

Dynamic Trends in Serotypes and Antimicrobial Resistance of *S. pneumoniae* in Argentine Pediatrics: Insights from 2018 to 2022.

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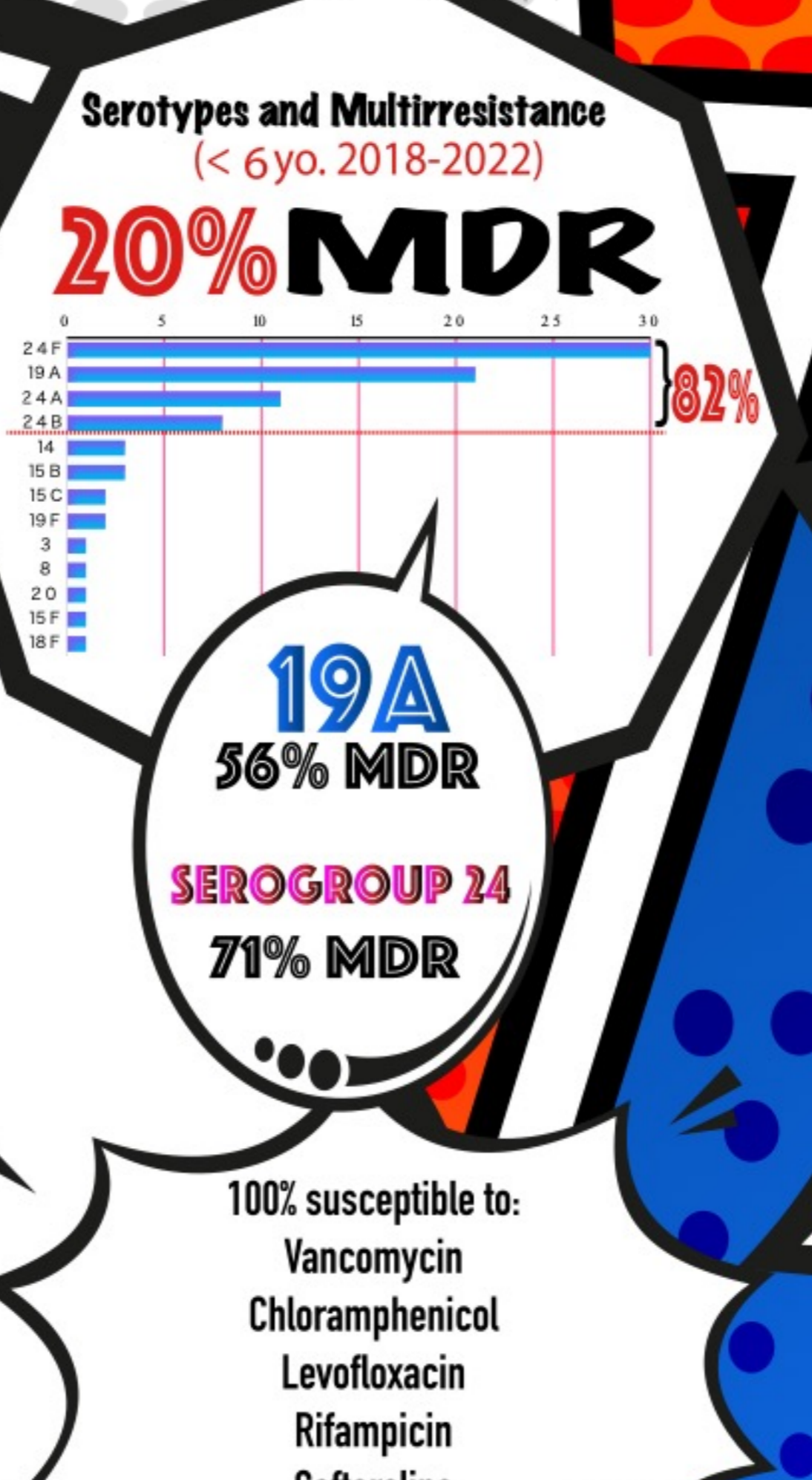
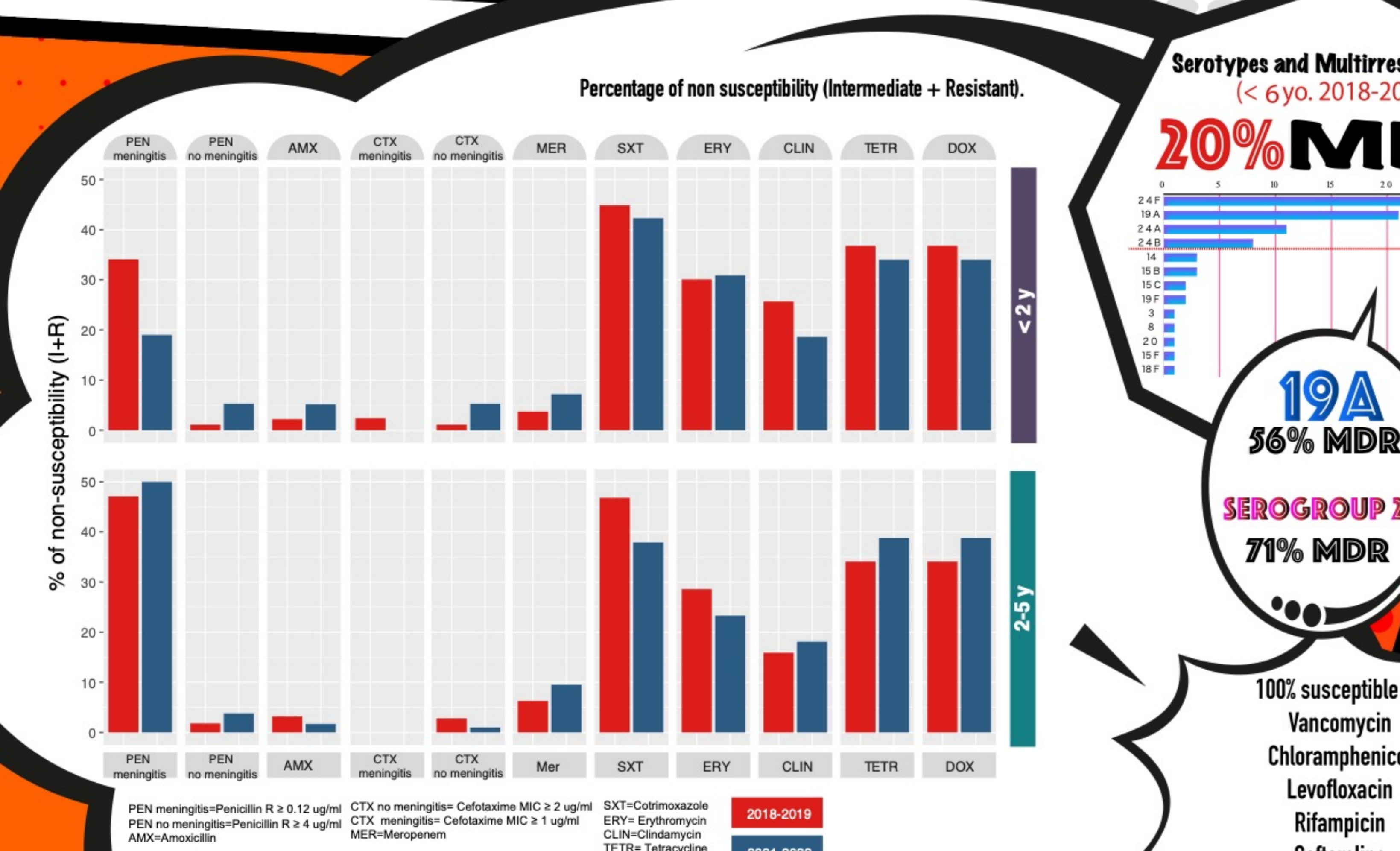
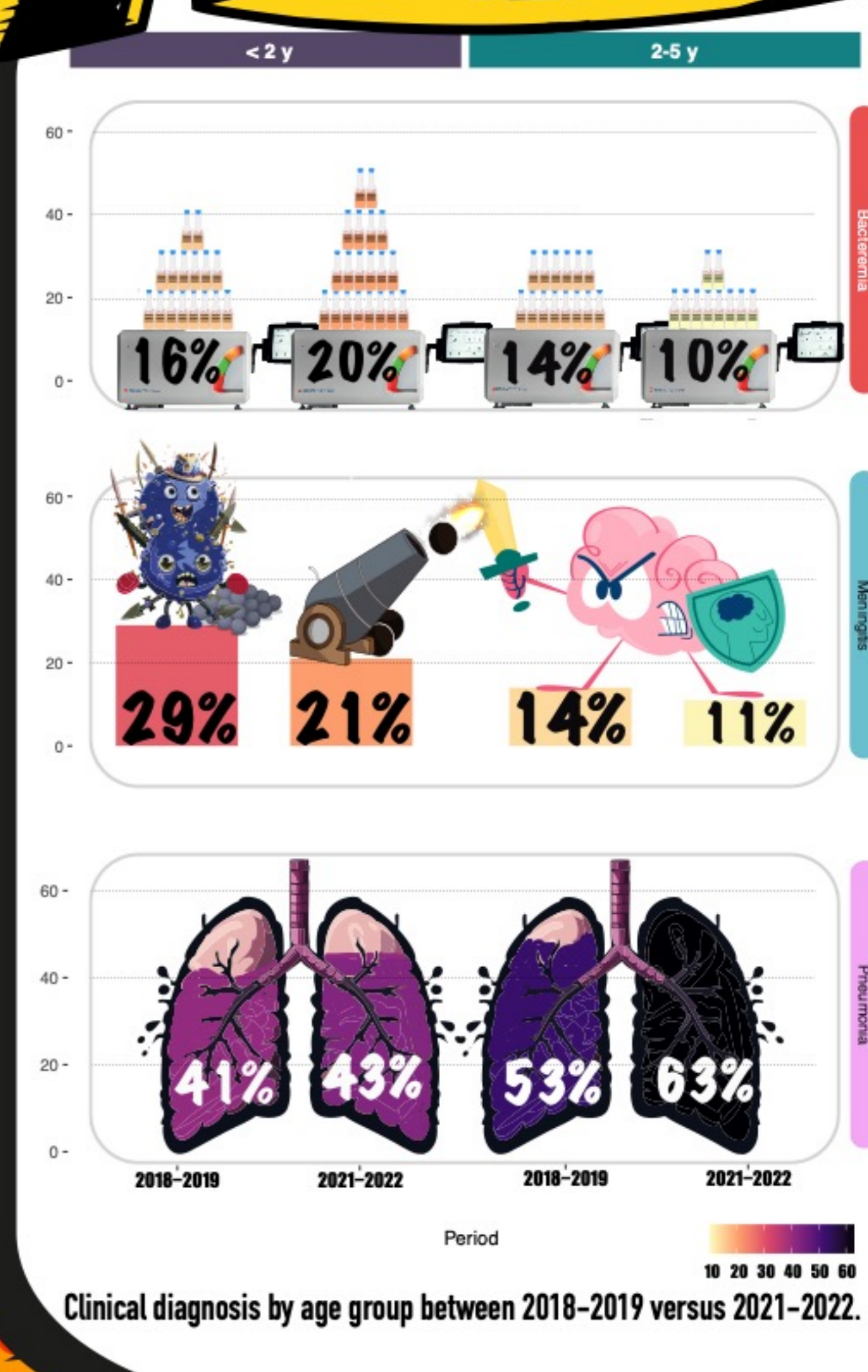
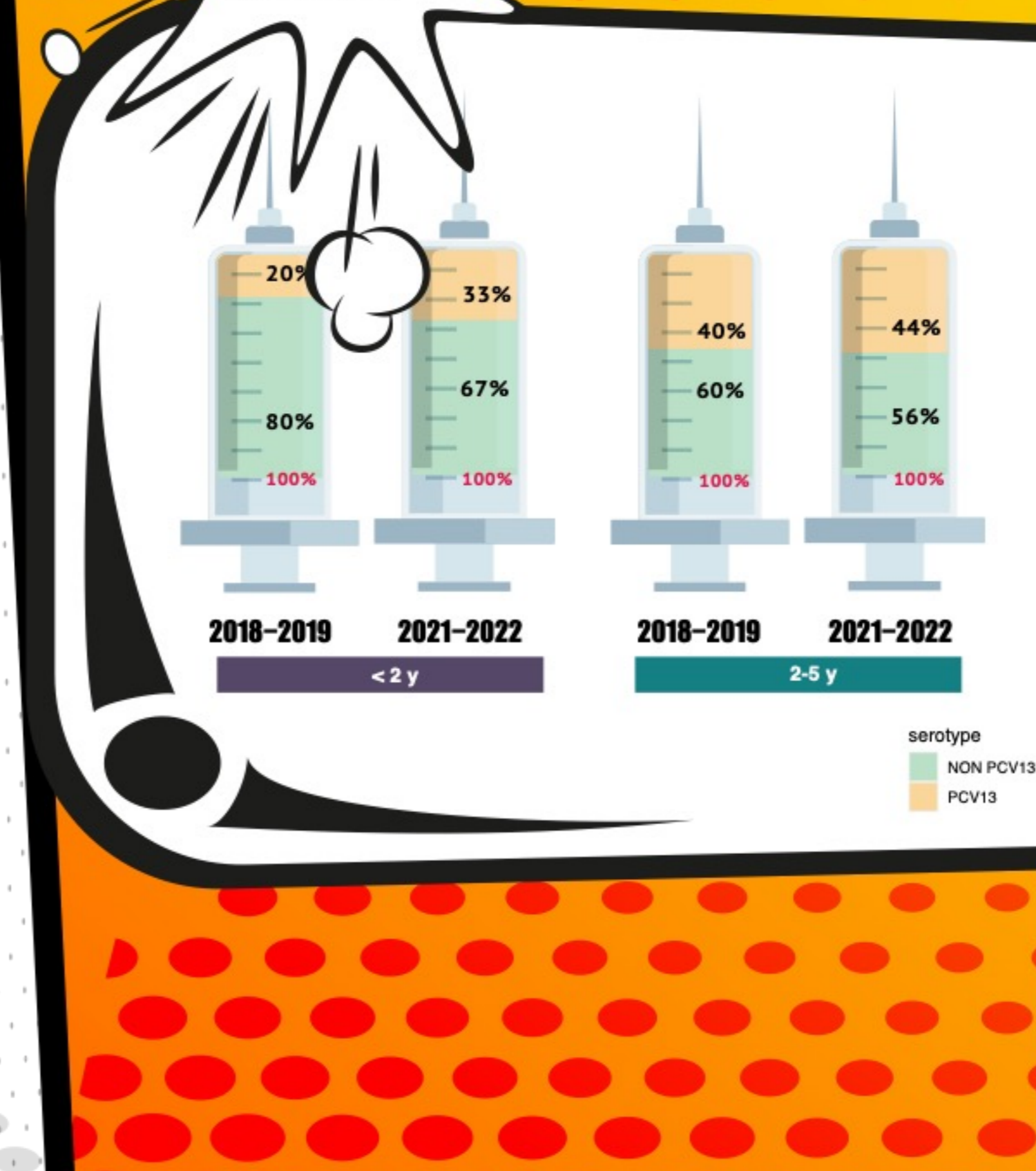
