

Community Engagement Notes for SARs-COV2 HDSS Serological Survey

Title: Surveillance for epidemiologic evaluation of COVID-19 in Kenya (SEECK)

Introduction

As the COVID-19 pandemic evolves, it is important to know the extent to which the public has been exposed to the infection. Knowing the levels of exposure is important for informing decisions on vaccination and other prevention measures such as lockdown and curfews. Before this study, we did not know the proportion of people who had been exposed to COVID-19 in Kenya since no representative population level-study had been conducted. The African Population and Health Research Center (APHRC) worked collaboratively with KEMRI-Wellcome Trust in Kilifi to estimate the proportion of individuals who had previous exposure to COVID-19 as evidenced by presence of antibodies against SARS-CoV-2 in their blood.

Where and when did the study take place?

The study took place in Kilifi, Kisumu and Nairobi Health Demographic Surveillance System (HDSS) from Jan to May 2021 before vaccination against COVID-19 became widely available. In today's discussion we will be talking about findings from the Nairobi sites - Korogocho/Viwandani.

Who were the participants for Nairobi?

- Randomly selected residents of Korogocho/Viwandani across all ages were recruited into the study

What happened to the selected participants?

- Selected participants were visited at home by field interviewers and invited to APHRC site office (Landmark plaza/lunga lunga plaza) to undergo study procedures.
- All participants were interviewed to understand a background of their sociodemographic and clinical characteristics
- 2mls of venous blood was collected from those less than 5 years and 5mls from those above 5 years.

What happened to the samples?

- Collected samples were transported to KEMRI-CGMRC, Kilifi for analysis and tested for the presence of **antibodies** against the SARs-CoV2 virus.

Results

a) SARS-CoV-2 Prevalence

We interviewed and took blood samples from 869 participants. Out of these 336 (38.7 %) were from Korogocho and 533 (61.3%) were from Viwandani community

Nearly two out of every five residents tested positive for SARS-CoV-2 antibodies (38%).

Prevalence was lowest among 0-10 years followed by 20-29 years.

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Viwandani had a higher prevalence overall and by age categories with exception of 40-49 year and 50-59 years.

Both genders demonstrated a high risk of exposure to SARS-CoV-2 infection from both slums (>35%)

b) Perceptions on the risk of acquiring SARS-CoV-2

About 43% of respondents aged 15 years and above indicated their own risk of acquiring COVID-19 was nil or low

Nearly half of all individuals who said that their risk of acquiring COVID-19 was nil had antibodies indicating that they had previously been exposed to the infection

This proportion was even higher among females from Viwandani residents where 7 out of 10 (66.7%) of those who indicated that they had nil chances of contracting COVID-19 indeed had SAR-CoV-2 antibodies

c) Inability to access health services

In general, 12.3% of all respondents indicated that they were not able to access services. This proportion was higher for Korogocho (19.4%) compared to 7.9% in Viwandani.

The prevalence of SARS-CoV-2 among those who had missed health care services due to COVID-19 was 27.1% compared to 39.5% among those who had not missed services.

d) Loss of job/income generating activities

4 out of 10 (40%) of respondents indicated that they or somebody in their household had lost a job or income generating activity in the last six months

A higher proportion was in Viwandani (41.1%) than Korogocho (37.2%).

In Korogocho there was a higher prevalence of SARS-COV-2 antibodies between individuals from households that had a member who lost a job/income generating activities (27.1%) compared to those where there was no loss of job or other income (40.8%)

Key Messages:

- 1) Exposure to SARS-CoV-2 is high in the two slum communities
- 2) Exposure is highest among individuals aged 10 year and older
- 3) Risk perception is poor with a lot of individuals assuming that they are not a risk
- 4) There are some differences by place of residence but not by gender
- 5) Past exposure to SARS-CoV-2 does not mean one is immune. Antibodies wear off and levels might not be protective