

FROM THE FAMILY PRACTICE INQUIRIES NETWORK

Is screening urinalysis in children worthwhile?

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■ EVIDENCE-BASED ANSWER

Screening urinalysis in asymptomatic children has not been shown to be beneficial (strength of recommendation: **B**; based on extrapolation from 1 meta-analysis). It is unlikely to be cost-effective and should be discontinued. While random urinalyses can be used for case finding of glucosuria, hematuria, pyuria, bacteriuria, and proteinuria, the routine use of screening urinalysis in asymptomatic patients is not likely to be an effective strategy.

■ EVIDENCE SUMMARY

The prevalence of urinary tract infection in childhood has been estimated to be roughly 1%.¹ For those children with asymptomatic bacteriuria, fewer than 10% progress to symptomatic urinary tract infections.² The prevalence of other glomerulonephropathies is <0.05%.^{3,4} Currently available screening urinalyses using chemical dipstick testing have reported sensitivities ranging from 53% to 93% and specificities of 72% to 98% for detecting significant bacteriuria.⁵ All positive screening tests for bacteriuria require confirmation by standard urine culture.

No prospective randomized trials of screening urinalysis in childhood have been published to date. Expert opinion varies as to the necessity of screening urinalysis. No prospective randomized trials demonstrate improved outcomes, and limited evidence suggests that detection and treatment of asymptomatic bacteriuria improves long-term outcomes such as renal scarring, hypertension, or pyelonephritis.⁶

■ RECOMMENDATIONS FROM OTHERS

The American Academy of Pediatrics recommends 1 screening dipstick urinalysis at age 5.⁷ The American Academy of Family Physicians,⁸ Bright Futures,⁹ Canadian Task Force on the Periodic Health Examination,¹⁰

and the United States Preventive Services Task Force¹¹ do not recommend screening for asymptomatic bacteriuria in children. The Institute for Clinical Systems Improvement recommends that consideration be given to eliminating routine urinalyses in asymptomatic children.¹²

CLINICAL COMMENTARY

Numerous false-positives may lead to harmful interventions

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In my practice, I have rarely found screening urinalysis to be useful. As mentioned above, it is not cost-effective and currently no available data demonstrate that outcomes are improved. What is not mentioned is the likely high rate of false-positive findings that would need further investigation—eg, hematuria and proteinuria. These investigations could be invasive and potentially harmful and would increase costs further, not to mention add unnecessary worry to concerned parents. Some parents still request a urinalysis, largely due to habits from a previous physician. I have found that a brief discussion of the risks and benefits of a screening urinalysis is enough to reassure parents.

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