Screening a High Risk Population for *Trichomonas vaginalis* at a Local Public Health Laboratory Using a NAAT Assay to Improve Sexually Transmitted Infection Case Management Practices

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**BACKGROUND**

"Trichomonas vaginalis" is one of the most common sexually transmitted infectious agents in the U.S. Symptomatic women with *trichomoniasis* often develop vaginal discharge, vulvovaginal soreness, and/or genital area irritation. About 20% to 50% of infected females remain asymptomatic, and even higher proportions in males. Detection of *T. vaginalis* using culture method is technically sensitive to transport time.1,2,3

**METHODS**

1. An FDA-cleared, Aptima® *Trichomonas vaginalis* (TV) nucleic acid amplification test (NAAT) was used on the Panther platform for screening female vaginal swabs for *T. vaginalis* to diagnose trichomoniases in asymptomatic and symptomatic cases. Females included in this study (Table 1).

2. The assay utilizes Target Capture, Transcript-Mediated Amplification (TMA), and Hybridization Protection Assay (HPA) technologies. During the detection step, tight-structured TV fragile (DAN/ DNA) is measured as photon signals in a luminometer and reported as Relative Light Units (RLU). 4

3. The verification results were assessed by patient referral to the expected results, repeat cycle, and interior reproducibility following laboratory validation criteria. 5

4. Clinical case management was performed at the STD clinic based on results from TV screening as established by the CDC. 6

**CDC Screening Guidelines for Trichomoniasis**

- Persons with HIV:
  - Screen urine of men and women, and cervical or vaginal swabs in women, for TV.
  - Add NAAT to PHL STI surveillance practices to allow simultaneous detection of multiple agents.

**RESULTS**

1. A total of 259 clinical specimens were analyzed during the validation study. Percentage agreement was 98.9% (95% CI 97.8-99.9%) when compared with a manual WAT testing, culture, and wet prep (percentage agreement Table 1).

2. TV was highly specific (100%) (95-100% CI) and sensitive 1.0 (95-100% CI) agreement (TMA), and Hybridization Protection Assay (HPA) technologies. 7

**CONCLUSIONS**

- TV infection is more common in women than men. Isolation of TV with CT/NG NAAT might detect TV in asymptomatic patients, and may also reduce the risk of HIV transmission and improve STI surveillance and case management in public health agencies.

**Future Directions**

- Screen urine of men and women, and cervical or vaginal swabs in women, for TV.
- Duplex screening of high-risk male partners to their partners.
- Add NAAT to PHL STI surveillance practices to allow simultaneous detection of multiple agents.
- Explore reimbursement opportunities for public health agencies.

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**References**

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