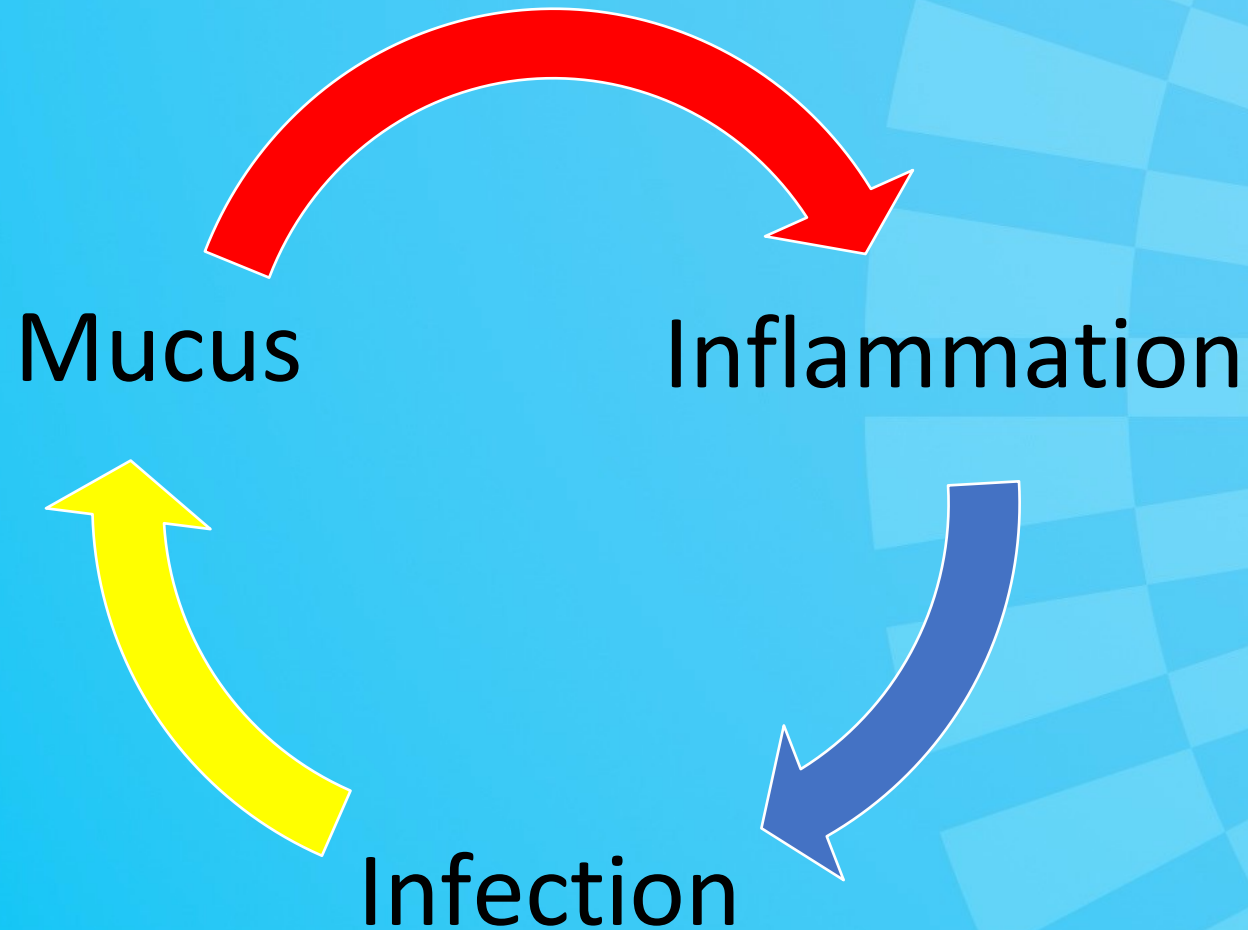


Impact of Infection on the Lives of People with Cystic Fibrosis

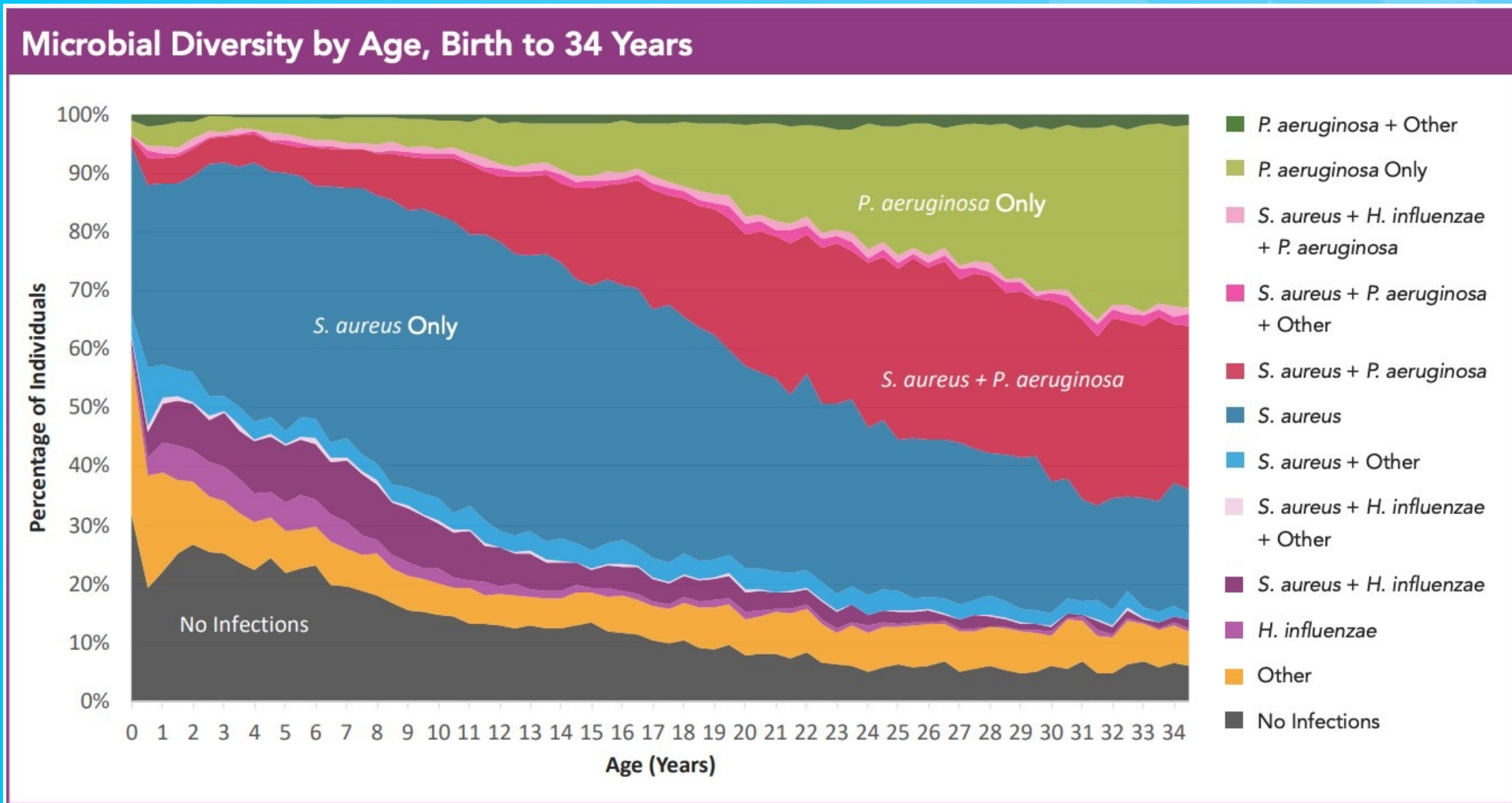


A. Whitney Brown, MD
