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Preterm Infants May Need a Boost to Protect Against Invasive Pneumococcal Disease

A new study suggests that preterm infants may not be fully protected against invasive pneumococcal disease under the current United Kingdom immunization schedule.

The findings are reported in the November issue of the journal *Clinical and Vaccine Immunology*.

The study, conducted by researchers from Newcastle University, began with a survey of UK neonatal intensive care units. The survey found that preterm infants at increased risk of invasive pneumococcal disease were not being adequately immunized because of a lack of evidence that these infants are protected by the pneumococcal conjugate vaccine.

Preterm babies have significantly less maternally derived antibody than full-term infants. Early effective immunization is therefore especially important to decrease the chances of pneumococcal infection.

"Our study found that in addition to a poor response to serotype 6B, preterm infants had a diminished response to serotype 23F, and several infants remained unprotected to

at least one serotype following a booster dose of the vaccine," says Samantha Moss, an author of the report. "These results support the need for a booster dose in the second year of life."

Current vaccination schedules in the UK calls for immunization at 2, 4, and 13 months. Evidence suggests that preterm infants are more likely to remain unprotected following the initial immunization and would therefore benefit from increased monitoring post-primary immunization and, if they are unprotected, to offer them an early booster dose.

Journal Reference: 1. S. J. Moss, A. C. Fenton, J. A. Toomey, A. J. Grainger, J. Smith, A. R. Gennery. Responses to a Conjugate Pneumococcal Vaccine in Preterm Infants Immunized at 2, 3, and 4 Months of Age. *Clinical and Vaccine Immunology*, 2010; 17 (11): 1810 DOI: 10.1128/CVI.00214-10