

UTI calculator predicts risk of infant urinary tract infection

April 17 2018



(HealthDay)—The newly developed UTICalc calculator can be used to

guide testing and treatment in children with suspected urinary tract infection (UTI), according to a study published online April 16 in *JAMA Pediatrics*.

In an effort to develop a calculator that can first estimate the probability of UTI based on clinical variables and then update that probability based on laboratory results, Nader Shaikh, M.D., M.P.H., from the Children's Hospital of Pittsburgh, analyzed [electronic medical records](#) from a training database of 1,686 febrile [children](#) (aged 2 to 23 months) presenting to the [emergency department](#). The calculator was validated using a database of 384 patients.

The researchers found that, compared with the American Academy of Pediatrics algorithm, the clinical model in UTICalc reduced testing by 8.1 percent and decreased the number of UTIs that were missed from three cases to none. The dipstick model in UTICalc would have reduced the number of treatment delays by 10.6 percent compared with empirically treating all children with a leukocyte esterase test result of ≥ 1 .

"Accurate diagnosis of UTI is important to reduce the delay in diagnosis and to avoid unnecessary treatment with antimicrobial drugs," the authors write. "The approach advocated here tailors testing and treatment to the risk factors present in the child being assessed, thus offering the potential to improve outcomes for children with UTI."

More information: [Abstract/Full Text](#)

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Citation: UTI calculator predicts risk of infant urinary tract infection (2018, April 17) retrieved 25 April 2024 from

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