Senior Director, Clinical Affairs
Cystic Fibrosis Foundation

Cystic Fibrosis is Characterized by a Lifetime of Respiratory Infections

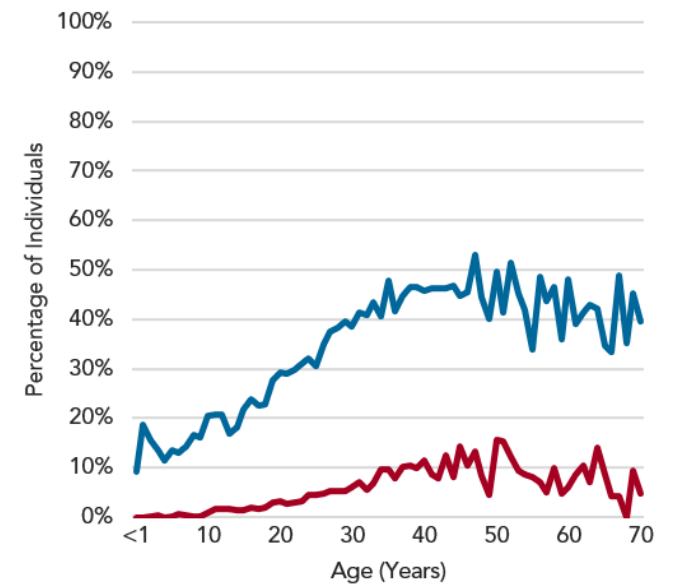
