

Evaluation of Community-based Delivery and Administration of SARS-CoV-2 Antigen Rapid Tests in Lilongwe and Blantyre districts, Malawi

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- Malawi, COVID-19 testing :
 - Largely limited to facility-based settings, targeting high risk populations including symptomatic patients or contacts of index cases.
 - Remains suboptimal and well under the WHO target of 1 test per 1000 population per week.
 - Limited access to testing centers.
- Transmission of COVID-19 through community gatherings remained a significant challenge to the national COVID-19 response in Malawi.
- To further maximize testing coverage CHAI in collaboration with MOH proposed to implement community testing within highly trafficked market areas using antigen testing.

Overall goal was to **evaluate the effectiveness of community-based delivery and administration of SARS-CoV-2 antigen rapid diagnostic tests in marketplaces** in Malawi.

1. Describe the implementation process and challenges associated with deployment and administration of Ag-RDT.
2. Measure the extent to which Ag-RDT was implemented for surveillance in the marketplace.
3. Assess community health care workers and individual's perspectives on feasibility and acceptability of Ag-RDT.
4. Measure the success of quarantining after being tested in a community setting.

- This was a **cross-sectional study with a mixed-methods design**
- The study targeted testing in two supermarkets and two flea markets each in the two districts of Lilongwe and Blantyre
- **Testing happened for 74 days** (between July and September 2022), and the study estimated number of people accessing each location was expected to be approximately 200 per day.
- Programmatic data was collected prospectively as individuals got tested

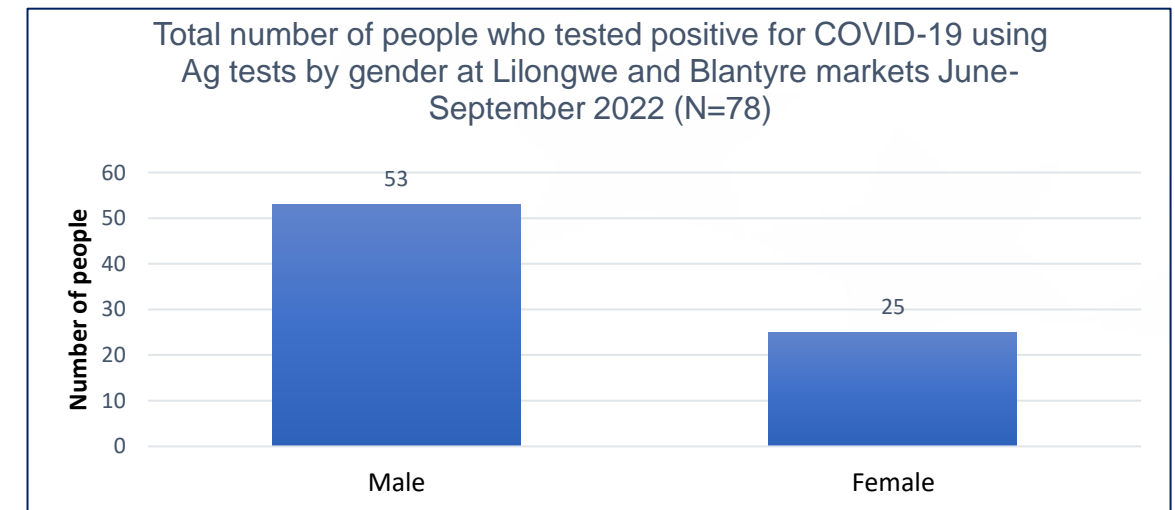
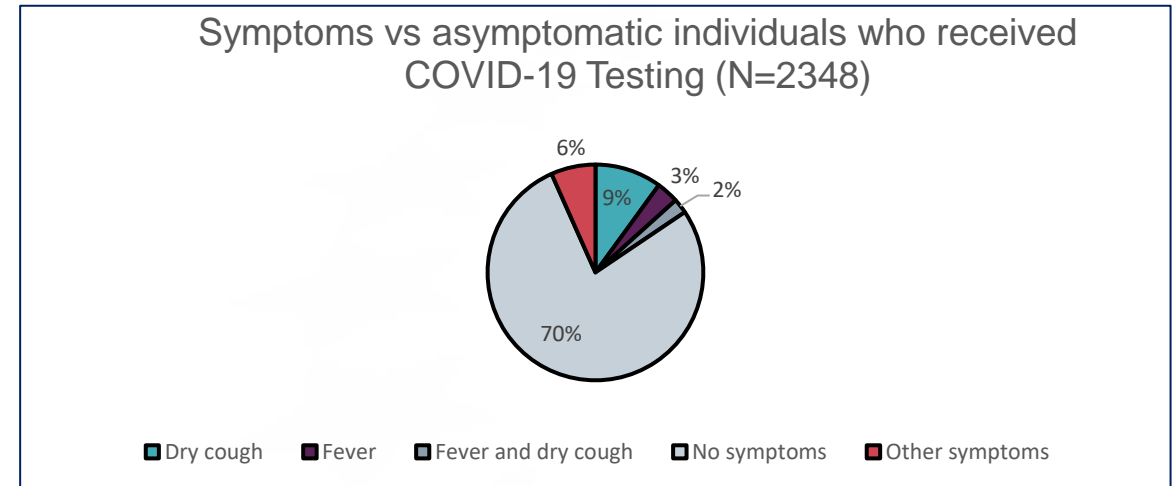
The study had two arms:

