Ministry of Health Malaysia

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Diagnosis for all

High acceptability and uptake in a COVID-19 self-testing pilot in manufacturing industries in Kedah, Malaysia

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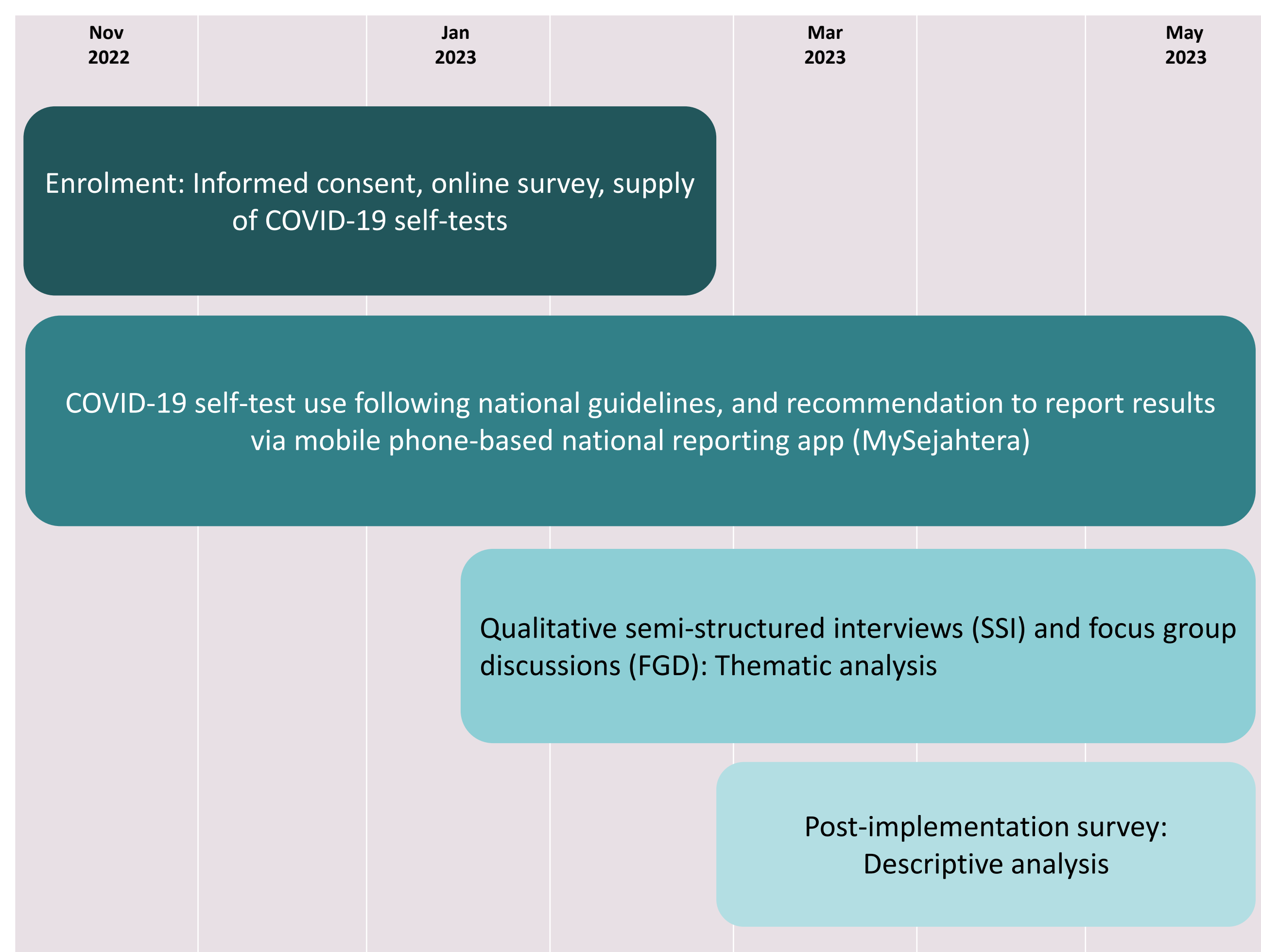
Introduction

Different public health strategies are needed to mitigate the COVID-19 pandemic and to prepare for potential health emergencies in the future. COVID-19 **self-testing** is essential for enabling individuals to self-care, to screen and isolate themselves in a timely manner.

