

# Analysis of national surveillance of respiratory pathogen for children and adolescents' community acquired pneumonia

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## Abstract

**Introduction:** Respiratory infection in particular community acquired pneumonia (CAP) in children is a major disease that ranks high in outpatient and inpatient cases. The causes of CAP vary depending on the individual susceptibility, epidemiological characteristics of the community, and season. We performed this study to establish nationwide surveillance network system and identify the causative agents for CAP and antibiotics resistance in Korean children with CAP. **Methods:** The monitoring network was composed of the 28 secondary and tertiary medical institutions. Upper and lower respiratory samples were assayed using culture or Polymerase chain reaction (PCR) from Aug 2018 to May 2020. **Results:** A total of 1023 cases were registered in patients with CAP, and 264 cases (25.8%) were isolated by culture, *S. aureus* 131 cases (12.8%), *S. pneumoniae* 92 cases (9%), *H. influenzae* 20 cases (2%). PCR of atypical pneumonia pathogen revealed 422 cases of *M. pneumoniae* (41.3%). Respiratory virus showed positive rates in 65.7% by multiplex PCR test and of them, human rhinovirus was most highest with 312 cases (30.5%). The proportion of mixed infection was 49.2%. The rate of antibiotics resistance showed similar results as previous reports. **Conclusion:** It will identify the pathogens that cause respiratory infections, and analyze the current status of antibiotic resistance to provide scientific evidence for management policies of domestic respiratory infection. Also, in preparation for the new epidemic, including COVID19, monitoring of respiratory infections in children and adolescents, has become more important, and research should be continuously conducted in the future.

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**KEYWORDS** : pneumonia, child, surveillance, epidemiology