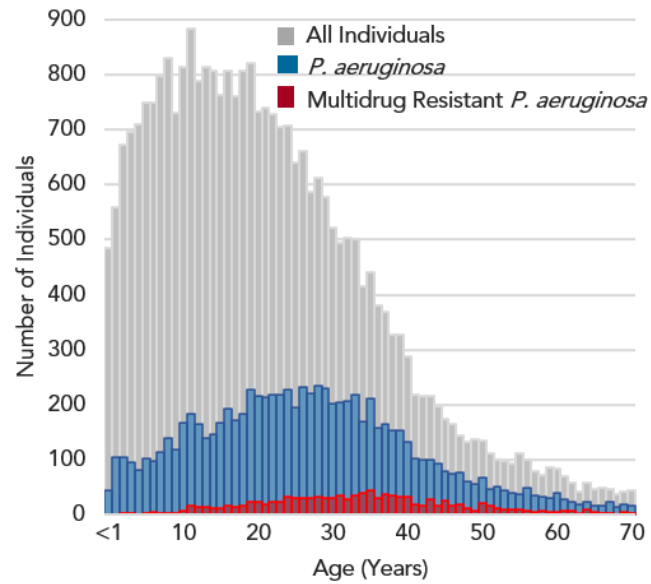


Prevalence of Respiratory Pathogens in CF

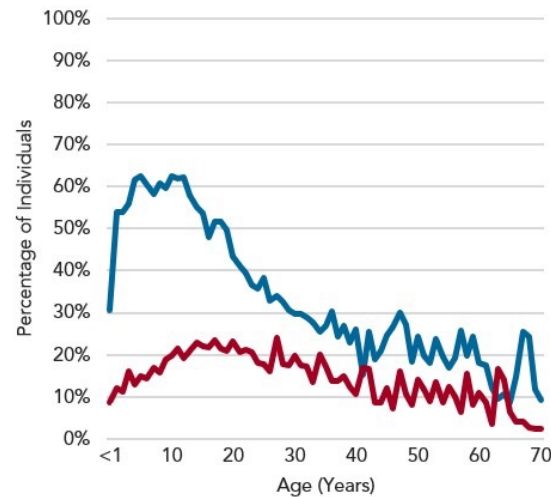
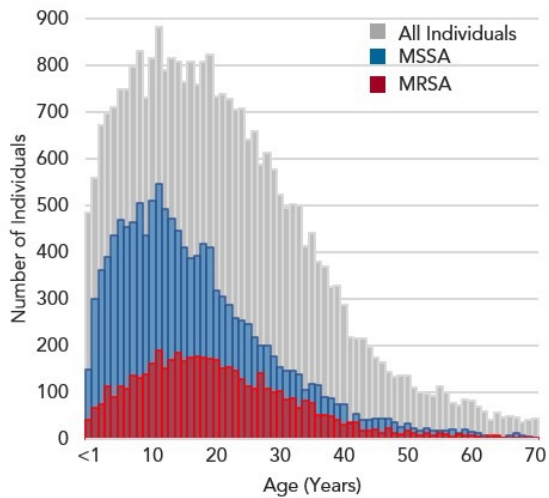