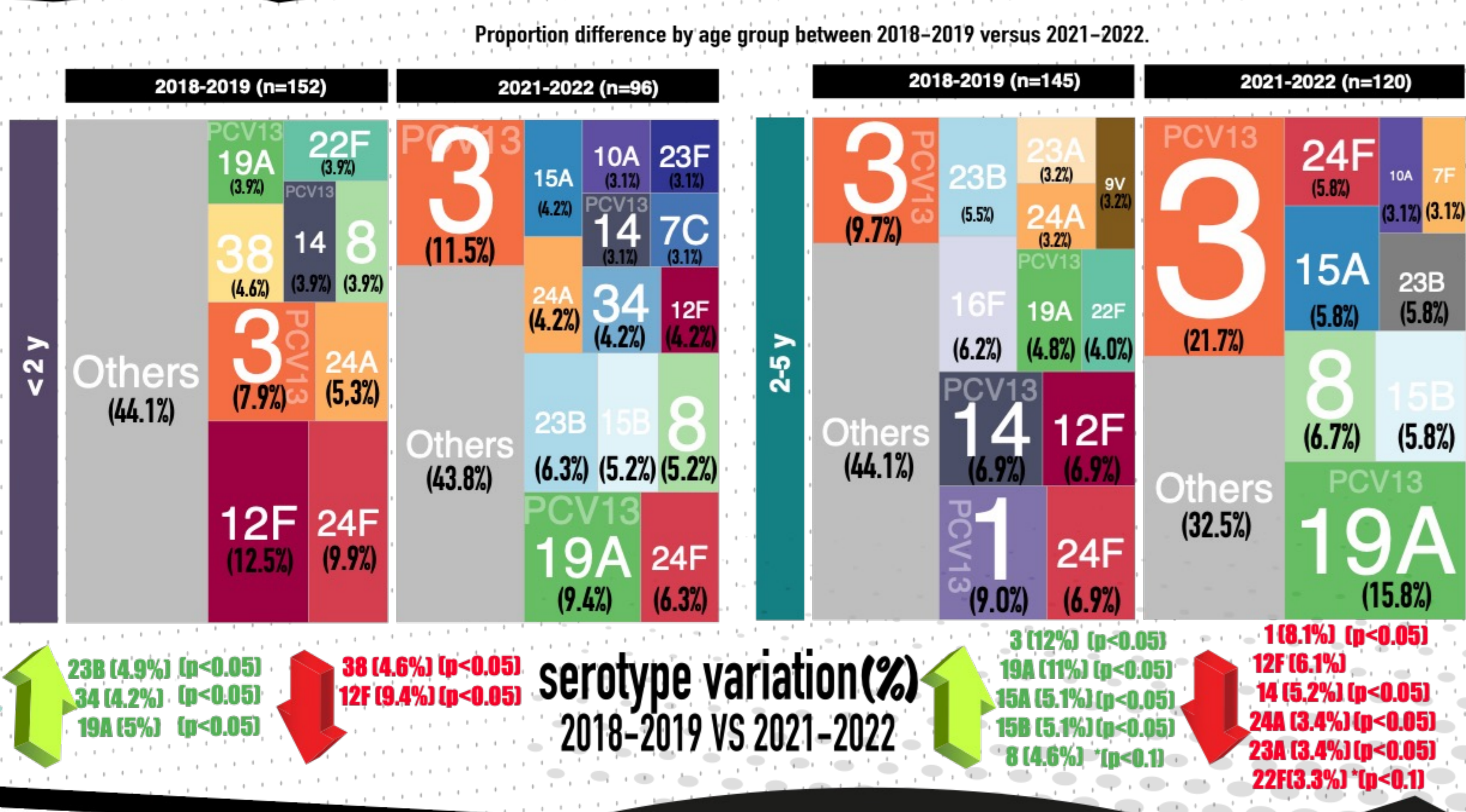
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Streptococcus pneumoniae (Spn) is a major human pathogen causing infections in children under five years of age and elderly. We describe the epidemiology of invasive pneumococcal diseases (IPD) in children stratified by cases caused by PCV13 versus non-PCV13 serotypes.

