Impact of Infection on the Lives of People with Cystic Fibrosis

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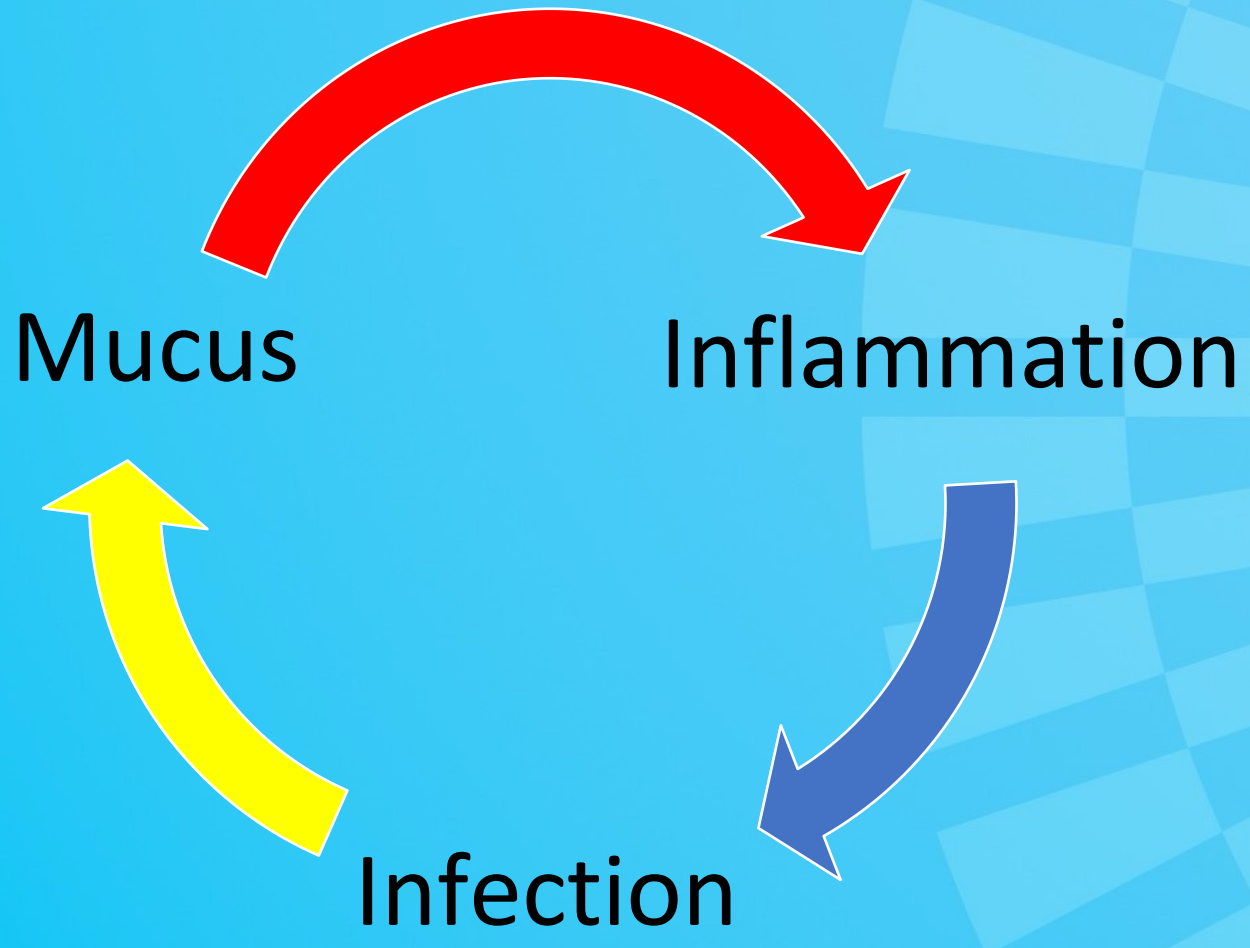
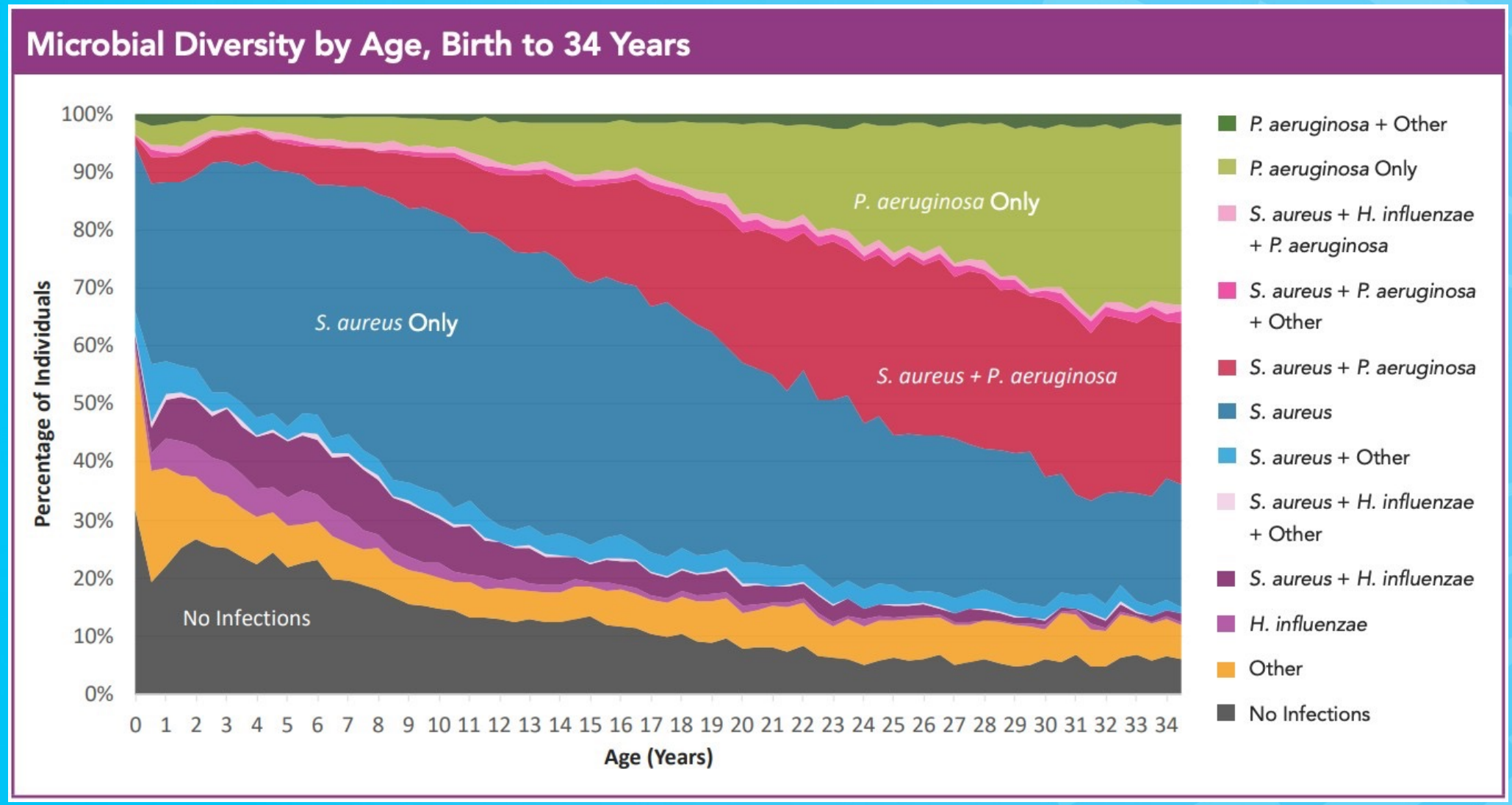
CYSTIC FIBROSIS FOUNDATION®

