Targeted Screening for Congenital Cytomegalovirus – Related Hearing loss

In Western Australia

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Background

• Congenital CMV (cCMV) is the most common preventable cause of sensorineural hearing loss in babies worldwide
• Estimated prevalence is 0.5% of all live births and the cause of 8% of all hearing losses and up to 20% of all hearing loss of unknown origin
• Currently in WA there is no screening for cCMV and no known local research
• Lack of consensus worldwide on management of cCMV
• Early diagnosis can improve patient outcomes and avoid unnecessary investigations
• Treatment options include antivirals which can prevent permanent hearing loss. Currently in WA timing of cCMV identification is often delayed, precluding treatment with antivirals (suggested age to commence anti-virals is before 30 days of life)
• Saliva swab taken from inside the cheek of a newborn (up to 21 days of life) is a recognised reliable means of diagnosing cCMV

Hypothesis

• Targeted cCMV screening of Western Australian newborns with hearing loss is a feasible means of identifying cCMV. Early identification could improve health and wellbeing outcomes for affected infants

Method

• Over two years this research will test infants who fail newborn hearing screen for cCMV
• Testing: bedside saliva swab prior to discharge from hospital
• Data collection: relevant results of ENT, audiology, paediatric clinic appointments to ascertain clinical progression and patterns of hearing loss

Discussion

• This project has the potential to determine if targeted screening and therefore early treatment for infants with cCMV related hearing loss in WA can improve outcomes
• This study has the potential to transform the approach to congenital sensorineural hearing loss in WA and contribute knowledge to this emerging field