



# Investigating the Epidemiological Profile of Pediatric Streptococcus Pneumoniae Isolates In Hospital Settings

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Streptococcus pneumoniae, a leading cause of morbidity and mortality among children worldwide, presents characteristics, and antimicrobial resistance patterns of pediatric pneumococcal infections, guiding public health care and the availability of vaccines, pneumococcal disease continues to pose challenges, particularly in vulnerable populations. This study investigated the epidemiological profile of pediatric Streptococcus pneumoniae isolates in hospital settings, encompassing demographic characteristics, clinical presentations, antimicrobial susceptibility, serotype distribution, and antimicrobial resistance patterns. The study included 100 pediatric patients (ages 0-18 years) hospitalized with pneumococcal infections between January and December 2022. Demographic data showed a higher prevalence in males (55%) and in the 5-18 age group (40%). Clinical presentations varied, with pneumonia being the most common (60%), followed by meningitis (25%) and sepsis (15%). Antimicrobial susceptibility testing revealed high resistance to penicillin (85%) and tetracycline (90%), but sensitivity to amoxicillin-clavulanate (95%) and vancomycin (100%). Serotyping identified several common types, including 23F, 9V, and 4. The study highlights the need for continued surveillance and updated vaccination strategies to address the evolving epidemiology of pediatric pneumococcal infections.

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