Cystic Fibrosis is Characterized by a Lifetime of Respiratory Infections



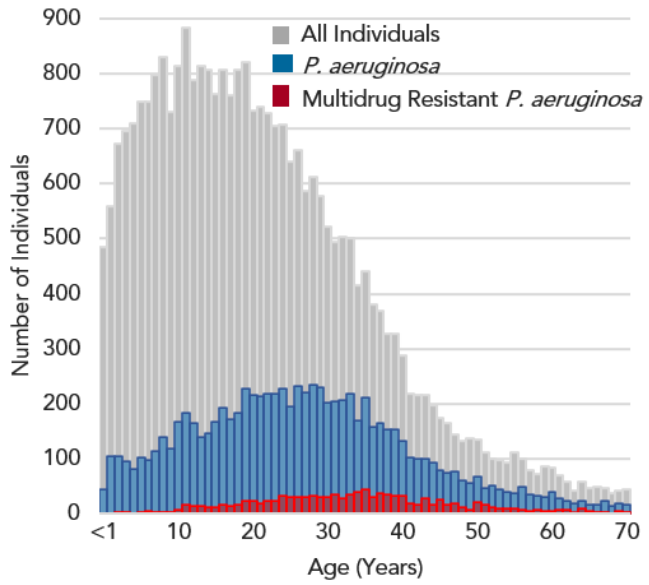
Prevalence of Respiratory Pathogens in CF

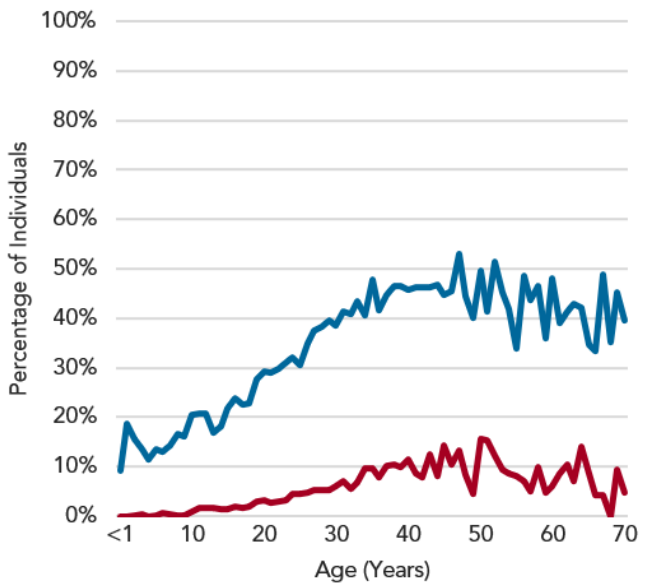


2019 Cystic Fibrosis Patient Registry Annual Data Report

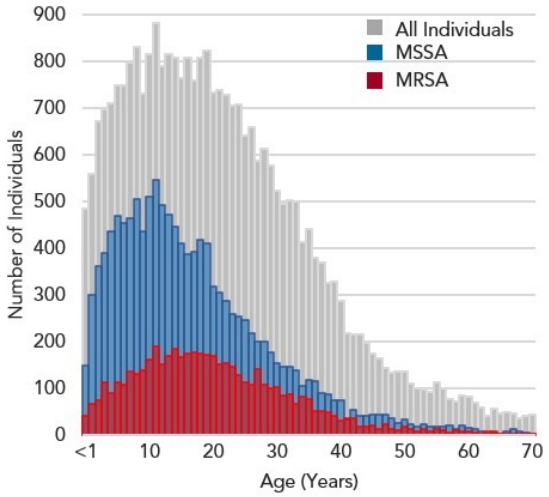
Antimicrobial Resistance is a Problem in in Cystic Fibrosis

