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Study to assess shorter-duration antibiotics in children

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Physicians at five U.S. medical centers are planning to enroll up to 400 children in a clinical trial to evaluate whether a shorter course of antibiotics—five days instead of 10—is effective at treating community-acquired pneumonia (CAP) in children who show improvement after the first few days of taking antibiotics. The National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health, is sponsoring the clinical trial, which will use an innovative evaluation method developed by a group of scientists who specialize in antibiotic resistance research.

CAP is a potentially serious lung infection in young children that often leads to hospitalization. Viruses and bacteria (specifically *Streptococcus pneumoniae*) are the most common causes of CAP in pre-school-aged children, whereas *Mycoplasma pneumoniae* and fungal infections occur more frequently in older children. The current standard of first-line treatment for young children diagnosed with CAP is a 10-day course of the antibiotic amoxicillin.

"Finding new strategies for treating bacterial infections and making better use of existing antibiotic medications are major areas of focus for researchers," said NIAID Director Anthony S. Fauci, M.D. "This study aims to determine whether we can effectively treat young children for community-acquired pneumonia with a shorter course of antibiotic therapy than is currently the standard. Using only the amount of medication that is needed—and no more—not only is good for patients but could also help conserve the long-term effectiveness of available

drugs."

The clinical study, called SCOUT-CAP (Short Course vs. Standard Course Outpatient Therapy of CAP in Children), will enroll children ages 6 months to roughly 6 years (71 months) diagnosed with CAP who were initially treated in outpatient clinics, urgent care facilities and emergency departments and have clinically improved prior to enrollment. The trial is being conducted through the NIAID-funded Vaccine and Treatment Evaluation Units (VTEU) program in collaboration with the NIAID-funded Antibacterial Resistance Leadership Group (ARLG), which prioritizes, designs and executes clinical research to reduce the threat of antibiotic resistance. Three VTEU sites are involved—Duke University, Vanderbilt University and Cincinnati Children's Hospital Medical Center—along with the Children's Hospital of Philadelphia and Children's Hospital of Pittsburgh-University of Pittsburgh.

The trial will use an evaluation method specifically designed to assess the best treatment strategies with a goal of reducing children's exposure to antibiotics and ultimately reducing the potential for developing resistance to antibiotics. The ARLG developed the trial method and the study concept. The SCOUT-CAP trial, estimated to end in March 2019, will evaluate short courses of the oral antibiotics amoxicillin, amoxicillin-clavulanate combination, and cefdinir. As planned, 200 children enrolled in the study will receive the standard 10-day course of antibiotics, and 200 children will receive the short course.

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