

MetroHealth Medical Center
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Abstract Submission Form

Poster Title: Rates of UTI in Transgender Women Post-Vaginoplasty: A Retrospective Cohort Study in a Large US Health Network

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Urinary tract infections (UTIs) are the most common outpatient infection in the US. By age 32, 50% of cis women (CW) develop at least one UTI. Existing studies on incidence of UTIs in trans women (TW) post-vaginoplasty (VP) are inconclusive, with data ranging from 0-32%. Our study describes the risk of UTI following healed VP in TW compared to CW.

We used TriNetX (TriNetX, Inc., Cambridge, MA, USA), a clinical research platform that collects EHR data, to build the largest known cohort of TW with VPs. TW were identified by a Gender Identity Disorder diagnosis, estrogen therapy, and VP. TW and CW cohorts were divided into 3 age groups (18-39, 40-59, 60-74). The index event for TW was 3 months post-VP to allow the neovagina to heal.

Outcomes were defined as ≥ 1 instance of UTI (N39.0) or Cystitis (N30.x). Outcomes were assessed at 6, 12, 36 months, and 10 years. Within age groups, TW and CW were compared at each time interval for 12 total analyses. Probability of outcomes was assessed with Kaplan Meier. Comparisons were made using Hazard Ratios (HR) and a log-rank test to determine significance ($p < 0.05$). All analyses were done within TriNetX.

For all time intervals and age groups, TW had a significantly ($p < 0.0001$ - $p = 0.0088$) higher probability of developing a UTI compared to CW (table 1). The 3-6 month interval for the 40-59 and 60-74 cohorts could not be analyzed due to insufficient data.

Absolute differences in probability ranged from 0.98% (18-39 at 6 and 12 months, $p = 0.0002$) to 16.377% (40-59 at 10 years, $p < 0.0001$). HRs ranged from 1.363 (18-39 at 10 years, 95% CI: 1.119, 1.660) to 3.552 (60-74 at 12 months, 95% CI: 1.951, 6.360).

We found a significantly higher probability (absolute difference: 0.98%-16.377%, HRs: 1.363-3.552) of TW developing at least one UTI compared to their age-cohorted CW counterparts at all time points analyzed.

We theorize several factors outweigh the protective benefit of a longer urethra in TW. These may include lack of education on neovaginal perineal hygiene, lack of commensal bacteria and vaginal mucosa, increased diameter of the urethral meatus, high rates of meatal stenosis, and introduction of nonnative bacteria through dilators and douching. These findings may help improve post-operative care plans to decrease rates of UTI in TW, improving quality of care.