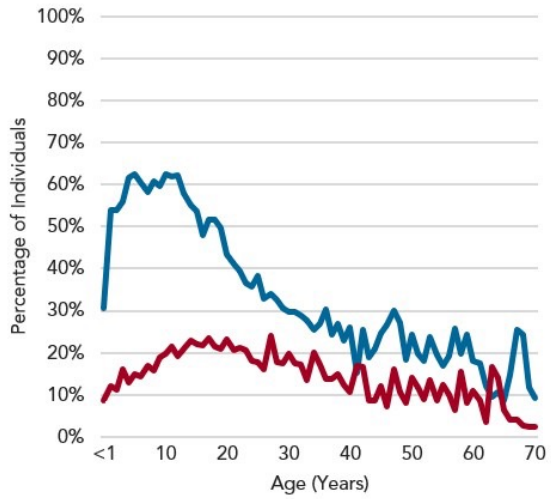
P. aeruginosa and Multidrug-Resistant P. aeruginosa by Age in Years, 2020



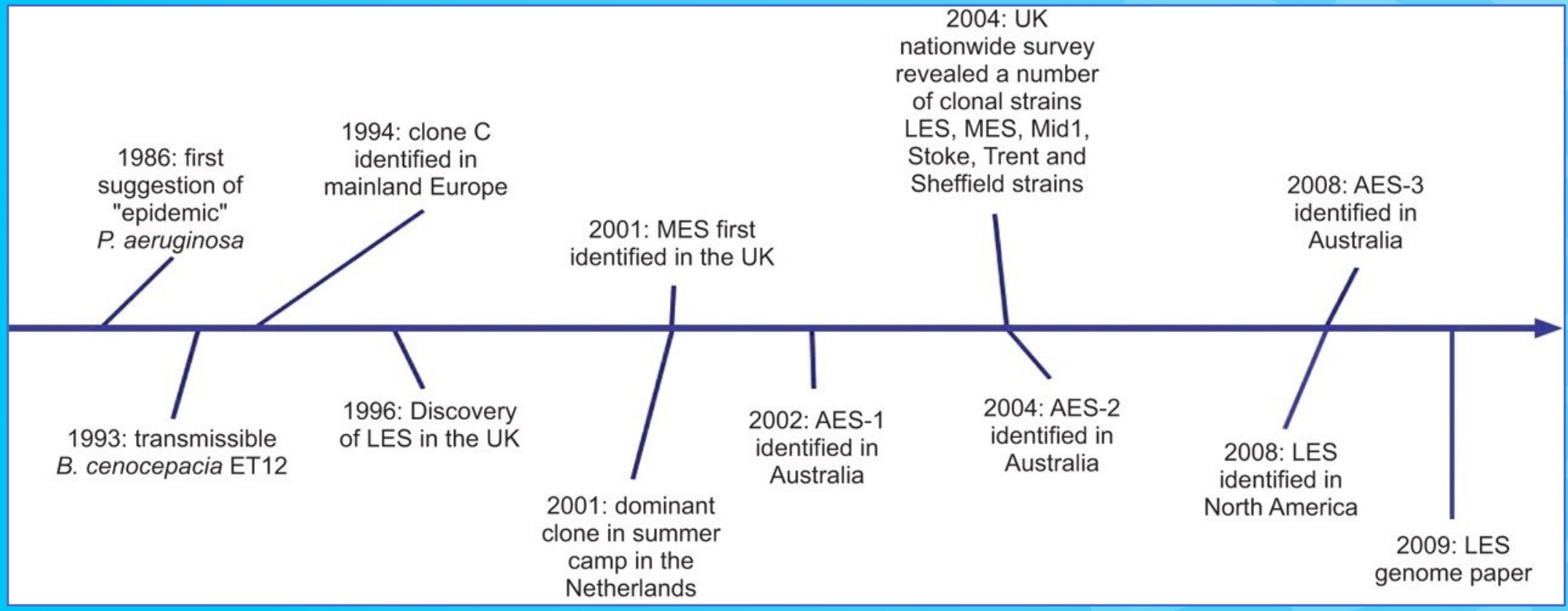


MSSA and MRSA by Age in Years, 2020





Lessons Learned over Time: Nosocomial and Community Transmission



