

Is newborn screening for congenital cytomegalovirus infection cost effective?

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Congenital cytomegalovirus (cCMV) infection is a leading cause of childhood hearing loss, cognitive deficits and visual impairments. Estimates suggest 20,000 babies are born with cCMV infection annually in the United States. However, universal newborn screening has not been adopted partly because of questions around cost-effectiveness.

Soren Gantt, M.D., Ph.D., M.P.H., of the University of British Columbia, Vancouver, and coauthors created models using rates and outcomes to estimate the cost-effectiveness of universal and targeted (only newborns with failed hearing screenings) programs to screen for cCMV infection in newborns compared with no screening. A definitive diagnosis of cCMV requires viral detection in saliva, urine or blood samples.

The authors report that among all infants born in the United States, identifying one case of cCMV infection by [universal screening](#) was estimated to cost \$2,000 to \$10,000 or \$566 to \$2,832 by targeted screening. Identifying one case of [hearing loss](#) due to cCMV was \$27,460 by universal screening or \$975 by targeted screening.

Study limitations include estimations of the costs of screening, costs associate with hearing loss and assumptions about the impact of early intervention.

"We found that screening newborns for cCMV infection is generally associated with cost savings, or is essentially cost neutral from the

perspective of net public spending, across a wide range of assumptions. These results, combined with the reported clinical benefits and high parental acceptance, appear to satisfy accepted criteria for newborn screening. Thus, in the absence of a vaccine or other effective methods to prevent cCMV infection, newborn cCMV screening appears warranted in the United States," the study concludes.

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