Antimicrobial Resistance is a Problem in Cystic Fibrosis

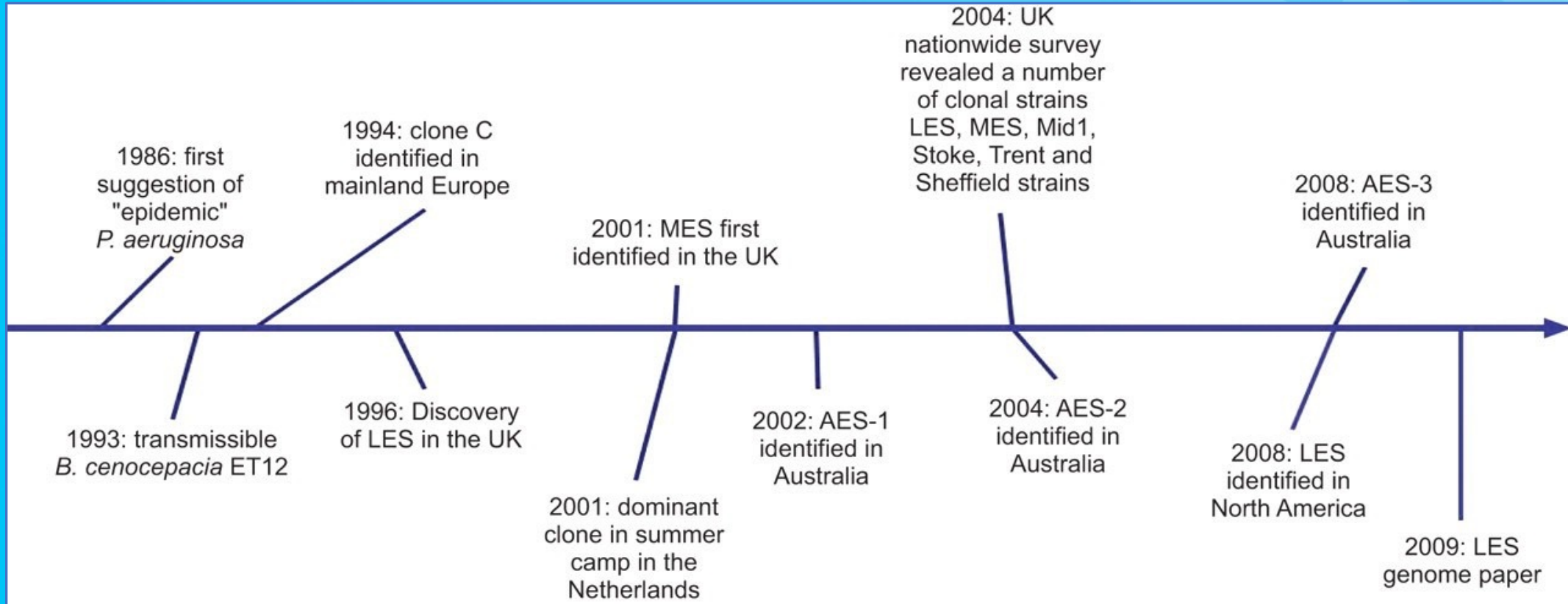
***P. aeruginosa* and Multidrug-Resistant *P. aeruginosa* by Age in Years, 2020**



