BACKGROUND

- Availability of CFTR modulator therapy down to younger ages coupled with the COVID-19 pandemic led to a remarkable decrease in pulmonary exacerbations (PEx) requiring hospitalization among children with CF
- We wondered whether the demographic and clinical profiles of children with CF being hospitalized for exacerbations in 2022 differed from those admitted in 2018 (pre-elexacaftor/tezacaftor/ivacaftor [ETI] therapy and pre-COVID pandemic)

STUDY OBJECTIVE

Determine the demographic and clinical characteristics of children with CF who are now requiring hospitalization for PEx

METHODS

- Retrospective medical chart review at five U.S. pediatric sites
- Data from all children with CF (ages from birth and older) who were hospitalized and received IV antibiotics for treatment of PEx in 2018 and 2022
- Four elements in REDCap: demographics, admissions, microbiology, inpatient medications

RESULTS

- Hospitalizations decreased >60% from 2018 to 2022 across our 5 pediatric sites
- No age or sex differences among those hospitalized in 2022 compared with 2018
- Significant racial differences among those hospitalized in 2022 compared with 2018
- Children hospitalized in 2022 were more likely to have two non-F508del mutations
- Changes in lung function were similar in 2018 and 2022

STUDY LIMITATIONS

- Variable practice patterns across sites (diagnosis & treatment)
- Lacking treatment adherence data, particularly around the use of CFTR modulator therapies
- Lacking measures of mental and social health

CONCLUSIONS

- Reduction in hospitalizations likely reflects the benefit of ETI therapy, as a higher percentage of children hospitalized in 2022 had 2 non-F508del mutations and were not eligible for ETI
- Higher percentage of those hospitalized in 2022 identified as being from minority racial backgrounds, further highlighting the importance of health equity efforts in CF
- Lower percentage of children hospitalized in 2022 were infected with MRSA, concurrent with decreased rates of MRSA community infections in 2022

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