

Alaska Participation in a Vaccine Effectiveness Study of the Pfizer-BioNTech and Moderna COVID-19 Vaccines among Healthcare Personnel, January-March 2021

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Introduction

Health care personnel (HCP) are at increased risk for exposure to SARS-CoV-2, the virus that causes COVID-19, due to their interactions with patients in the healthcare setting in addition to community exposure. COVID-19 mRNA vaccines were distributed to Alaska HCP as initial groups prioritized for vaccination, starting in late December. ANTHC* and SCF* employees on ANMC* campus and YKHC* HCP participated in a national CDC sponsored test-negative design case-control study to evaluate the effectiveness of COVID-19 mRNA vaccines in preventing symptomatic COVID-19 among HCP.

Figure 1: Study HCP recruitment flyer, YKHC.



Methodology

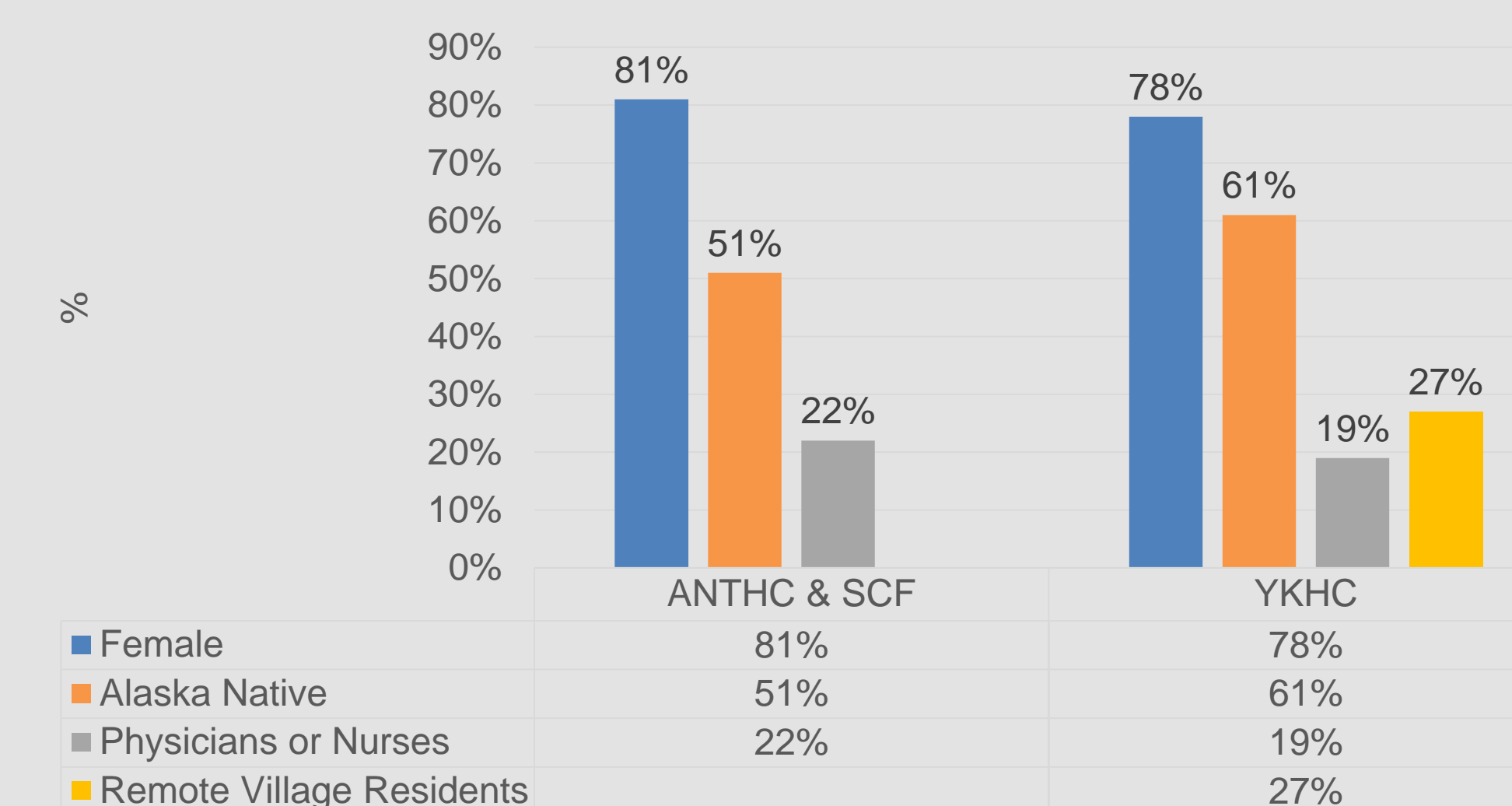
Arctic Investigations Program – CDC approached ANTHC, SCF and YKHC partners in late October 2020 about potential participation in this study. ANTHC, SCF and YKHC leadership conducted accelerated review of a protocol, full tribal approval was obtained, and research staff were trained. ANMC (ANTHC/SCF) and YKHC participation in this 33-site multi-site study was initiated on January 1, 2021. HCP who had been tested for SARS-CoV-2 were eligible to participate. Information on COVID-19 test results, symptoms, underlying conditions, and COVID-19 vaccine receipt were obtained by interview and medical record review. In this test-negative design, HCP who tested positive for SARS-CoV-2 were eligible as cases; three HCPs who tested negative were enrolled as controls for each case.

Results

Figure 2: HCP vaccinated vs. tests returned positive by study week, YKHC.



Figure 3: HCP study participant demographics by site.



As of April 15, 2021, YKHC enrolled 21 cases and 61 controls; ANMC enrolled 14 cases and 41 controls. Among YKHC participants, 27% were from remote villages, 78% female, 61% Alaska Native, 19% physicians or nurses. Seventy-two% of ANMC participants were from Anchorage, 81% female, 51% Alaska Native, 22% physicians or nurses.

Between December 2020 and April 15, 2021, the percentage of fully vaccinated HCP increased from 0% to 70% (YKHC) and 66% (ANMC). The percentage of HCP SARS-CoV-2 tests with positive results decreased from 3.6% to 0% (YKHC) and from 3.4% to 0.4% (ANMC).

Conclusion

ANTHC, SCF and YKHC collaborated with CDC to rapidly approve and implement this time-sensitive study evaluating COVID-19 vaccine effectiveness among HCP using research staff from the 3 organizations. The overall vaccine effectiveness results of this study will be published May 14 in the Morbidity and Mortality Weekly Report (MMWR). These results which included local participants, may help increase acceptance in SARS-CoV-2 vaccine in these populations.

Figure 4: Images of healthcare personnel at ANMC & SCF.



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- *ANMC₂ – Alaska Native Medical Center
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