New study examines value of routine laboratory screenings for children entering foster care

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Routine laboratory screening recommended for children entering foster care carries high costs and questionable medical benefits.

A new study, published online in *Pediatrics*, suggests that targeted screening may be a more clinically meaningful approach and reduce costs.

"In the context of high-value, cost-conscious care, evaluating medical practice is important and necessary," says Mary Greiner, MD, a physician at Cincinnati Children's and lead author of the study. "Targeted screening should take local prevalence rates and other clinical implications into account."

The researchers studied data between 2012 and 2015 from the medical records of nearly 2,000 children and young adults less than 21 years old. These individuals were in the legal custody of Jobs and Family Services, the child protective agency of Hamilton County, Ohio, and seen at the Cincinnati Children's foster care clinic. The clinic evaluates children in the region when they enter foster care and at every change in placement.

Clinic visits include a medical record review, physical examination and laboratory screening to test for hepatitis B and C, syphilis, tuberculosis and HIV. Clinicians obtain hemoglobin concentrations for all children and measure lead levels in children 6 months to 6 years. They screen

those 12 and older who were sexually active for gonorrhea and chlamydia.

Nearly five percent of those screened were identified to have anemia, 2.9 percent infectious disease, and 2.6 percent had elevated lead levels. Seven percent of teens tested positive for chlamydia. The prevalence for hepatitis B and C, syphilis and tuberculosis was less than 1 percent. There were no cases of HIV.

"Routine screening is generally accepted when screening tools are sensitive and specific and early detection improves outcomes," says Dr. Greiner. "But costs must be reasonable in relation to anticipated benefits."

Dr. Greiner identified costs for each screening test using published Medicaid reimbursement rates. She found, for example, that the cost of screening for chlamydia in the population she studied was less than the cost of failing to diagnose and treat infection. The cost of treating active cases of tuberculosis, on the other hand, would be less than the cost of routine screening for the whole population. She suggested that more targeted screening for tuberculosis in Hamilton County and similar communities may be appropriate.

Study findings suggest that routine screening for anemia, lead (in children 6 months to 6 years old), chlamydia and gonorrhea (in sexually active adolescents) in this community is useful and cost-effective. More targeted screening may be appropriate for hepatitis B and C, tuberculosis, HIV, and syphilis, she says.

"Replicating this work with other foster care populations and developing an algorithm for targeted screening are important areas for future research," says Dr. Greiner. Through Dr. Greiner's work on the American Academy of Pediatrics Council on Foster Care, Adoption, and

Kinship Care, these findings will inform future recommendations for delivering health care to children in foster care, she says.

Provided by Cincinnati Children's Hospital Medical Center