As of 19 July 2022, Malaysia registered 142 COVID-19 self-tests for use. Achieving widespread COVID-19 testing in the community may present challenges. In the state of Kedah, during the pandemic, multigenerational households were hotspots for viral transmission.

This study focuses on five of the areas of feasibility studies, proposed by Bowen et al.: **acceptability, demand, implementation, practicality, and adaptation**. The implementation of a COVID-19 self-testing distribution model to reach multigenerational families in the community through the active workforce was considered to be a feasible and acceptable approach to guarantee safe spaces.

Methods

Mixed-methods implementation pilot study of a COVID-19 self-testing distribution model, with self-tests delivered via workplaces and secondary distribution to households.

Nov 2022	Jan 2023	Mar 2023	May 2023

Enrolment: Informed consent, online survey, supply of COVID-19 self-tests

COVID-19 self-test use following national guidelines, and recommendation to report results via mobile phone-based national reporting app (MySejahtera)

Qualitative semi-structured interviews (SSI) and focus group discussions (FGD): Thematic analysis

Post-implementation survey: Descriptive analysis

Results

A total of 1,768 participants from four industrial manufacturing companies enrolled in the pilot study (Figure 1). Most of them were **female** (58%), **Malaysian** (97%), had **secondary education** (51%) and were **employed full time** (98%). Almost **80% of participants had received the COVID-19 booster** dose. Regarding COVID-19 diagnosis, **56% of participants, and 67% of their household members, had previously been diagnosed with COVID-19**.

Total employees: 2,959

Enrolment: 1,768 (60%)

Completed enrolment survey: 1,763 (99%)

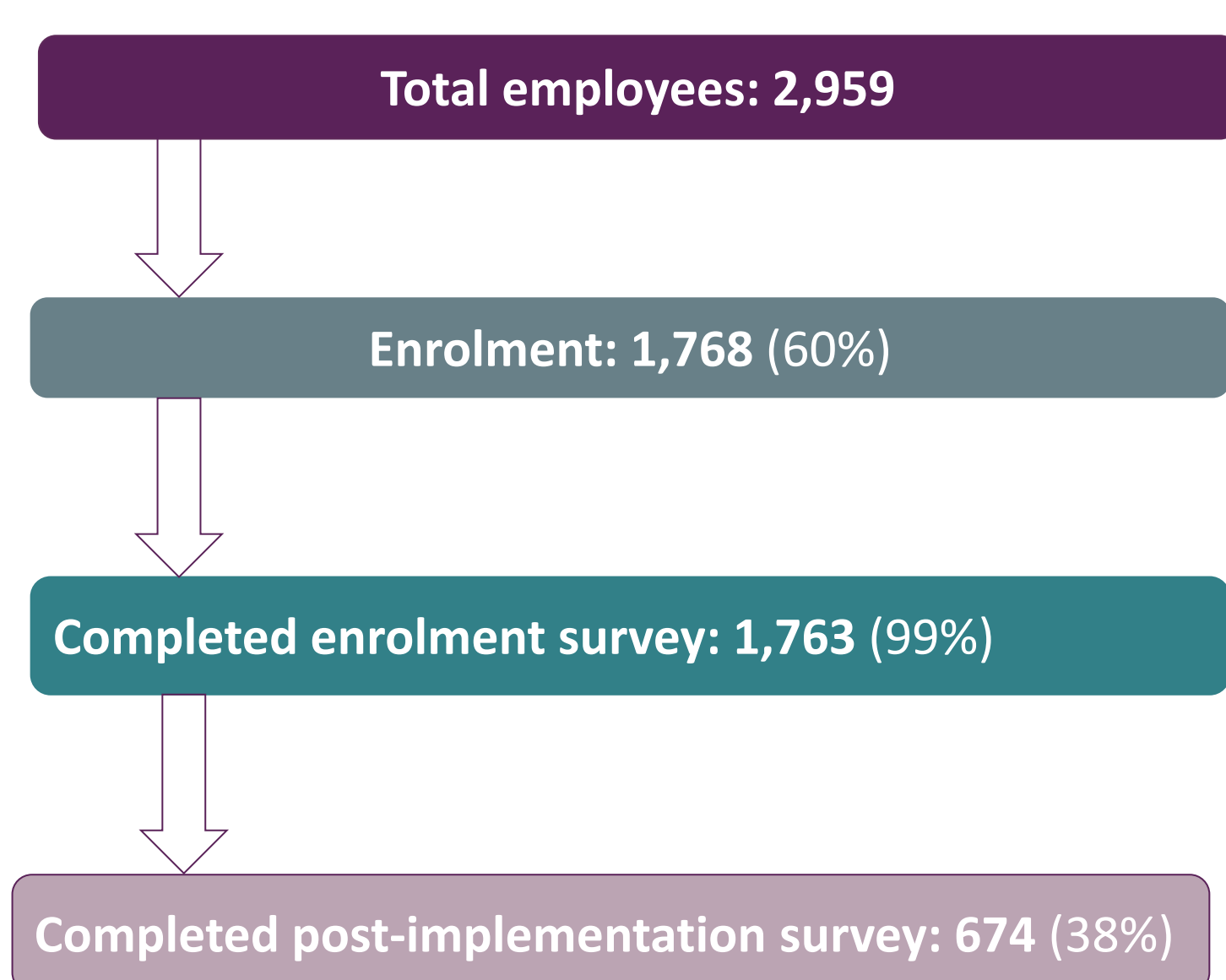Completed post-implementation survey: 674 (38%)

