

INVASIVE PNEUMOCOCCAL DISEASE AND *S. PNEUMONIAE* CARRIAGE IN HOSPITALISED CHILDREN IN LATVIA 2018–2022

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Objectives. In 2018, 24 663 confirmed cases (6.4 cases per 100 000 population) of invasive pneumococcal disease (IPD) were reported in EU/EEA by 29 countries. Second highest rate were infants < 1-year (14.4 cases per 100 000). Ten most common serotypes – 8, 3, 19A, 22F, 12F, 9N, 15A, 10A, 23B, 6C (70% of typed isolates). For < 5-year-olds, 75% caused by serotype not included in pneumococcal conjugate vaccine (PCV). IPD caused by PCV13 serotypes declined from 88 cases per 100 000 in 1998 to 2 cases per 100 000 in 2019. In Latvia coverage of PCV is 86% in 2018 and 79.1% in 2020.

Materials and Methods. Study design – descriptive cross-sectional study. Inpatient statistical data 2018–2022 obtained from Children’s Clinical University Hospital’s (CCUH) “Andromeda” database. IPD data of Latvian paediatric population 2018–2022 obtained from Latvian Centre of Disease Prevention and Control (LCDPC). *S. pneumoniae* DNA obtained from nasopharyngeal and oropharyngeal swabs with further serotyping.

Results. In CCUH number of acute pneumonias in 2018–2019 were 1049 cases. Severe pneumonia 2.2% (23 cases), of which 8.7% (2) streptococcal. In 2020–2021 were 533 cases of acute pneumonia, 0.5% (3) were severe, 66.6% (2) of them pneumococcal. In 2022 was an increase with 446 acute pneumonia cases – 1.1% (5) severe (60% (3) pneumococcal). In 2018–2022 in CCUH 10 confirmed pneumococcal pneumonia cases. Serotyping done in 2 cases, respectively 23B and 19A.

In 2018–2022 LCDPC data show 18 cases of IPD. Majority 44% (8 cases) in 2020–2021. 33% (6) < 1-year-olds age and 67% (12) 1–5-year-olds. Serotypes identified in 83% cases. Most common 3 (16%) and 19A (16%).

Conclusions. Total number of pneumonia cases during COVID-19 pandemic decreased, however the number of pneumococcal pneumonia cases was the highest in 2020. Total number of IPD cases were evenly high in 2021 and 2022. Most commonly affected age group – children 1–5 years, who should be fully vaccinated against *S. pneumoniae*. The majority of identified are non-vaccine serotypes (3, 19A).