

Study shows enhanced accuracy of CMV detection method in newborn screening

February 2 2021, by Kelly Glynn



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In Minnesota, there are currently about 60 diseases that all newborns are screened for at birth using a heel prick and a few drops of blood. Of all the screenable disorders combined, newborn infection with

cytomegalovirus (CMV) is most common, and it is ranked as the most prevalent infectious disease in the U.S. and Europe that causes birth defects, long-term disabilities and deafness in babies.

Yet, current routine screening practices do not include monitoring for CMV. The lack of [blood](#) spot screening may be due to past studies not showing a good enough detection rate for CMV, using the blood spot test, that would be sufficiently sensitive to justify universal screening.

Mark Schleiss, MD, pediatric infectious disease physician with the University of Minnesota Medical School and M Health Fairview, led a study that used improved techniques to show that the dried blood spot taken at [birth](#) can, in fact, find CMV infection in the newborn with almost 90% accuracy. The study was recently published in *JAMA Pediatrics*.

"This is a major new development in the field and means that automated testing for CMV could be done for this infection using the standard dried blood spot tests that are already obtained on all newborns, using existing infrastructure and requiring no new tests on the baby," said Schleiss, who is the principal investigator of the study. "Identifying CMV at birth, in turn, allows for earlier intervention that can improve the outcome for these children."

Earlier intervention could improve hearing, speech, language and intellectual/neurodevelopmental outcomes for newborns with CMV.

Schleiss will continue his work with the Minnesota Department of Health to encourage that the results are translated into action, by considering adding the CMV [screening](#) to all newborn dried blood spot tests currently done in Minnesota newborns. Ultimately, he would like to see it become standard practice nationally.

More information: Sheila C. Dollard et al, Sensitivity of Dried Blood Spot Testing for Detection of Congenital Cytomegalovirus Infection, *JAMA Pediatrics* (2021). [DOI: 10.1001/jamapediatrics.2020.5441](https://doi.org/10.1001/jamapediatrics.2020.5441)

Provided by University of Minnesota Medical School

Citation: Study shows enhanced accuracy of CMV detection method in newborn screening (2021, February 2) retrieved 23 May 2024 from <https://medicalxpress.com/news/2021-02-accuracy-cmv-method-newborn-screening.html>

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