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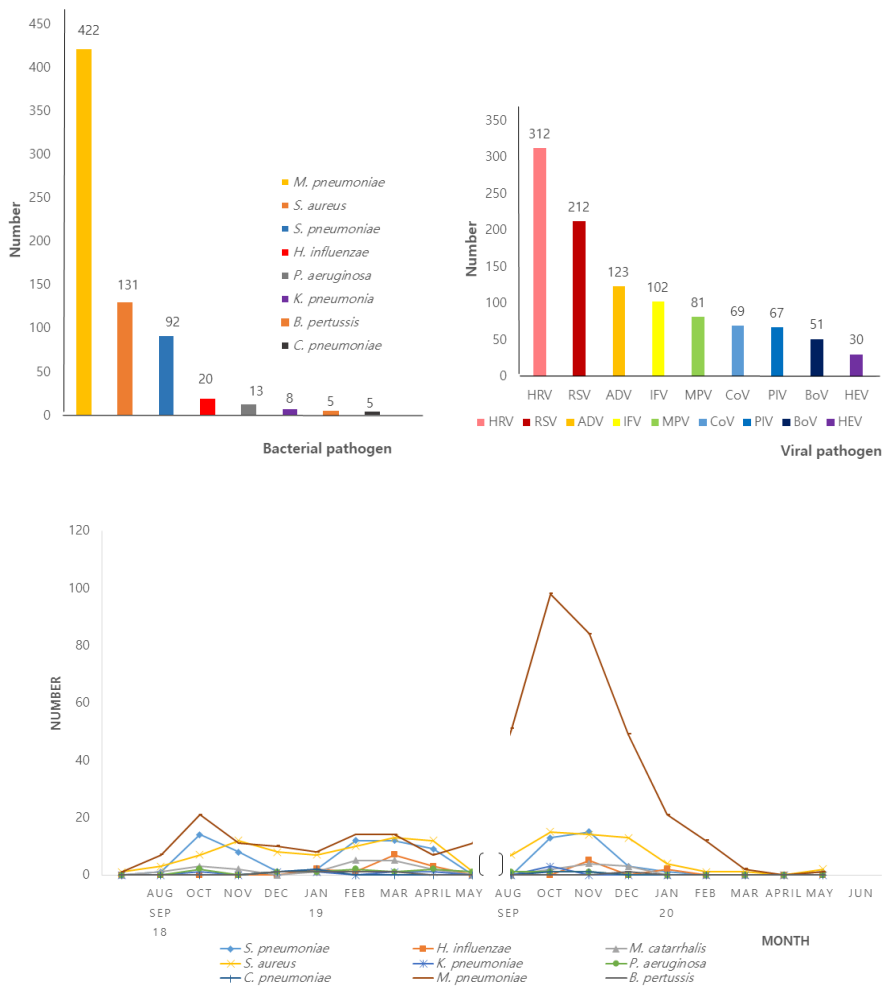
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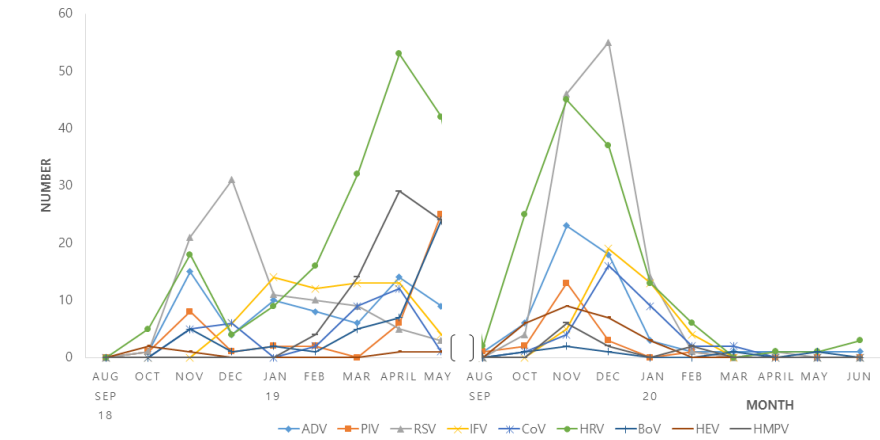
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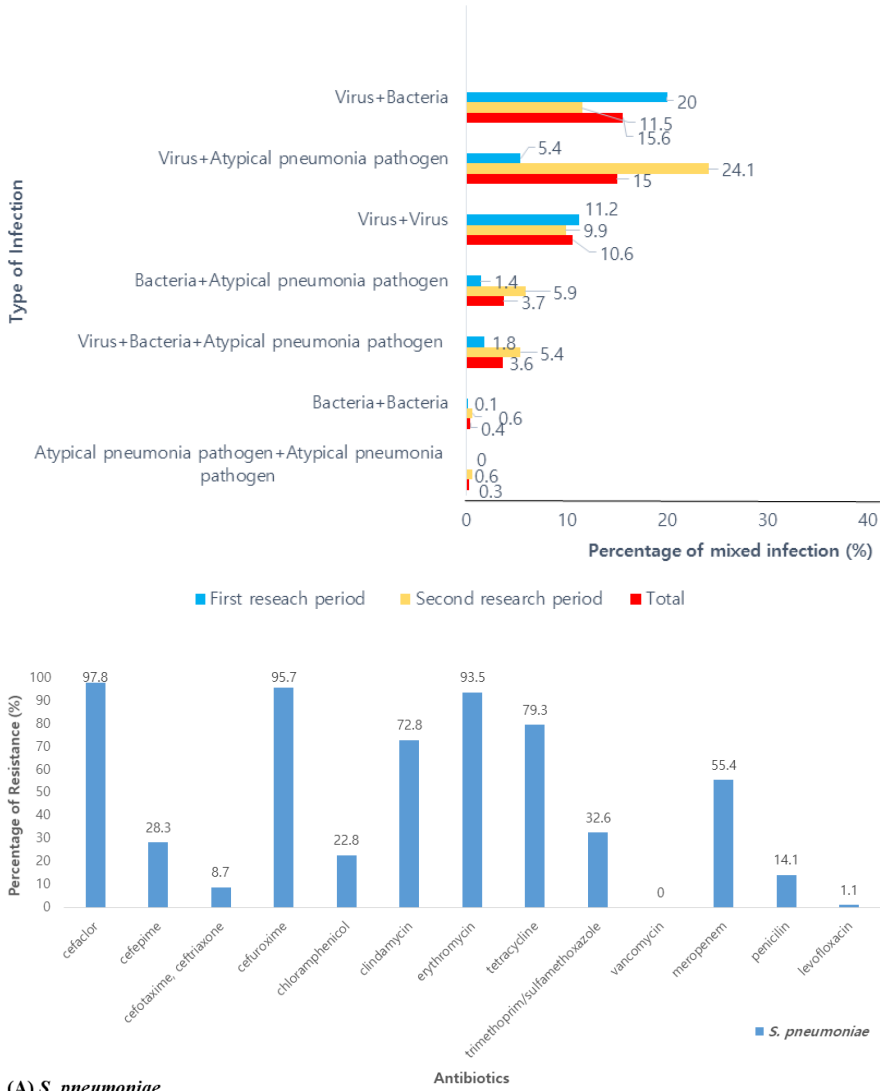
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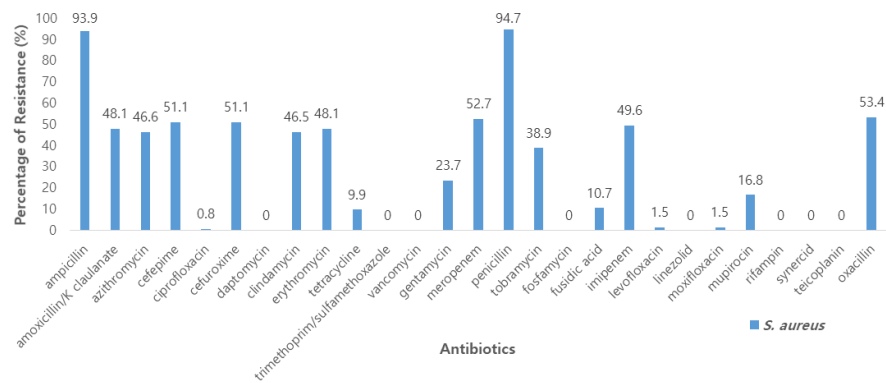
