

# ***Changing Epidemiology of the Respiratory Bacteriology of Patients With Cystic Fibrosis***

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**BACKGROUND:** Monitoring potential changes in the epidemiology of cystic fibrosis (CF) pathogens furthers our understanding of the potential impact of interventions.

**METHODS:** We performed a retrospective analysis using data reported to the Cystic Fibrosis Foundation Patient Registry (CFFPR) from 2006 to 2012 to determine the annual percent changes in the prevalence and incidence of selected CF pathogens. Pathogens included *Pseudomonas aeruginosa*, methicillin-susceptible *Staphylococcus aureus* (MSSA), methicillin-resistant *S aureus* (MRSA), *Haemophilus influenzae*, *Burkholderia cepacia* complex, *Stenotrophomonas maltophilia*, and *Achromobacter xylosoxidans*. Changes in nontuberculous mycobacteria (NTM) prevalence were assessed from 2010 to 2012, when the CFFPR collected NTM species.

**RESULTS:** In 2012, the pathogens of highest prevalence and incidence were MSSA and *P aeruginosa*, followed by MRSA. The prevalence of *A xylosoxidans* and *B cepacia* complex were relatively low. From 2006 to 2012, the annual percent change in overall (as well as in most age strata) prevalence and incidence significantly decreased for *P aeruginosa* and *B cepacia* complex, but significantly increased for MRSA. From 2010 to 2012, the annual percent change in overall prevalence of NTM and *Mycobacterium avium* complex increased.

**CONCLUSIONS:** The epidemiology of CF pathogens continues to change. The causes of these observations are most likely multifactorial and include improvements in clinical care and infection prevention and control. Data from this study will be useful to evaluate the impact of new therapies on CF microbiology.

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