- **Clinical evaluation component:** Inclusion criteria to this study arm were:
 - Individual should have accessed the testing site.
 - Aged 18 years and above
 - Individual have received an Ag-RDT.
- **Semi-structured survey component:** This arm included three forms of questionnaires:
 - Healthcare worker questionnaire: inclusion criteria was;
 - Individual questionnaire for those seeking SARS-CoV-2 testing
 - Post Test Follow up survey for individuals who tested positive

Results from patient level clinical data



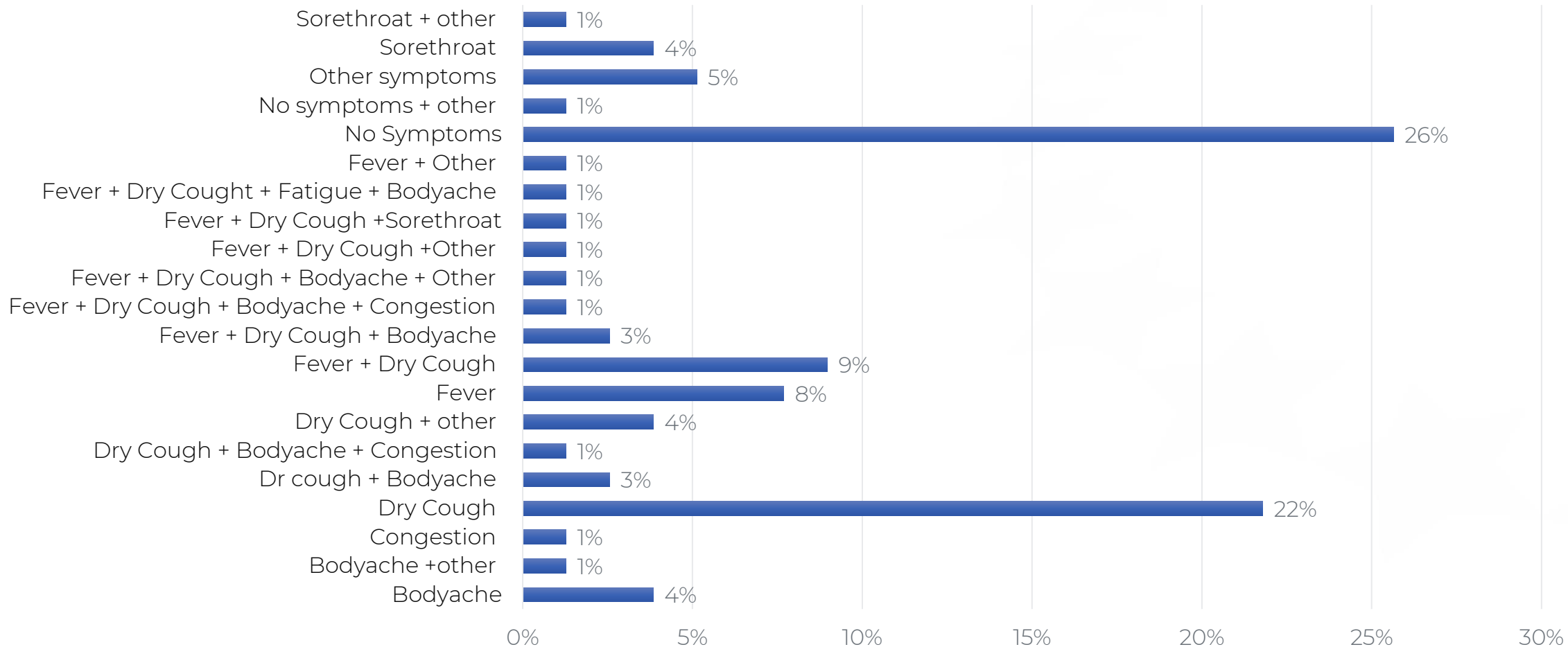
- **2,348 tests were conducted** in the four study markets (1,622 were female representing 69% of the total tests)
- **78 positive cases** (70 index cases and 8 contacts) were reported representing a positivity rate of 3% (68% positive cases were male and 3% were female).
- **70% of the clients that were tested were asymptomatic**
- Of the 30% symptomatic clients, **dry cough was the most common symptom (9%)**, 3% had fever and 2% had both dry cough and fever
- All positive cases were referred to the nearest clinic and recommended to self-isolate for 10 days as laid out in the national guidelines for COVID-19