MSSA and MRSA by Age in Years, 2020



Lessons Learned over Time: Nosocomial and Community Transmission



- *Pseudomonas aeruginosa*
- *Burkholderia cenocepacia*

Infection Prevention and Control Guidelines for CF

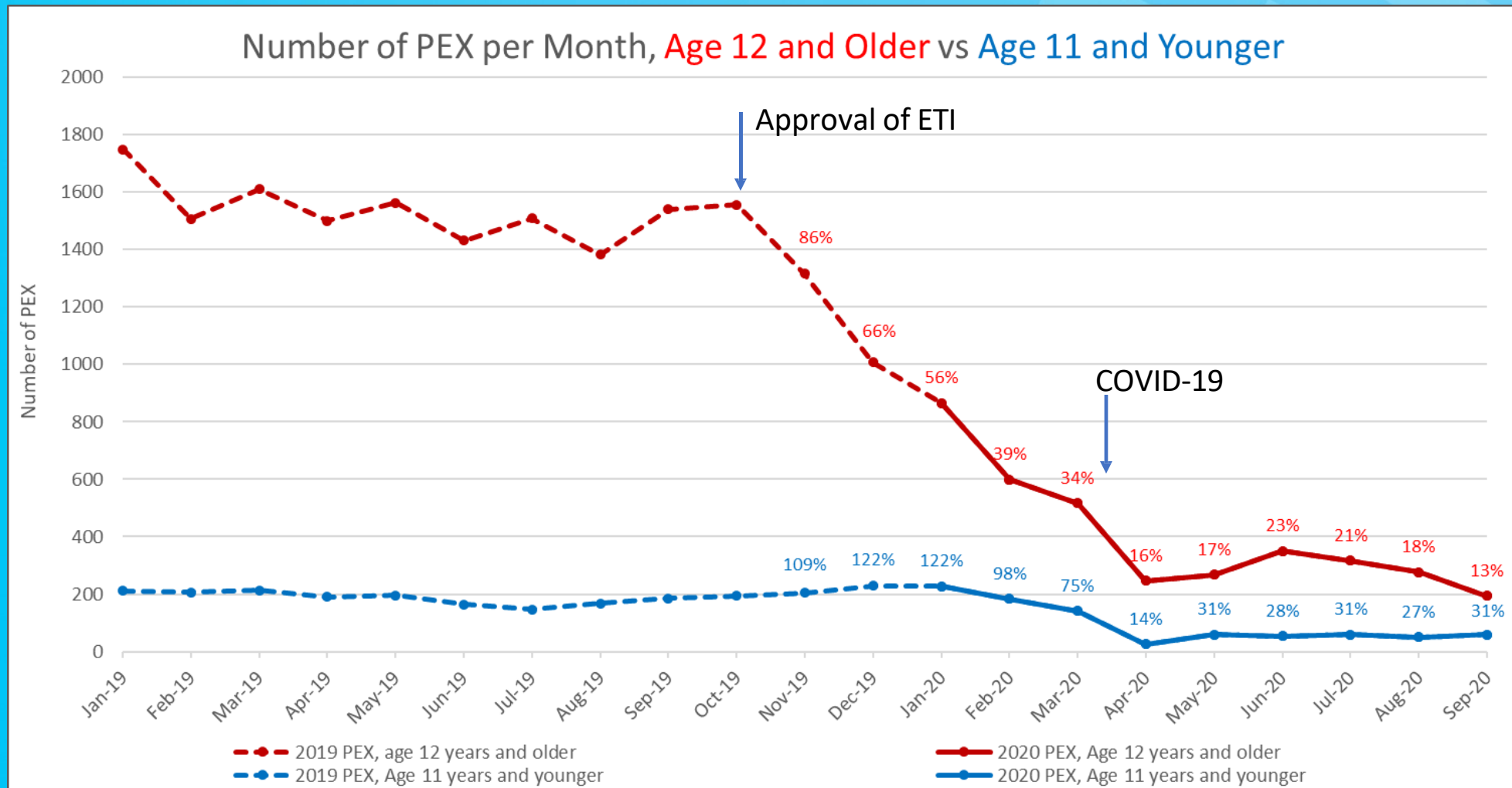
- Contact precautions for all CF patients regardless of pathogen status
- Mask use by patients in common areas in health care settings
- A minimum six-foot distance between patients
- Standards for reducing infection risk with pulmonary function testing
- Auditing the cleaning and disinfection of environmental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



Impact of IPC Practices on People with CF



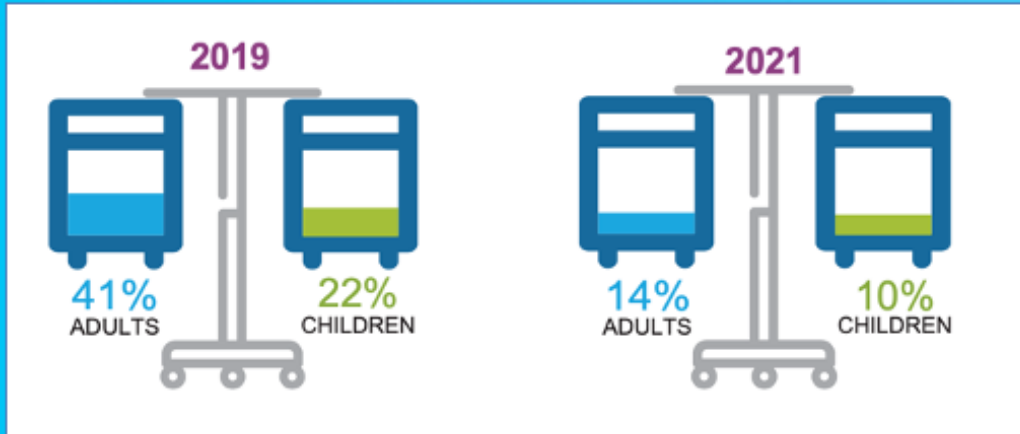
What about the burden of infection?









