

More accurate diagnostic test may reduce deaths

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A more accurate, faster diagnostic test for Group B Streptococcal infection in babies has been reported in the *Journal of Medical Microbiology*. The new test could allow better treatment and management of the disease and reduce the risk of mortality among newborns.

Group B streptococcus (GBS) infections, caused by the bacterium *Streptococcus agalactiae*, are the most common cause of meningitis, septicaemia and pneumonia in newborns. In 2010 there were 506 cases of GBS infections in infants across England, Wales and Northern Ireland.

[Health Protection Agency](#) (HPA) researchers have developed a novel test that accurately detects whether the GBS bacterium is present in samples of blood or spinal fluid in less than 2 hours. It detects the presence of the *cylB* gene in *S. agalactiae*, which is an important disease-causing factor. GBS bacteria live harmlessly in the female genital tract of women and are carried by 20-30% of pregnant women. The bacteria can also form part of normal skin and [gut flora](#). GBS can be transmitted from mothers to newborns during delivery. 1-3% of infants who become colonized with the bacterium go on to develop [blood infections](#) within their first week of life, which can be fatal.

Lead Author, Dr Aruni De Zoysa, Senior Scientist at the Streptococcus reference Unit who developed the new [diagnostic test](#) believes that this test should have a positive impact on management of GBS infections in babies. "If we can allow clinicians to diagnose GBS infection quickly

and accurately, this will mean [antibiotic treatment](#) can start sooner. Better management of the disease in this way should reduce the risk of mortality," she said.

Dr De Zoysa explained that the new test has a number of advantages over traditional methods for detecting GBS infection. "Currently, GBS infection is only able to be diagnosed by taking blood samples and waiting for the bacteria to grow in the laboratory, which is time-consuming and can sometimes be unreliable," she said. "Our new test, although still in the early stages of development, is an invaluable tool that is based on detecting DNA, which makes diagnosis far more accurate and allows us to get results much faster." The assay also uses very small sample volumes, which is an advantage particularly for newborns. "As there is no vaccine at present for GBS, rapid and accurate detection of GBS bacterium is crucial to reduce the risk of infant deaths from GBS infection," stressed Dr De Zoysa.

More information: "Non-culture detection of *Streptococcus agalactiae* (Lancefield group B *Streptococcus*) in clinical samples by real-time PCR," [dx.doi.org/10.1099/mic.0.053959-0](https://doi.org/10.1099/mic.0.053959-0)

Provided by Society for General Microbiology

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