- *Pseudomonas aeruginosa*
- *Burkholderia cenocepacia*

Fothergill JL, Walshaw MJ, Winstanley C. Eur Resp J 2012; 40 (1): 227-238

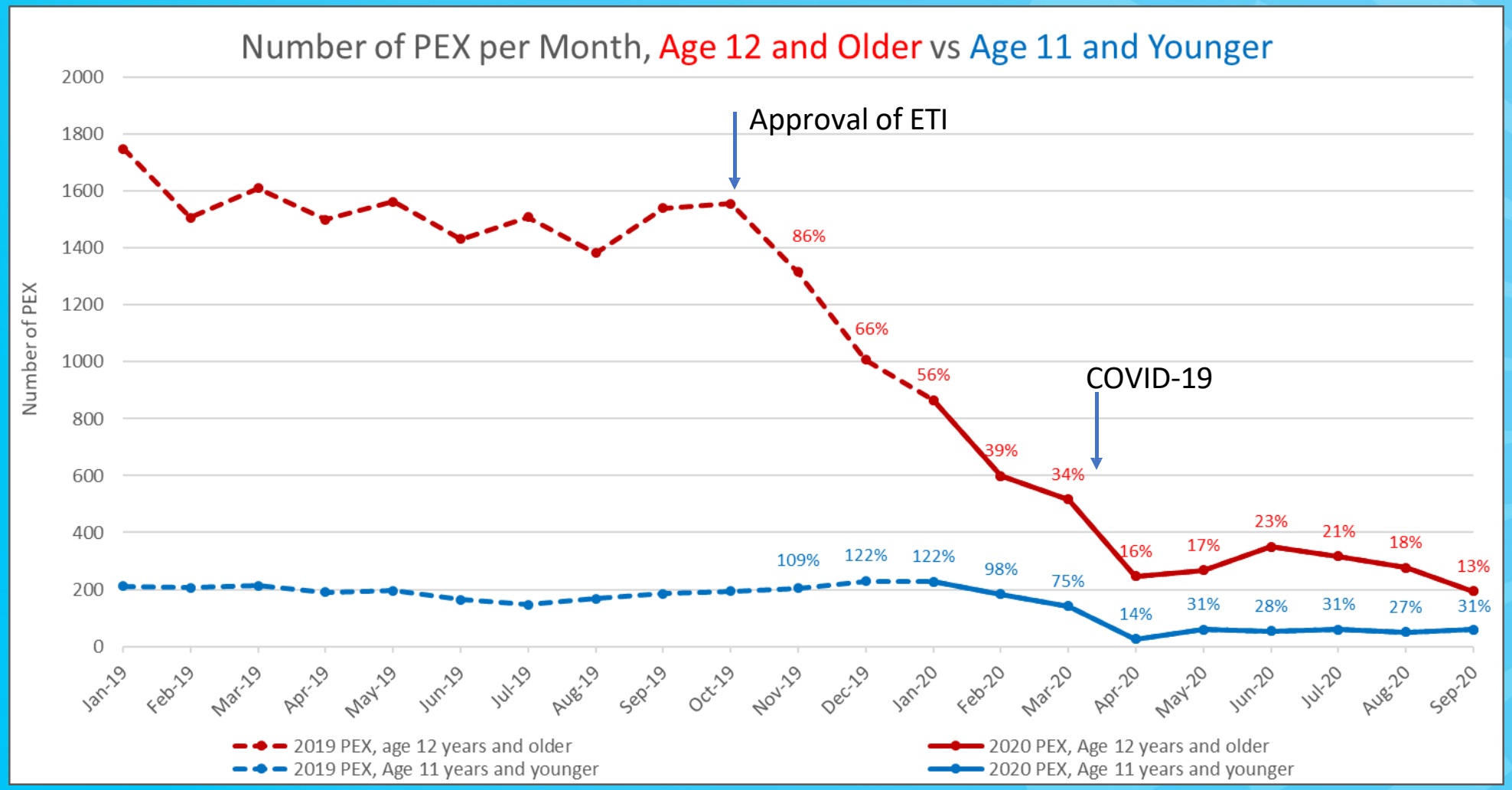
Infection Prevention and Control Guidelines for CF

