Is there value in routine screening exercises for syphilis? Coincidental syphilis detection in samples submitted for routine HSV investigations

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BACKGROUND

Syphilis remains an important public health problem in Australia

An outbreak of syphilis, first reported in Queensland in 2011, has subsequently spread to other states
→ **CDINS declared August 2025.**

Overlap in clinical presentations and serology may be falsely negative early in primary infections.

Testing is not always multiplexed, clinicians need to request both HSV and *T. pallidum* PCR, creating opportunities for missed or delayed diagnosis.

AIMS

Evaluate missed opportunities to diagnose syphilis by screening samples submitted for routine HSV/VZV PCR.

METHODS

Samples submitted to Pathology Queensland for HSV/VZV investigation.

Nucleic acid extracts were pooled (n = 4 samples per pool) and tested for *T. pallidum*.

All positive pools reflexed for individual sample testing to confirm the presence of *T. pallidum*.

Positive samples referred to the pathology provider for confirmatory (NATA-accredited) testing and triggered formal patient follow-up.

RESULTS

5052 HSV/VZV lesion samples screened for *T. pallidum*

→ **41 *T. pallidum* positive samples (0.8%)** →

31 — Original request included *T. pallidum*

3 — New specimen after negative HSV

1 — Separate specimen submitted on same day

3 — Male, all submitted within 4 weeks, part of the same infectious episode

1 — Male

1 — Female, pregnant. No evidence of syphilis testing/investigation

Confirmatory testing of all samples confirmed *T. pallidum* diagnosis and triggered formal follow-up and treatment of patients.

CLINICAL IMPLICATIONS

Sequential testing creates opportunities for missed or delayed syphilis diagnosis.

Early detection is particularly important, particularly in pregnancy, where untreated infection can have severe consequences.

CONCLUSION

3 patients would have otherwise gone undiagnosed & untreated for syphilis

There is clear value in screening exercises to rapidly diagnose and treat syphilis

LIMITATIONS

The study was designed as a routine screening exercise of HSV PCR submissions, not a population prevalence study.

Screening exercises can be costly, multiplex (HSV/VZV/Syphilis assays offer a cost-effective approach to enable timely testing/screening.

TAKE-HOME MESSAGE

Small numbers still matter when the consequence of a missed diagnosis is high.

Simple molecular screening strategies like this can identify infections that might otherwise have been missed.

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