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COVID-19 Vaccination in Individuals with Cystic Fibrosis at a Pediatric Cystic Fibrosis Center

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Background

- Observational data suggest that COVID-19 appears to have similar outcomes among most individuals with cystic fibrosis(CF) compared to the general population
- However, people with CF (pwCF) who have advanced age, CF-related diabetes, lower lung function, or a history of lung transplantation may be at increased risk for more severe disease
- Therefore, the CF Foundation advocates for pwCF to have discussions about vaccination with care teams
- At present, the FDA has granted emergency use authorization (EUA) of three COVID-19 vaccines
- Initially ACIP/CDC guidance allowed each state to determine vaccine distribution based on an individual's exposure and risk for severe disease
- This study describes the attitudes of adolescents and their caregivers with CF followed by Children's Mercy Kansas City (CMKC) CF center eligible for COVID-19 vaccination in the state of Missouri
- At the time publication, COVID-19 vaccination is available for all individuals ≥ 12 years of age in all states

Methods

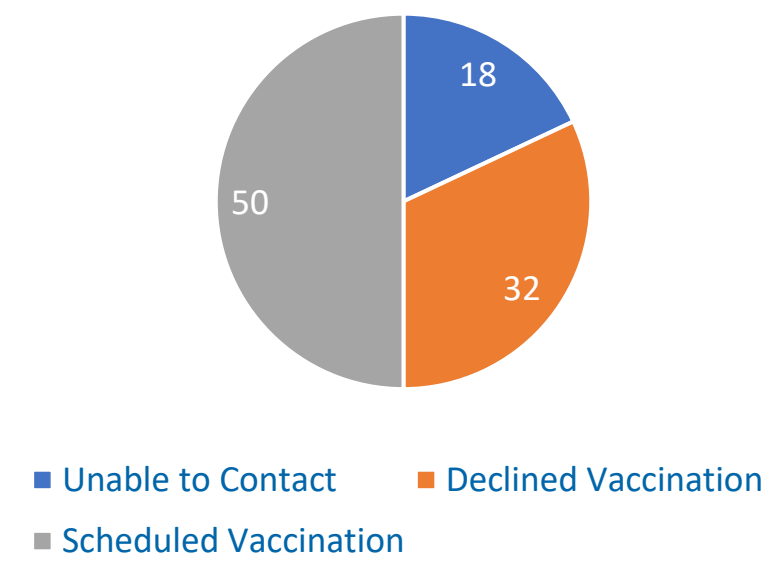
- CMKC Cystic Fibrosis Center is in Missouri but provides care for 234 pwCF from Missouri and Kansas
- We receive COVID-19 vaccine from both Missouri and Kansas' allocation with distribution based on state-wide, phased, and tiered systems
- Starting in January 2021, Phase 1B – Tier 2 in Missouri included, among others, pwCF
- Starting in March 2021, Phase 4 in Kansas included pwCF
- CMKC was allotted doses (first and second) to be administered
- Center staff contacted (telephone and EMR messaging) and documented vaccine status of all pw CF age > 16 years receiving care at CMKC from January 2021 to 02 April 2021
- Updated analysis was completed on 31 July 2021 with expanded approval of COVID-19 vaccination to pwCF ≥ 12 years (FDA EUA approved: May 2021)

Results

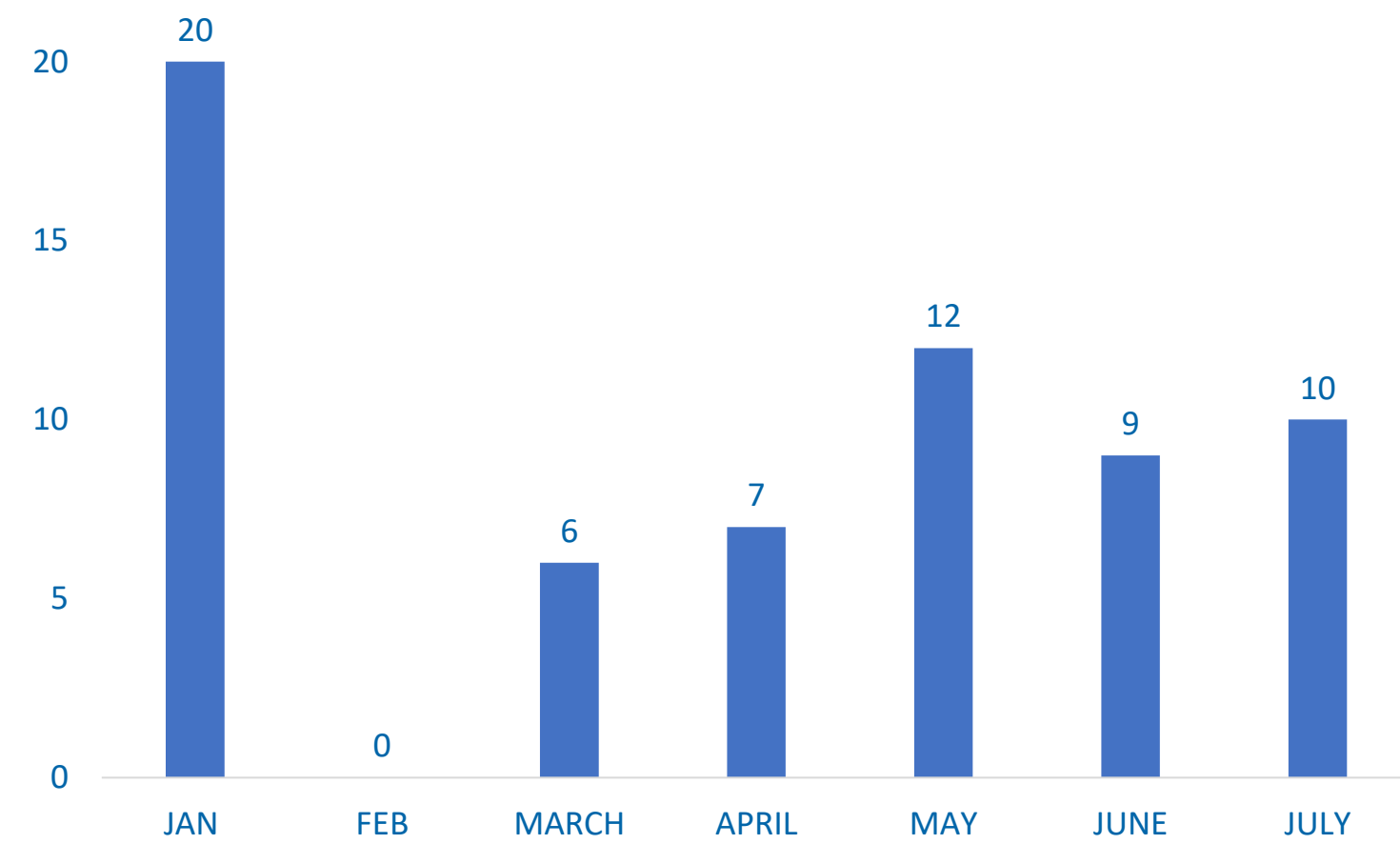
Of the 234 individuals followed at CMKC, 56 (24%) were age ≥ 16 years and initially eligible for COVID-19 vaccination.