Results - Self-reported symptoms of positive cases

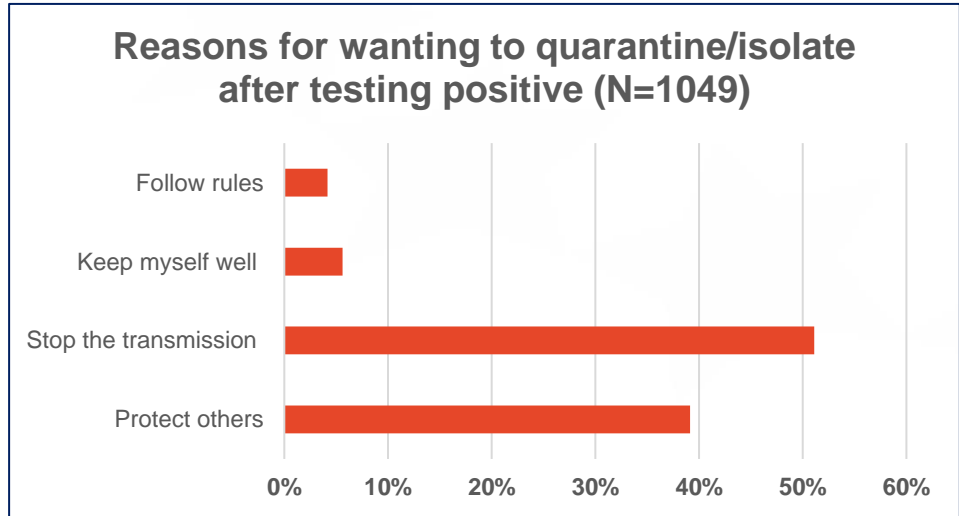
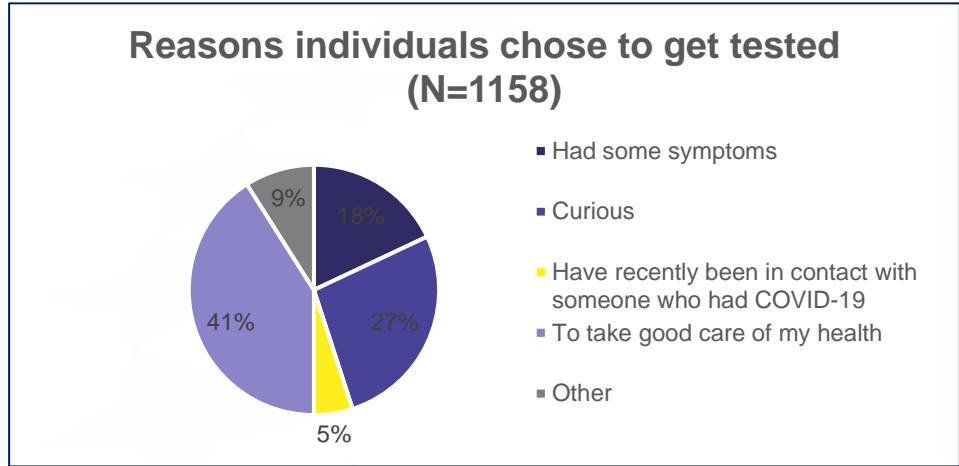


