

## Paper Challenge PC084: swab for *Neisseria gonorrhoeae* received 10 days after collection Preexamination sample handing decision.

**HISTORY** This paper challenge was sent to category A, B, C, and C1 laboratories. The scenario presented was: Your laboratory receives a cervical swab in Amies media from a 25-year old female with a request for *Neisseria gonorrhoeae*. The swab was received in your laboratory 10 days after collection. How would your laboratory proceed?

Participants were asked how they would proceed and were given the following responses to choose from:

- A. Set up the culture, indicate that the swab was delayed in transit and recommend another specimen be submitted for nucleic acid amplification test (NAT).
- B. Reject the sample, indicate that the swab was delayed in transit and that the specimen should be re-collected for culture and/or nucleic acid amplification test (NAT).
- C. Culture and report.
- D. Reject the sample.

**GRADING (maximum grade = 4)** The Microbiology Advisory Committee considered the best response as answer (B) and answer (A) as acceptable. The 15 reference laboratories answered as follows: B (11 [73%]), A (3 [20%]), and D (1 [7%]); therefore the challenge was considered acceptable for grading.

**RESULTS RECEIVED** Table 1 outlines the responses of participant laboratories. Four laboratories (1B, 3C) did not submit a report. As anticipated no laboratory chose answer (C).

Results	A	B	C/C1	Total (%)	Grade
Answer (B)	63 (85%)	27 (79%)	12 (60%)	102 (80%)	4
Answer (A)	9	3	2	14 (10.5%)	3
Answer (D)	2	3	3	8 (6%)	1
No report	0	1	3	4 (3.5%)	0
Total	74	34	20	128	

**CLINICAL SIGNIFICANCE** The Microbiology Advisory Committee recognizes that healthcare facilities in more remote areas may have transportation difficulties and experience greater delays in sample receipt to the laboratory. For this reason answer (A) was graded as an acceptable response. Laboratories are cautioned however, that delays in processing exceeding 24 hours negatively impact the ability to recover *Neisseria gonorrhoeae* from culture<sup>1,2,3</sup>. False negative results mean the patient may not be treated for an infection that they indeed have and may pass on to others. It is imperative that, should a

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97% (72/74) of category A laboratories, 88% (30/34) of category B laboratories, and 60% (12/20) of category C/C1 laboratories received a grade of 4/4 or 3/4.

### NOTES

- <sup>1</sup> Delays in processing exceeding 24 hours negatively impact the ability to recover *Neisseria gonorrhoeae* from culture.
- <sup>2</sup> Proactive communication between the laboratory and physicians is encouraged whenever preexamination problems arise.

delay in transport take place, the healthcare provider be made aware of the implications. Answer (B) was considered the best response.

*Neisseria gonorrhoeae* is a fastidious and fragile sexually transmitted pathogen that has seen its incidence in Canada more than double in the last 10 years<sup>4</sup>. Unless transport and storage conditions are optimal, culture methods prove unreliable which has led many laboratories to utilize non-culture detection techniques such as nucleic acid amplification assays (NAT). Laboratories should however retain the ability to culture *N. gonorrhoeae* as it remains important in cases of sexual assault/abuse and in investigations of treatment failure. In cases where culture is required, the laboratory should work with the healthcare provider to ensure prompt and appropriate transport of the sample.

The vast majority of all laboratory errors are in the pre- and postexamination processes<sup>5</sup>. Proactive communication between the laboratory and physicians is encouraged whenever preexamination problems arise. The laboratory has a clinical responsibility to ensure that proper collection procedures and devices are readily accessible to all laboratory users, and the physician understands the reason samples are rejected or certain tests are not performed on certain samples.

### REFERENCES

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