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A community prevalence study to measure the level of under-detection of COVID-19 on Efate Island, Vanuatu

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Abstract

Background: COVID-19 is a notifiable condition in Vanuatu whereby medical officers must report all newly detected cases of COVID-19 to health authorities. On 4/3/2022, Vanuatu received its first locally acquired COVID-19 on Efate Island, and there were >2000 cases detected and reported to the Vanuatu Ministry of Health's Surveillance Unit between 3/4/2022-7/3/2022. It was recognized that the true number of cases detected and notified were likely to be under-estimated. The purpose of this study was to estimate the level of COVID-19 under-detection on Efate Island during the first month of community transmission to support surveillance activities.

Methods: We conducted a cross-sectional SARS-CoV-2 prevalence study in two geographic administrative areas in the capital (Port Vila, Efate) between 9/4/2022 and 23/4/2022. All residents in the geographic areas were eligible and invited to participate. Trained nurses and public health teams conducted a demographic and behavioural interview and collected nasal specimen. Specimens were tested by PCR. Data were recorded in a Google Sheets database.

Results: A total of 251 people from 57 households participated in the study from a total of 363 eligible people (participation rate 69%). Among the 251 participants, the COVID-19 status was known for 187 (75%) participants and 104 participants (56%) were found to be COVID-19 positive. Among these cases, only 12% had been previously notified to the surveillance unit. A total of 84 participants that were COVID-19 positive (81% of all positive) had symptoms among which only 31% (37% of participants with symptoms) had been tested

Discussion: Within the first few weeks of community transmission, more than half of participants in the selected areas had evidence of COVID-19 infection however most SARS-CoV-2 infections went undetected. The number of cases in Efate is estimated to be 8-11 times higher than what is included in official case numbers.