Number of positive cases (N=78)



Results from individual semi-structured survey component

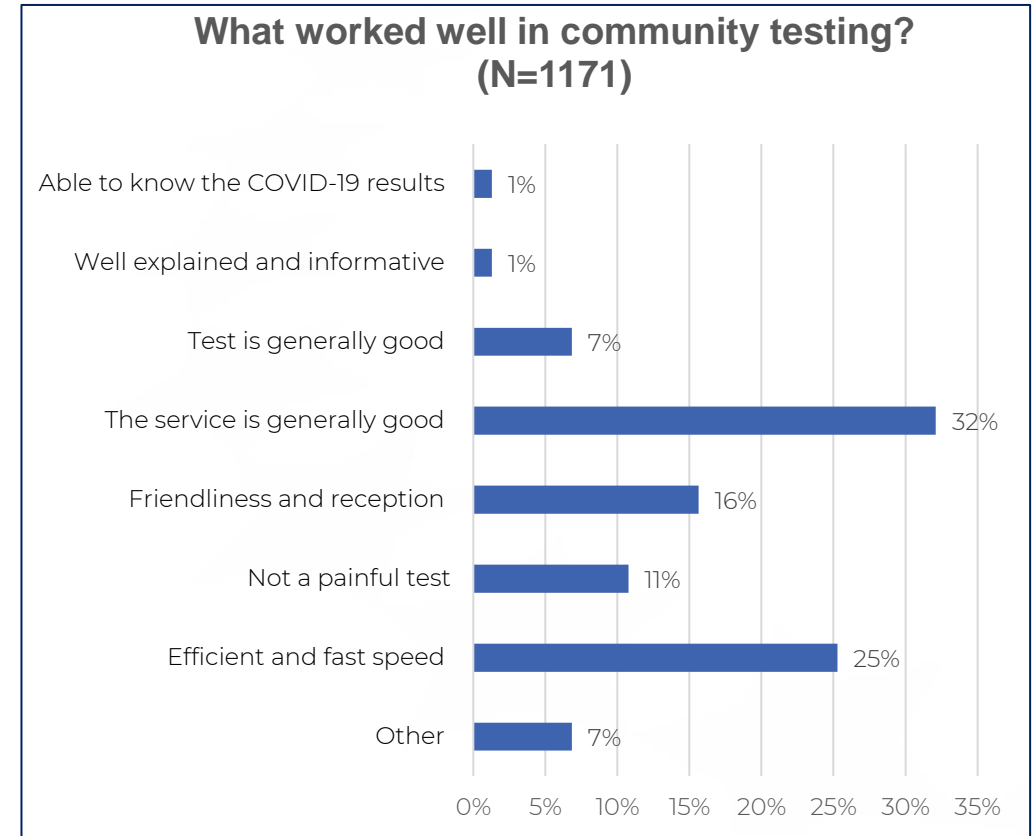
- **1,158 individuals/clients were interviewed** among which 70% were male (30% female) and 4% had tested positive.
- 53% reported to have never been tested for COVID-19.
- For those previously tested, **70% had been tested at a hospital while 5% were repeat testers within the community-based study.**
- **41%** reported that they chose to get tested for COVID-19 because they **wanted to take “good care of their health”**.
- **90%** of the clients reported that they would **likely consider self-isolation** if tested positive for COVID-19.



Results –Individual trust in Antigen test and results



- **93% of survey respondents found the whole testing experience acceptable** citing that it was fast and very time efficient.
- **99% of the clients reported that they trust the COVID-19 testing** that they received in the community setting.
- The main reasons among those who reported not to trust the results were;
 - they have never been found with COVID-19 before,
 - never got tested before,
 - having all symptoms but never being found positive with COVID-19.
- **98% reported that they would consider future testing in a community testing site.**
- Almost all the respondents reported that they would recommend community testing to their family or friends.