- Contact precautions for all CF patients regardless of pathogen status
- Mask use by patients in common areas in health care settings
- A minimum six-foot distance between patients
- Standards for reducing infection risk with pulmonary function testing
- Auditing the cleaning and disinfection of environmental surfaces

Saiman L, et al. Infection Prevention and Control Guideline for Cystic Fibrosis: 2013 Update. Infect Control Hosp Epidemiol 2014; (35)51: S1–67

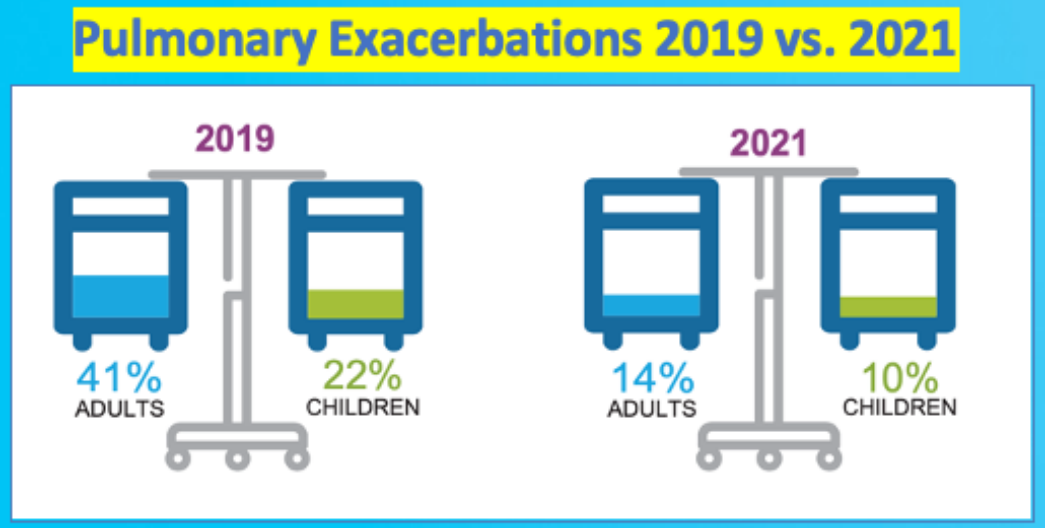
Impact of IPC Practices on People with CF

What about the burden of infection?



CFTR modulators: transformative therapies for cystic fibrosis
Adapted from J Managed Care Spec Pharm. 2021 Feb;27(2):281-284.