Figure 1. Flow diagram of the analysis of study participants

Of the 674 participants (38%) who completed the survey at the end of the study, **more than half** of participants (58.8%) and household members (55.9%) reported they had **used a COVID-19 self-test**. In total, **34 participants and 344 household members** reported they **self-tested positive** during the pilot study.

Since enrolment, participants had high willingness to self-test for COVID-19 (77%) (Table 1). Thus, there was only a slight increase compared to end-of-study levels (80%). Approximately 40% of participants at both timepoints knew how to use the nasal swab correctly.

Table 1. Baseline perceptions and satisfaction around COVID-19 self-testing.

Aspect	Baseline data n/N (%)
Worried about COVID-19	
Strongly disagree	70/1763 (4.0)
Disagree	97/1763 (5.5)
Neutral	469/1763 (26.6)
Agree	431/1763 (24.4)
Strongly agree	686/1763 (38.9)
Undisclosed	10/1763 (0.6)
Willing to perform a self-test	
Strongly disagree	66/1763 (3.7)
Disagree	45/1763 (2.6)
Neutral	284/1763 (16.1)
Agree	441/1763 (25.0)
Strongly agree	918/1763 (52.1)
Undisclosed	9/1763 (0.5)
Willing to report a self-test result	
Strongly disagree	45/1763 (2.6)
Disagree	42/1763 (2.4)
Neutral	261/1763 (14.8)
Agree	387/1763 (22.0)
Strongly agree	1,021/1763 (57.9)
Undisclosed	7/1763 (0.4)
Understand the benefits of self-testing	
Strongly disagree	43/1899 (2.3)
Disagree	36/1899 (1.9)
Neutral	275/1899 (14.5)
Agree	421/1899 (22.2)
Strongly agree	1124/1899 (59.2)

A total of 44 SSI, and 4 FGD with 14 participants, were performed. Participants trusted COVID-19 self-tests, and most of them accepted the use of the nasal swab as quoted: *"Nasal tests were more accurate, and they were more confident with the result"* (female, 50, senior executive).

Participants explained that the main reason for not reporting their self-test result via MySejahtera was that they tested negative. The elements of the self-test model that were valued the most among participants were: **free self-tests for them and their household members, care packages, and continuous support provided during implementation.**

Conclusions

The acceptability and uptake of COVID-19 self-tests were high and secondary distribution led to the detection of more than 300 COVID-19 cases in the community. Therefore, workplace-based self-testing programs have the potential to enhance access to testing in the community and contribute to the mitigation of future pandemics.