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

What happened during 2021?

Pulmonary Exacerbations 2019 vs. 2021

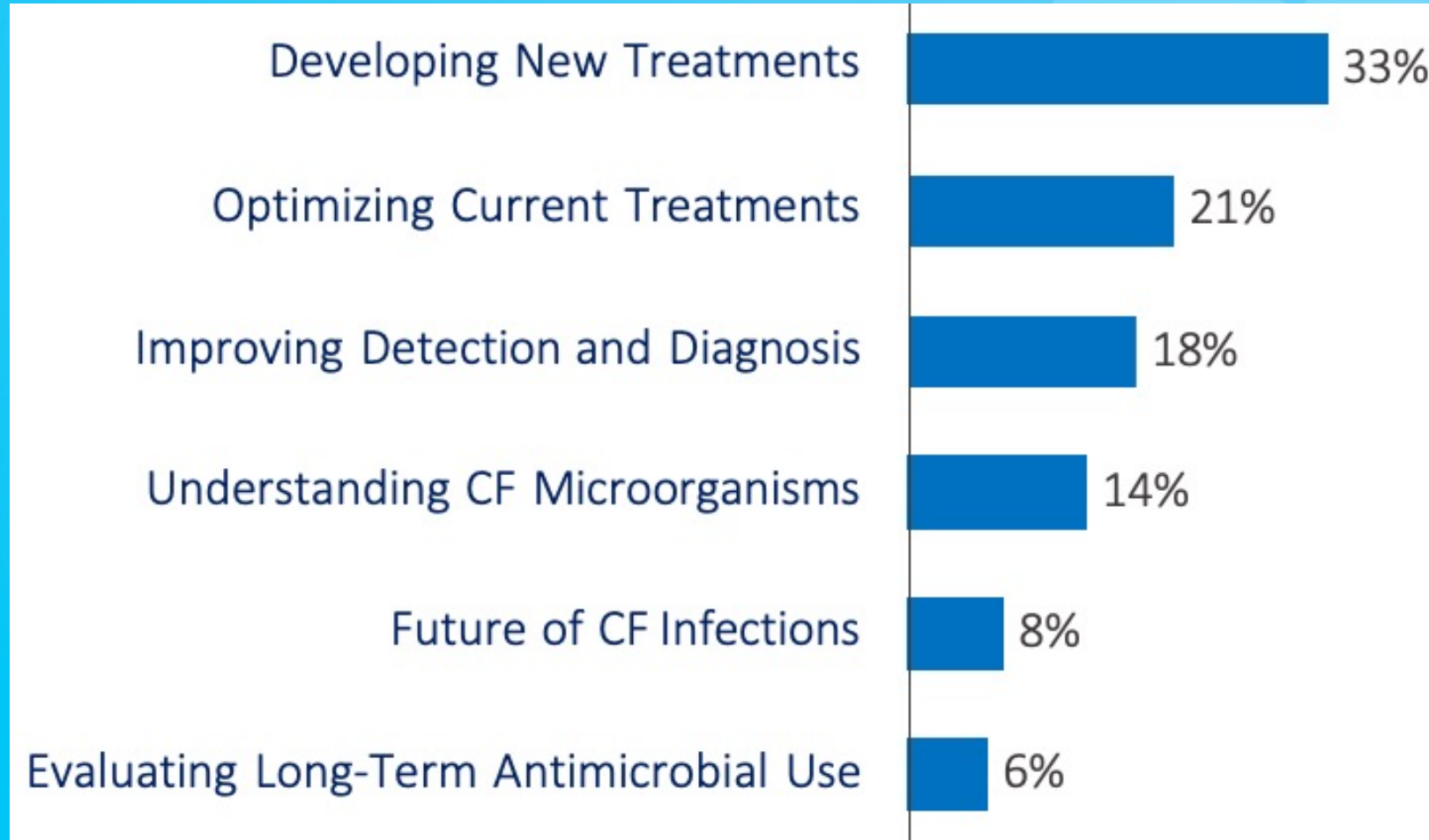


Bacteria	2019 Percent With Infection	2021 Percent With Infection
 <i>Pseudomonas aeruginosa</i>	43%	28%
 <i>Stenotrophomonas maltophilia</i>	12%	6%
 Methicillin-resistant <i>Staphylococcus aureus</i>	25%	18%
 <i>Achromobacter xylosoxidans</i>	6%	3%
 <i>Burkholderia cepacia</i> complex	3%	1%
 Nontuberculous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

