

RAG

Risk Assessment Group

PRIMARY RISK ASSESSMENT

Group A streptococci (GAS)

Date of the signal	Date of the RA	Signal provider	Experts consultation	Method
08/03/2017	09/03/2017	WIV-ISP, NRC	Permanent experts: S. Quoilin, D. Reynders, V. Laisnez, C. Schirvel, R. Mahieu, P. Demol, M. Thomas Specific experts: K. Loens and Erlangga Yusuf, NRC GAS, UZ Antwerpen N. Bossuyt, V. Maes, M. Sabbe, WIV-ISP	Email consultation
Date of update	Closing date			

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

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Signal		<p>Since December 2016, the National Reference Centre (NRC) for non-B beta-haemolytic streptococci has received relatively more group-A streptococci (GAS), group C-streptococci (GCS) en group G-streptococci (GGS) in comparison with previous years.</p> <p>Since December 2016 the NRC received 72 <i>S. pyogenes</i> isolates from 4 STSS, 6 fasciitis, 3 meningitis and 59 septicaemias. Eleven of the patients with invasive streptococcal infections died in a period of 3 months (December-February), included 3 children younger of 3 years old, and this in comparison with 17, 14, 19 and 29 deaths in resp. 2013, 2014, 2015 and 2016.</p> <p>Emm-typing was executed and the results don't show a new emm-type or new emm-subtype. The isolates were received from all districts and there is no known epidemiological link.</p>	
Description		Score	Description / arguments
1	Cause known?	Yes	<p>GAS infections are common infections in humans, especially in children. Mostly they are mild and of short duration, but sometimes they can cause serious infections such as STSS, necrotizing fasciitis and septicaemia. GAS infections can also causes late complications (acute rheumatics and acute poststreptococcal glomerulonephritis).</p> <p>Invasive infections can cause clusters (e.g. on neonatology services, homes, institutions, barracks, in association with varicella).</p>
2	Unexpected/unusual	Unusual	The number of GAS infections send to the NRC is higher than in previous years.
3	Severity	High	The mortality of STSS is about 50%.
4	Dissemination (Low/Medium/High)	Low	<p>Through droplets and (in)direct contact.</p> <p>Highest dissemination of invasive infection in household contacts.</p>
5	Risk of (inter)national spread	Low	<p>The Netherlands also mentioned a higher number of GAS infections: http://rivm-lic.m13.mailplus.nl/genericservice/code/servlet/React?encId=w45EXmtEpZtPZk3&actId=529248&command=openhtml</p> <p>Until now, without known epidemiological link.</p>
Preparedness and response			
6	Preparedness	high	<p>The notification of Streptococcal Toxic Shock Syndrome (STSS), necrotizing fasciitis, puerperal fever or sepsis caused by GAS is mandatory in Flanders since January 2017 and in Brussels.</p> <p>There is no obligation to send isolates to the NRC but the diagnostic capacity exists in Belgium (clinical laboratories and NRC).</p>

7	Specific control measures (surveillance, control, communication)		Surveillance through NRC data. NRC confirms diagnosis, determines the MIC, executes Emm-typing and executes PCR of genes that cause resistance to erythromycin and tetracycline.
Public health impact			
A	Public health impact in Belgium (Low/Medium/High)	Medium	Increase of GAS isolates received by NRC has been described in the past. No new Emm-typing or emm-subtype, no change in proportion between the types. No cluster effect (all districts).
B	Recommendations (surveillance, control, communication)		If case of STSS or necrotizing fasciitis: -mandatory notification in Flanders and Brussels -send isolate to NRC -antibioprophylaxis for household contacts (1 week before sickness until 24 hours after starting antibiotics): azithromycin 5 days or clindamycin 10 days -close contacts (1 week before illness until 24 hours after starting antibiotics: contact of >4h/day or >20h/week; sleeping in same room; direct mucosal contact): if symptoms (fever, skin lesions, painful throat) within 30 days after contact, take contact with GP asap
C	Actions		Recommendations do exist, no clustering effect but increase of severe cases during the last three months by the NRC. 1. NRC keeps attention and informs RAG coordination 2. Communication: -information in the next Newsflash -information on NRC website -information on professional website epidemiology

REFERENCES

[https://www.zorg-en-gezondheid.be/sites/default/files/atoms/files/Richtlijn%20Groep%20A-streptokokkeninfectie 2016.pdf](https://www.zorg-en-gezondheid.be/sites/default/files/atoms/files/Richtlijn%20Groep%20A-streptokokkeninfectie%202016.pdf)

<http://www.cps.ca/documents/position/Invasive-group-A-streptococcal-disease>