A total of 1,288 IPD cases occurred from January 2018 to December 2022 were submitted from 153 hospitals of 20 provinces to the National Reference Laboratories. The periods before and after 2020 were compared: 2018-2019 (pre) and 2021-2022 (post). Two age groups were analyzed, <2 years (n=152 pre, n=96 post) and 2-5 years (n=145 pre, n=120 post). The isolates were serotyped by Quellung reaction and MICs were determined by agar dilution method (CLSI2023).

BACKGROUND

Vaccine Serotypes trends



PCV13 Serotypes

- An increase was observed within the group aged under 2 years.
- The serotype 19A showed an increase across all age groups.
- Serotypes 3 and 19A remain the sole prevalent across all groups.

NON PCV13 Serotypes.

- In 2021-2022, serotypes 23B, 24F, 8, and 15B were prevalent across all age groups, whereas serotype 15A was only prevalent in the 2-5 y

Antimicrobials Agents

- No significant differences were observed in resistance profiles during the study periods.
- For the treatment of pneumonia, PEN (Penicillin) and AMOX (Amoxicillin) remain the antibiotics of choice.
- Resistance profiles to macrolides and tetracyclines suggest that in vitro sensitivity should be assessed prior to their use.
- Third-generation cephalosporins for meningitis. Continuous surveillance is crucial for assessing changes in the distribution of circulating serotypes and defining empirical treatments.

CONCLUSIONS