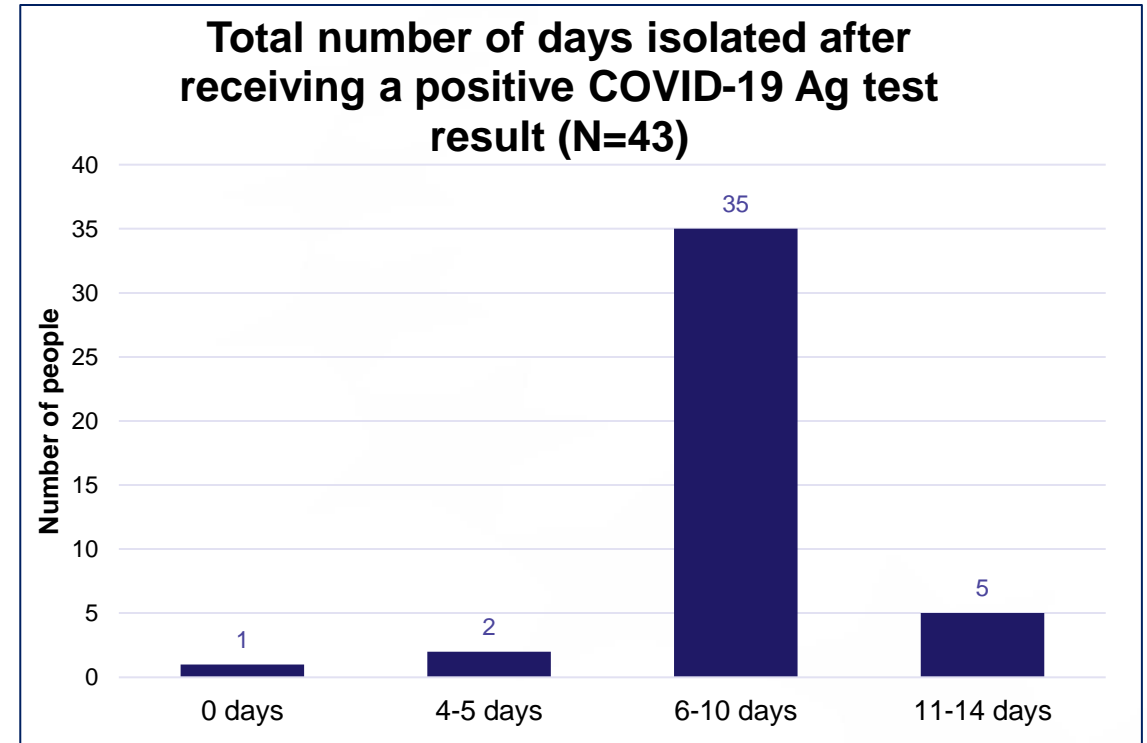
51 HCW interviews were conducted from which 61% were female (39% male).

- Healthcare workers were asked to report what worked well in the community testing sites and the following are some of the responses provided:
 - Publicity using health promotion teams from MOH contributed to increased community awareness and hence good turnout of clients
 - Good organization among the staff.
 - Adequate staffing levels at the community testing sites.
 - No stockouts experienced through the duration of the study
 - The short turn-around time for the tests conducted
- Almost all the healthcare workers reported that there should be increased community awareness and sensitization in order to inform people about community testing at dispel the myths surrounding community testing
- Healthcare workers reported the following factors as limiting the success of community testing:
 - Myths about COVID-19 among community members leading to lower acceptance
 - Lack of awareness among community members on community testing for COVID-19 as people are used to facility-based testing
 - Absence of COVID-19 vaccination services at the testing site as some people would only visit the site just to get a vaccine and would turn back if they see that there was no vaccination service being offered

Results from post test survey



- Out of the 78 positive cases reported in the study, **43 consented to be followed up through a telephone interview**, after 10 days from the date they got tested.
- **67 % of these were male** (33% female)
- 80% of these were from the two testing sites that had an urban characteristic.



- ❖ We found that **administration of COVID-19 testing using the community testing model is feasible and acceptable** to both clients and healthcare workers
- ❖ Community testing in Malawi contributed a significant number to the total national test volumes between the testing period
 - ❖ Total test volumes from community testing contributed to 21% and 11% of the total national antigen tests and total tests (Ag-RDT and PCR) respectively conducted during the study period.
- ❖ It recommended **that MOH should intensify on community sensitization on issues surrounding COVID-19** as many people still hold myths about the pandemic

Acknowledgements



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