.5%).</p> <p>No specific increase in Flanders for the moment but a cluster of 5 patients was observed in the area of Antwerp in April.</p>		
Description		Score	Description / arguments
1	Cause known?		<p>Hantaviruses are rodent-borne viruses (most common in EU is Puumala virus, carried by the bank vole). The virus is widespread across most of the continent, except for the UK, the Mediterranean coastal regions and the most northernmost areas.</p> <p>Outbreaks appear related to complex and multi-factorial mechanisms including favourable environmental conditions enhancing the risk of human population exposure to the virus.</p> <p>Most of notified cases to AViQ have a link with outdoors activity.</p>
2	Unexpected/unusual	Expected	<p>The current increase of hantavirus infection in several EU countries is not unexpected as regular outbreaks appear in a two or three years cycle across Europe, and most cases usually occur during spring and summer.</p> <p>Current environmental conditions this spring in large areas from the Balkans to Austria/Germany and Belgium/France appear to be favourable for voles.</p>
3	Severity		Varying severity of the haemorrhagic fever with renal syndrome (HFRS) but the mortality remains very low (less than 0.1%).
4	Dissemination (Low/Medium/High)	NA	Exposure to local rodent population.

5	Risk of (inter)national spread	No	Same situation in neighbouring countries (France and Germany).
<b>Preparedness and response</b>			
6	Preparedness		Mandatory notification in Brussels. Guidelines available in Wallonia ( <a href="https://www.wiv-isp.be/matra/Fiches/Hanta.pdf">https://www.wiv-isp.be/matra/Fiches/Hanta.pdf</a> ) and Flanders ( <a href="https://www.zorg-en-gezondheid.be/hantavirose">https://www.zorg-en-gezondheid.be/hantavirose</a> ).
7	Specific control measures (surveillance, control, communication)		No human to human transmission, so no specific control measures. Risk factors are already described. Agentschap Zorg en gezondheid already informed GP in the area of Antwerp.
<b>Public health impact</b>			
A	Public health impact in Belgium (Low/Medium/high)		Even if occurring over a large period (between January and June), 11 cases in this geographical area (Mons) where very few cases by year are usually diagnosed (0 in 2016, 3 in 2015, 6 in 2014) constitute an outbreak. Other sources of data (NRC/sentinel labs) are also observing an increase of cases. The risk for public health remains nevertheless low but a larger outbreak cannot be excluded.
B	Recommendations (surveillance, control, communication)		<b>Surveillance:</b> To monitor this event through notification to (AViQ/ToVo/CoCom), sentinel surveillance (WIV-ISP) and NRC (KUL) at the light of European situation. To assess the need of case control study if increasing number of cases have unknown exposure. <b>Control:</b> NA <b>Communication:</b> To inform GPs of provinces Hainaut and liege about the epidemiological situation and of other Walloon bordering districts with France as well considering that they are usually the most affected ones.
C	Actions		AViQ: write a communication for GPs. WIV-ISP: write generic information for professionals. The Flash will be adapted to include the link to this information.

## REFERENCES

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- (1) ECDC Round table. 25/06/2017.
- (2) A case-control study after a hantavirus infection outbreak in the south of Belgium: who is at risk? Van Loock F1, Thomas I, Clement J, Ghoos S, Colson P. Clin Infect Dis. 1999 Apr;28(4):834-9.
- (3) Factors driving hantavirus emergence in Europe. Chantal Reusken and Paul Heyman. Current [Opinion in Virology](#) 2013, 3:92-99.
- (4) In search for factors that drive hantavirus epidemics. Paul Heyman, Bryan R. Thoma, Jean-Lou Marié, Christel Cochez and Sandra Simone Essbauer. [Frontiers in Physiology](#) July 2012 | Volume 3 | Article 237.
- (5) Guidelines AViQ: A majority of men is affected and 36 cases are located in Wallonia.