2021 CF Foundation Patient Registry Highlights

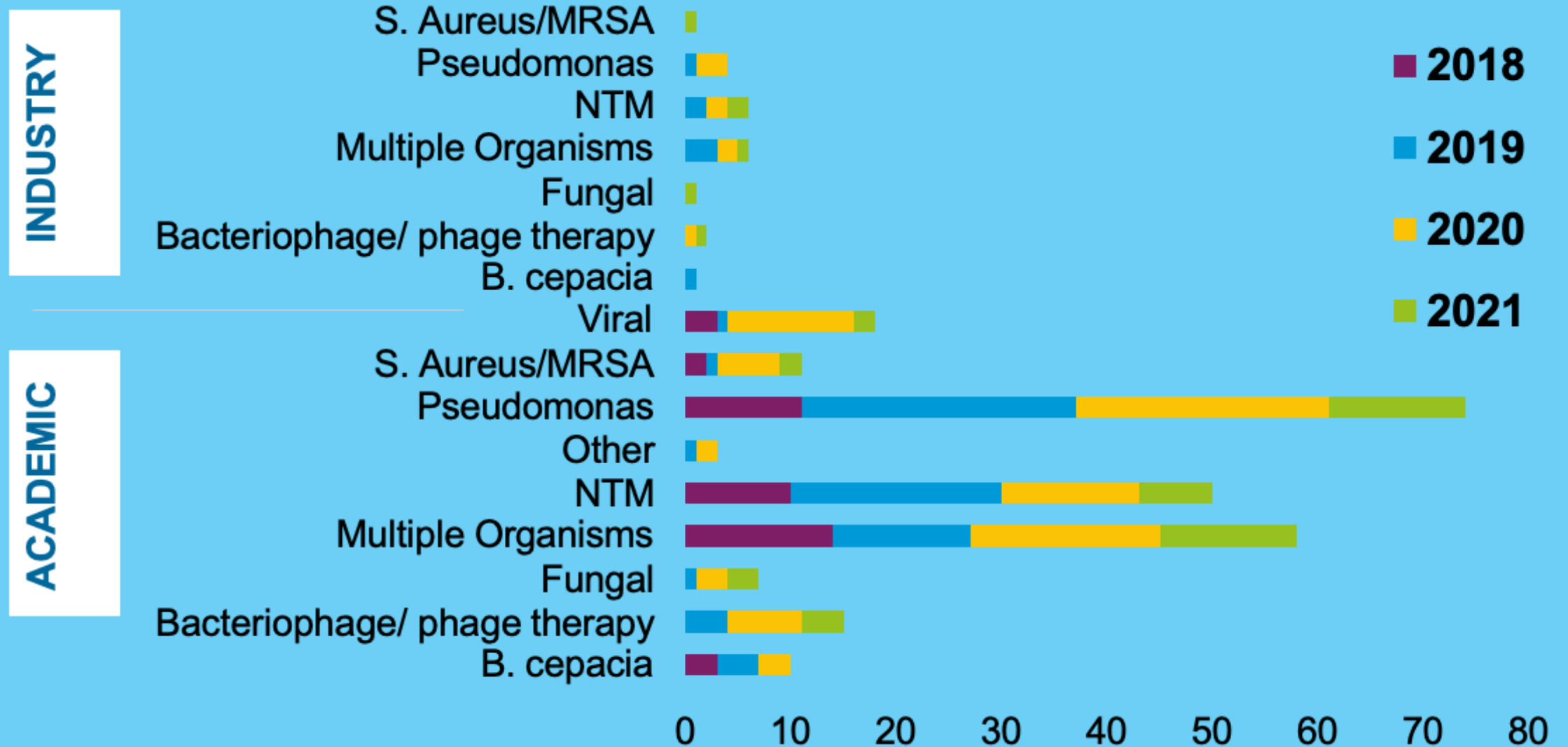
<https://www.cff.org/medical-professionals/patient-registry>

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