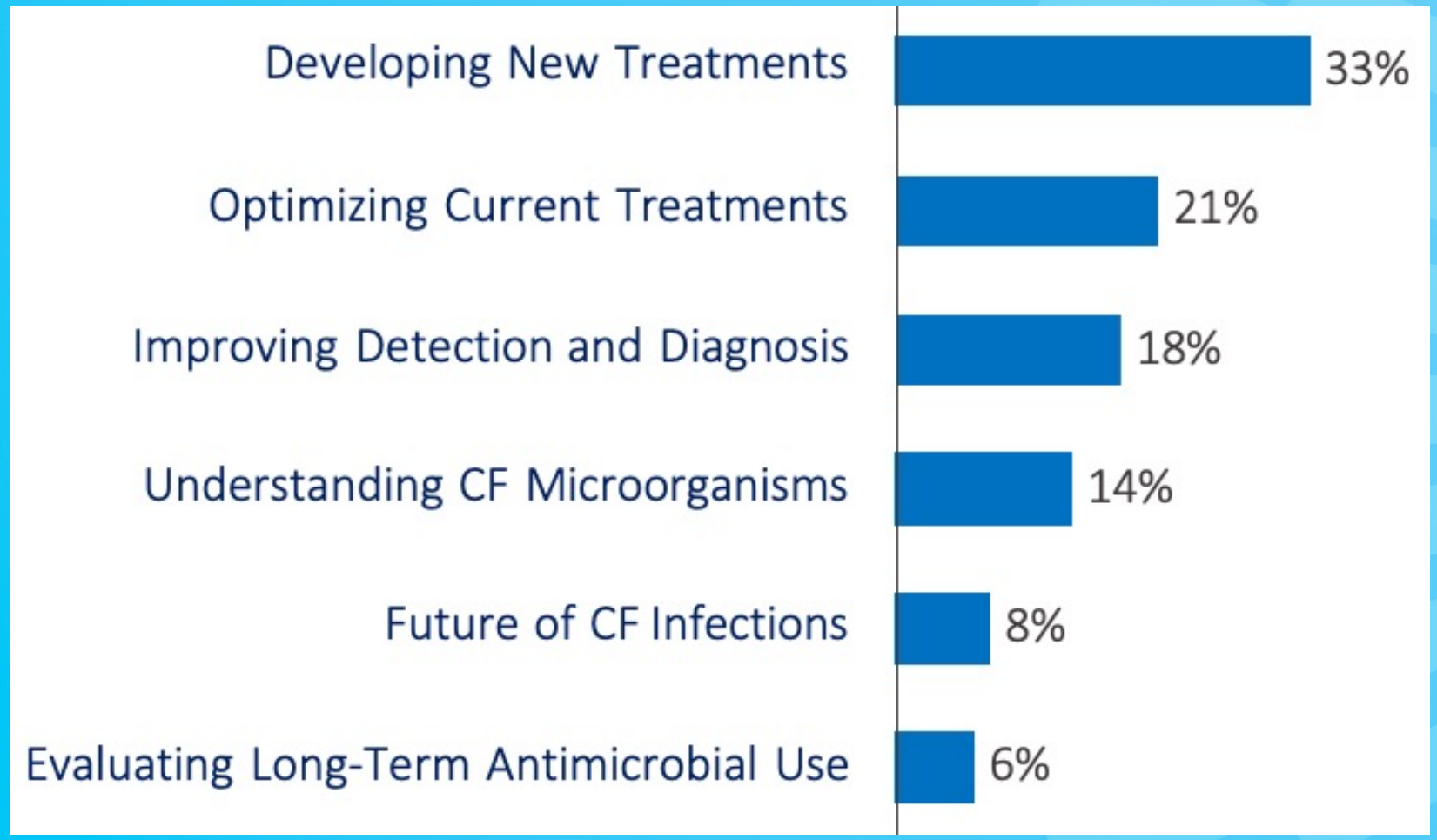
What happened during 2021?



Bacteria	2019 Percent With Infection	2021 Percent With Infection
Pseudomonas aeruginosa	43%	28%
Stenotrophomonas maltophilia	12%	6%
Methicillin-resistant *Staphylococcus aureus*	25%	18%
Achromobacter xylosoxidans	6%	3%
Burkholderia cepacia complex	3%	1%
Nontuberculous mycobacteria	14%	10%