Demographics	
Median Age (years, range)	17.97 (16.08-20.76)
Female Sex (n, %)	31 (55)

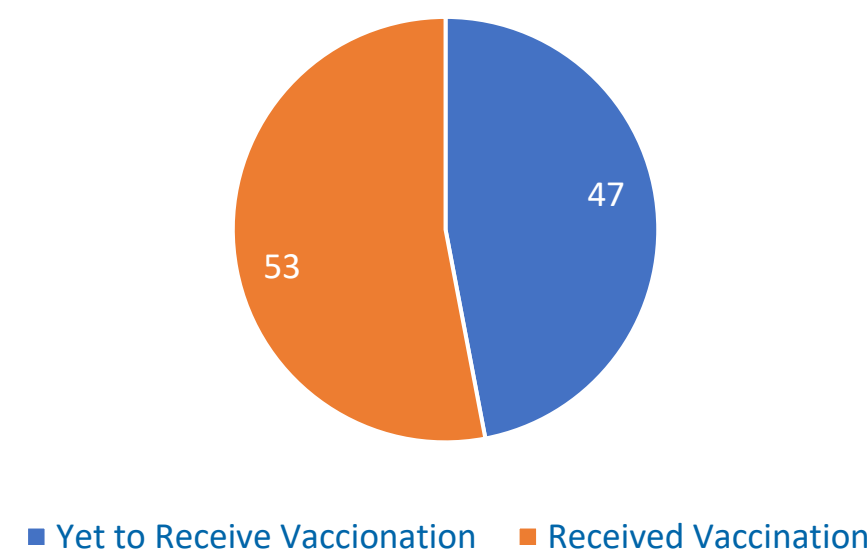
Percentage of Initial Vaccine Eligible (N=56)



of pwCF that received initial COVID-19 Vaccination per Month in 2021



Percentage of Current Vaccine Eligible (N=123)



Reasons for Declining Vaccination (N=18)	N (%)
Logistic Issues (i.e. unable to travel, scheduling conflict)	5 (28)
Unknown	5 (28)
Mistrust in Vaccine and/or Pandemic Severity	3 (17)
Current SARS-COV2 infection	2 (11)
Concern over Vaccine-Related Adverse Drug Event	1 (6)
Wanted to Get Minor Child Consent	1 (6)
Perceived Lack of Susceptibility to Infection	1 (6)

Population Vaccination Rates	State of Missouri (8/4/21)	State of Kansas (8/2/2021)	United States (8/3/2021)
Total Population Completing Vaccination	2,554,305 (41.6%)	1,143,084 (42.3%)	165,081,416 (49.7%)
12 to 17-year-old population	107,032 (22.8%)	82,882 (-)	8,320,395 (-)

References: <https://covidvaccine.mo.gov/data/>, <https://www.kansasvaccine.gov/158/Data>, <https://covid.cdc.gov/covid-data-tracker/#vaccination>

Conclusions

- Among the initial 56 pwCF contacted, the majority agreed to COVID-19 vaccination
- A variety of reasons were given for declining vaccination; most concerning among these were skepticism regarding the pandemic and vaccine necessity and misconceptions about safety and efficacy
- As access to SARS-CoV-2 vaccination is expanded nationally and includes younger children with CF, it will be critical for CF Care Center staff to proactively address issues surrounding vaccination hesitancy