

# Rapid change in the ciprofloxacin-resistance pattern among *Neisseria gonorrhoeae* strains in Nuuk, Greenland.

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## Objectives

Sexually transmitted infections (STIs), including infections with *Neisseria gonorrhoeae* (GC), are highly incident in Greenland. Since January 2011, GC testing has been performed on urine with nucleic acid amplification tests (NAATs) by stand displacement amplification (Becton Dickinson ProbeTec). Monitoring of GC antibiotic susceptibility by culture was introduced in Nuuk in 2012. Until 2014, no cases of ciprofloxacin-resistant GC strains were reported. In this paper, we report the finding of ciprofloxacin-resistant GC and describe the most recent incidence of GC infections in Greenland.

## Methods

Men in Nuuk with a positive urine test (NAAT) for GC have been encouraged to provide a urethral swab for culture and susceptibility testing. The number of urine NAATs and culture positive swabs from January to October 2014 were obtained from the Central Laboratory at Queen Ingrid's Hospital in Nuuk and stratified on gender, place and period of testing. Incidence rates were estimated as number of urine NAAT \* (12/10) per 100,000 inhabitants.

## Results

From January to October 2014, a total of 5,436 urine GC NAATs were performed in Nuuk and 9,031 in the rest of Greenland. Of these, 422 (8%) and 820 (9%) were positive, respectively. From January to August, 6 (15%) cultures from Nuuk were ciprofloxacin resistant while in September and October 26 (59%) were resistant ( $p < 0.01$ ). In total, 35 (40%) of 88 culture positive isolates showed ciprofloxacin resistance. GC incidence in Nuuk was 3,017 per 100,000 inhabitants per year, while in the rest of Greenland 2,491 per 100,000 inhabitants/year.

## Conclusion

Within a short period, a rapid and dramatic change in ciprofloxacin susceptibility among GC strains isolated in Nuuk was documented and recommendation for first line treatments has changed. Continued monitoring and re-thinking of primary and secondary preventive initiatives is highly recommended in this high GC incidence setting.

## References

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