

# In ERs, UTIs and STIs in women misdiagnosed, even mixed up nearly half the time

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Urinary tract and sexually transmitted infections in women are misdiagnosed by emergency departments nearly half the time, according to a paper in the *Journal of Clinical Microbiology*, a publication of the American Society for Microbiology. These misdiagnoses result in overuse of antibiotics, and increased antibiotic resistance, according to Michelle Hecker, MD, an assistant professor in the Department of Medicine, Division of Infectious Diseases, MetroHealth Medical Center, Case Western Reserve University, Cleveland, and her collaborators.

"Less than half the [women](#) diagnosed with a [urinary tract infection](#) actually had one," said Hecker. "Sexually transmitted infections were missed in 37 percent of the women, many of whom were wrongly diagnosed with urinary tract infections." The results, she said, indicate that [emergency department](#) diagnostic testing strategies for both types of infection need to be re-evaluated.

"Overdiagnosis of UTI [urinary tract infection] was not only a common cause of unnecessary antibiotic use but also contributed to the underdiagnosis of STI [[sexually transmitted infection](#)] since 64 percent of the patients with a missed STI were diagnosed as having a UTI instead," the investigators write. "An abnormal UA [urinalysis] result, seen in 92 percent of our subjects, was a common finding, poorly predicted the presence of a positive urine culture, and may also have contributed to the overdiagnosis of UTI."

Part of the problem arises from the fact that lower urinary tract infections share symptoms with some sexually transmitted infections, including dysuria (painful or difficult urination), frequency, and urgency. Additionally, urinary tract and sexually transmitted infections can result in similar findings from urinalysis.

Furthermore, the investigators found that women were often treated for urinary tract infections in the absence of related symptoms, and without having had a urine culture. "Twenty-four percent of the subjects diagnosed with UTIs had no possible UTI-related symptoms documented," the investigators write.

Additionally, of 21 subjects who received antibiotic therapy within a week after urine culture—eight percent of the total—10 had had negative urine cultures, and 12 received antibiotics which had no activity, or limited activity against the usual uropathogens, according to the report.

The study examined records from 264 women, ages 18-65, who were seen at the MetroHealth Medical Center emergency department. The investigators were able to retrieve urine samples the women had provided, and to test these for the sexually transmitted infections gonorrhea, chlamydia, and trichomonas in cases where these tests had not been ordered as part of routine care.

More than 1 million cases of [urinary tract](#) infections are diagnosed by emergency departments annually. The Centers for Disease Control and Prevention estimates that nearly 20 million new sexually transmitted infections occur annually, but many go unreported, and many more are undiagnosed.

**More information:** *Journal of Clinical Microbiology*,  
[jcm.asm.org/cgi/reprint/JCM.00670-15v1](http://jcm.asm.org/cgi/reprint/JCM.00670-15v1)

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