

Title: Investigation and response to an outbreak of anogenital *Neisseria meningitidis* serogroup Y

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Background:

In October 2023, there was an increase in *Neisseria meningitidis* (*Nm*) serogroup Y (MenY) detections in anogenital specimens in NSW. Urethritis outbreaks caused by a non-groupable *Nm* clade have been described overseas, however outbreaks of encapsulated anogenital *Nm* have not been previously reported.

Objectives:

To investigate an anogenital MenY outbreak.

Methodology:

Nm isolated from anogenital sites is not notifiable, however some presumptive detections in NSW are referred for confirmation of identification and serogrouping. Whole genome sequencing (WGS) sequencing was performed on most isolates. Confirmed outbreak cases had an isolate matching the cluster sequence type; probable cases were NSW residents with MenY isolated from an anogenital site from 1 July 2023 without WGS. Cases were interviewed by public health and/or sexual health staff.

Results:

There were 41 outbreak cases identified to 8 February 2024. The 30 confirmed cases were MenY ST-1466 and had limited sequence diversity. Of the 41 cases, most were men (N=27), of whom six reported recent contact with a female sex worker. Almost all (N=39) had urogenital symptoms; the sole anorectal case was asymptomatic. Sexual contacts of symptomatic cases were offered antibiotics and vaccination. No cases or contacts developed invasive meningococcal disease (IMD).

Discussion/conclusion:

We describe the first reported outbreak of urogenital infection caused by encapsulated *Nm*. Ascertaining the extent of carriage, disease, and populations at risk is hindered by variability in clinical and laboratory practices, notification, and case data collection. Although MenY ST-1466 can cause IMD, the link between anogenital infection and IMD is not well-understood and requires further investigation.