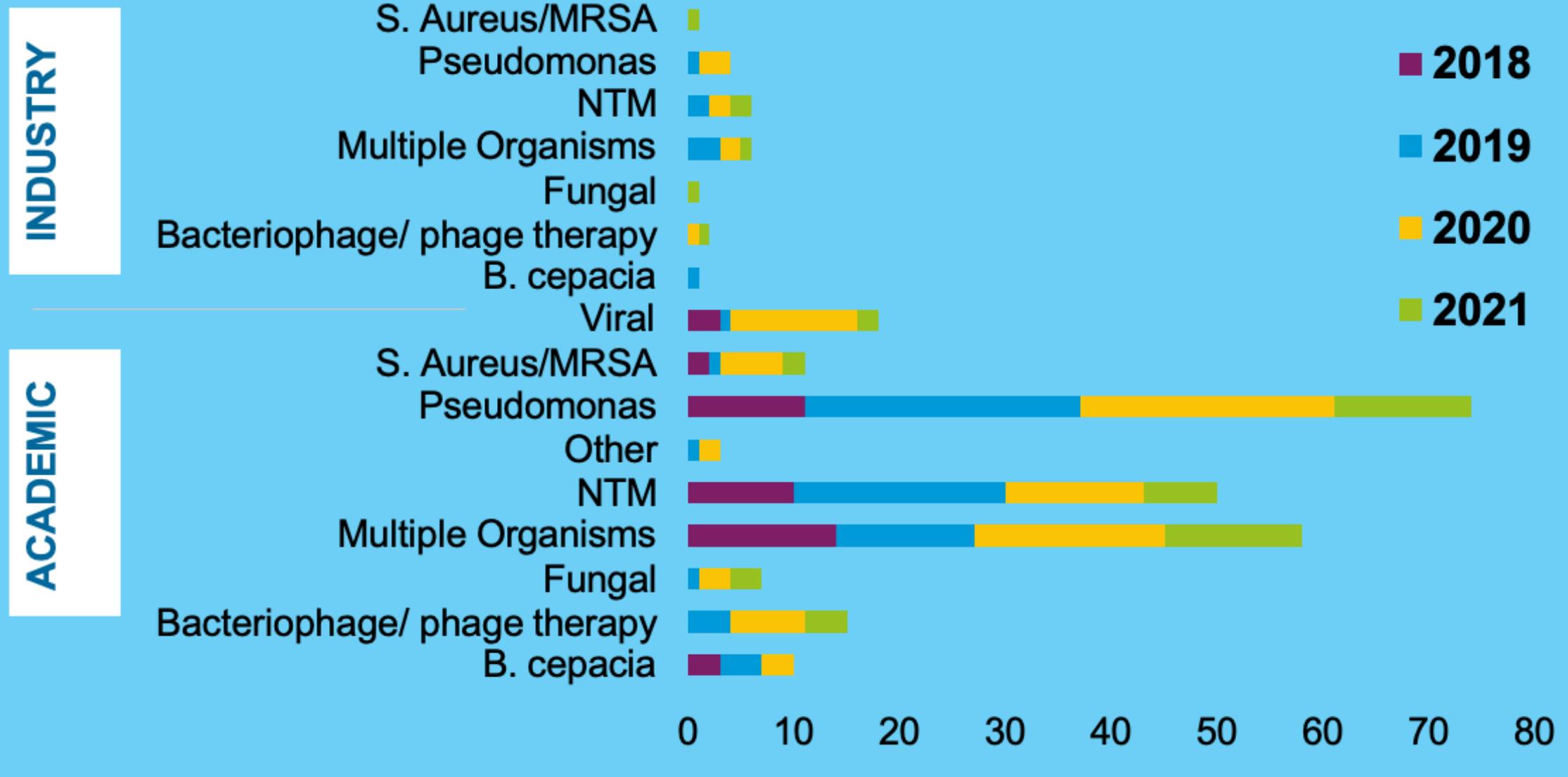
2021 CF Foundation Patient Registry Highlights
https://www.cff.org/medical-professionals/patient-registry

Priorities for infection-related research



Ranked 1st by people with CF and their Families among areas of focus within infection-related research for the CF Foundation (N=303)

CF Foundation Microbiological Research Portfolio



Unanswered Questions: Will the CF infection landscape change?

- With less antibiotic use, will antimicrobial resistance decrease?
- Is masking here to stay?
  - Public
  - Healthcare
- With less cough and sputum, are pathogens less transmissible?
- Can people with CF be together in person safely?

How will we get answers?

- Continue performing cultures
- Continue collecting data
- Keep investing in research