## 3.19 Determining the impact of co-colonisation on lung function in children with cystic fibrosis.

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**Background:** Chronic pulmonary infection with *Pseudomonas aeruginosa* (PA) is associated with poor clinical outcomes in patients with cystic fibrosis (CF). We aimed to investigate the impact of microorganisms, frequently co-colonising with PA, on lung function in children with CF. **Methods:** A retrospective analysis was performed on data from 40 patients (946 samples of respiratory secretions), aged 2 to 19 years old, over 4 years to identify the microorganisms with the highest rates of co-colonisation. Mann-Whitney U test was applied to compare lung function (FEV<sub>1</sub>% predicted) based on colonisation status. **Results:** Of 13 identified microorganisms, 3 accounted for the majority of co-colonising infections with PA. *Staphylococcus aureus* (SA) was the most common co-coloniser with PA (44%). These patients had a lower median FEV<sub>1</sub> compared to those with PA alone (p=0.0294). *Candida* spp. and *Aspergillus* spp. were the next most common co-colonisation with PA did not further reduce FEV1 beyond PA colonisation alone. **Conclusions:** Co-colonisation patterns may impact clinical outcomes in CF patients. These findings, if reproduced in a larger cohort, may influence antimicrobial selections going forward. **Disclosures: Conflict of Interest:** The authors declare that they have no conflict of interest.