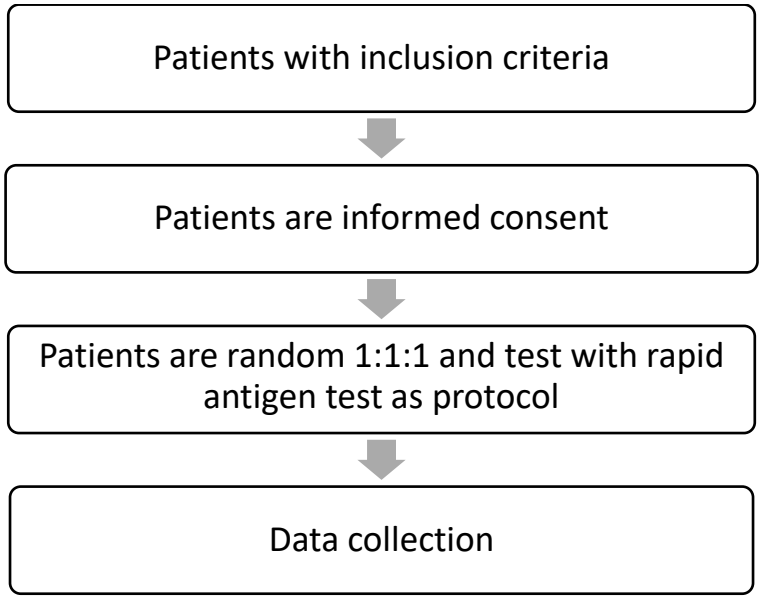
Study Protocol and Statistical Analysis Plan



The cluster randomized controlled trial will be conducted in Bangkok communities supported by Thaicare. A total number of 30,000 participants will be enrolled from 10 areas. (3,000 from each area). Participants from each area will be divided into three groups according to the accommodation type. The ratio between intervention group 1 to intervention group 2 and control group will be 1:1:1. The characteristics of population in each stratum will be reproduced as closely as possible. Cluster randomization by software will be used to blind the order of randomization. Demographic data (i.e., age, gender, weight, height, body mass index), concomitant diseases, income, type of accommodation, vaccination profile) of the control and intervention groups will be collected. The collection of data and the obtaining of the consent will be conducted by Socialgiver volunteers. There will be 2 intervention groups. Group 1 will receive 4 rapid antigen kits at the beginning of the study and will be asked to conduct a weekly self-test for 3 weeks. Group 2 will receive 7 rapid antigen kits at the beginning of the study and will be asked to conduct a twice-weekly self-test for 3 weeks (total of 6 tests). This is illustrated in Fig 1.

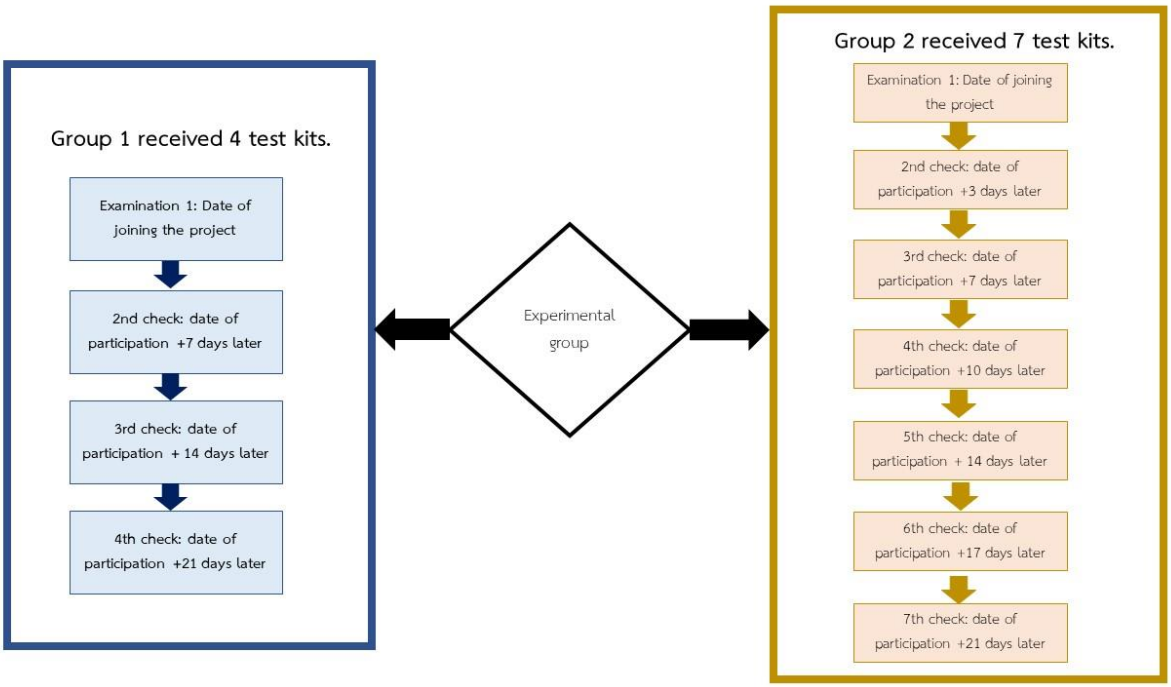


Fig 1. Self-tests schedule of each group.

Categorical variables will be presented in percent and frequency and analyzed by Chi square. Continuous variables will be presented in medians and interquartile range. Mixed effect logistic regression and incidence rate ratio will be used to model the difference in COVID-19 infection between the intervention and control groups, and between the two intervention groups. Statistically significant will be achieved at < 0.05 (P-values <0.05). Statistical Package for Social Sciences (SPSS) software (version 27, SPSS, Inc, Chicago, IL, USA) will be used.