



Epidemiological Alert

Multi-Resistant *Neisseria gonorrhoeae*

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In light of the identification by scientific communities of a strain of gonorrhea resistant to all microbial treatments available for sexually transmitted infections (STIs), the Pan American Health Organization recommends informing health workers, institutions, and nongovernmental organizations that work in the prevention and control of STIs about the risk of resistance in this strain, and in particular strengthen the surveillance in each country regarding the appearance of strains with an unusual profile. The Organization also recommends promoting the use of STI prevention methods.

Context

Gonorrhea is one of the most common sexually transmitted infections (STIs) in the world. The WHO estimates there are 88 million cases annually¹. The infection is caused by *Neisseria gonorrhoeae*, transmitted through unprotected sexual relations and can affect various organs.

Recently, scientific communities have been discussing the emergence of an *N. gonorrhoeae* strain resistant to all antimicrobial drugs available for the treatment of the sexually transmitted infections.² The new strain is called H041, and contains genetic mutations making it resistant to penicillin, ciprofloxacin, tetracycline, and also third-generation cephalosporin. In contrast, it maintains its susceptibility to spectinomycin and has decreased susceptibility to azithromycin.

In the past years, there was already concern of the emergence of cephalosporins resistance because it is the recommended treatment in the Americas Region.³ This strain threatens the treatment of syndromes caused by *N gonorrhoeae*.

¹ World Health Organization. Emergence of multi-drug resistant *Neisseria gonorrhoeae* - Threat of global rise in untreatable sexually transmitted infections. Fact sheet. http://www.who.int/reproductivehealth/publications/rtis/who_rhr_11_14/en/index.html.

² Ohnishi M *et al.* Is *Neisseria gonorrhoeae* initiating a future era of untreatable gonorrhea? Detailed characterization of the first high-level ceftriaxona resistant strain. *Antimicrob. Agents Chemother.* Doi:10.1128/AAC-00325-11.

³ Pan American Health Organization. *Treatment of Infectious Diseases*, 2011-2012, 5th Edition. Washington DC, 2011. Chapter 4, page 114-115.

Epidemiological surveillance of resistant strains is critical in guiding therapeutic decisions and to prevent further circulation of resistance through its identification and early treatment.

PAHO/WHO recommendations:

In light of this situation, the Pan American Health Organization makes the following recommendations:

- Strengthen the monitoring of gonococcus resistance at national levels. This necessitates strong collaboration between National HIV/AIDS/STI Programs and National Reference Laboratories. Strains presenting an unusual resistance profile or cephalosporins resistance should be sent for laboratory confirmation. Multi-resistant *N gonorrhoeae* should be reported to the Member State IHR National Focal Point, and based on the risk assessment notified to WHO IHR Contact Point.
- Inform health workers, institutions and non-governmental organizations (NGO) working in the prevention and control of STIs, about the risk of resistance by *N. gonorrhoea* and seek microbiological confirmation for patients with recurrences.
- Promote the use of STI prevention methods.