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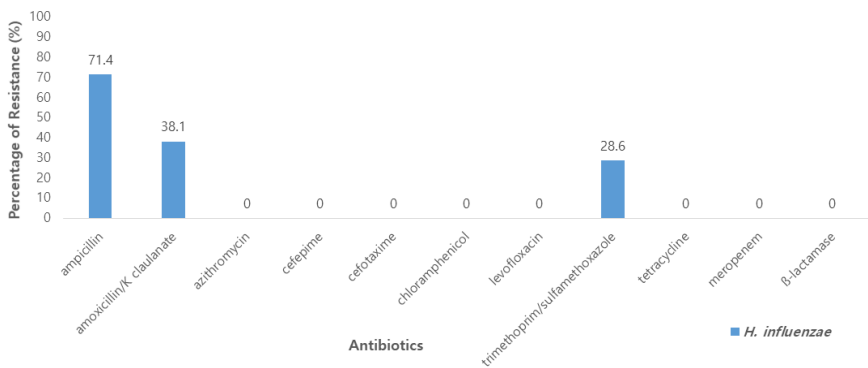
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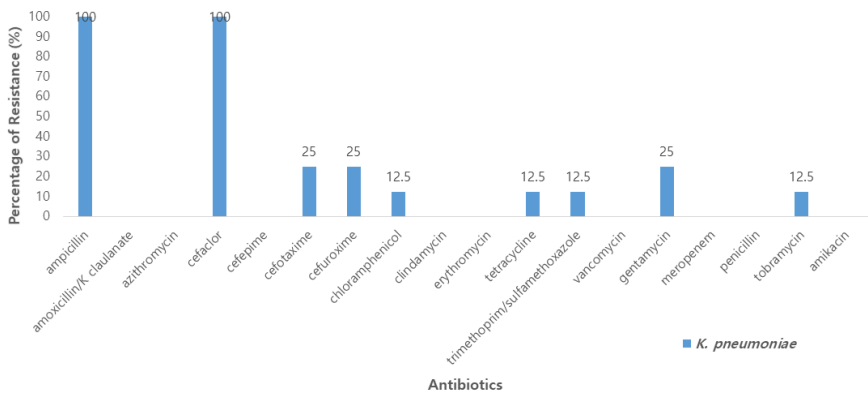
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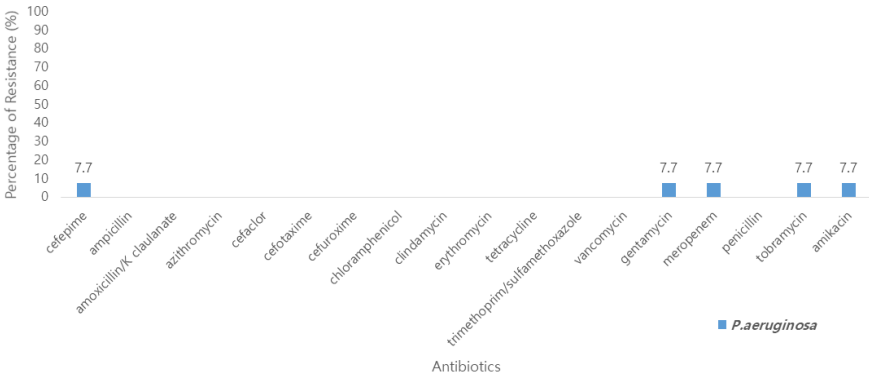
(B) *S. aureus*



(C) *H. influenzae*



(D) *K. pneumoniae*



(E) *P. aeruginosa*