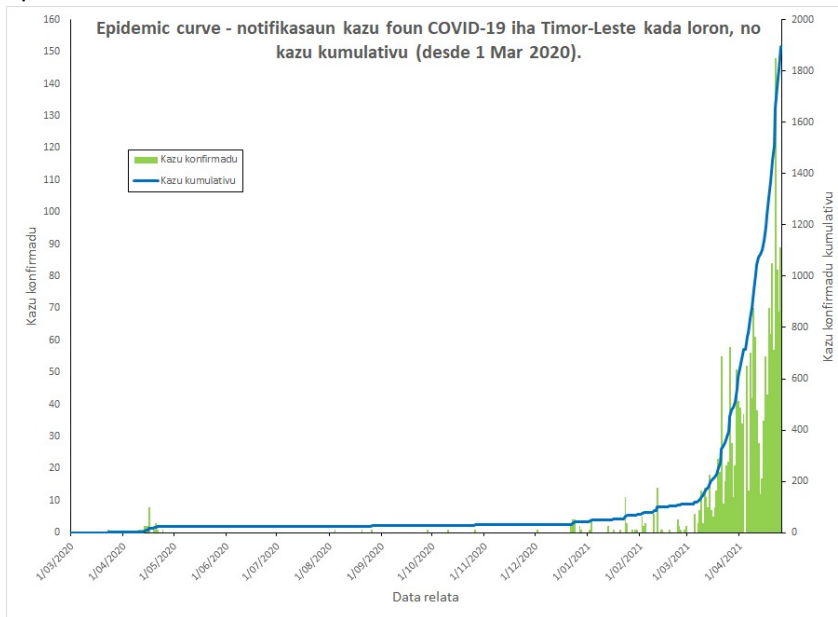


## COVID-19 in Timor-Leste

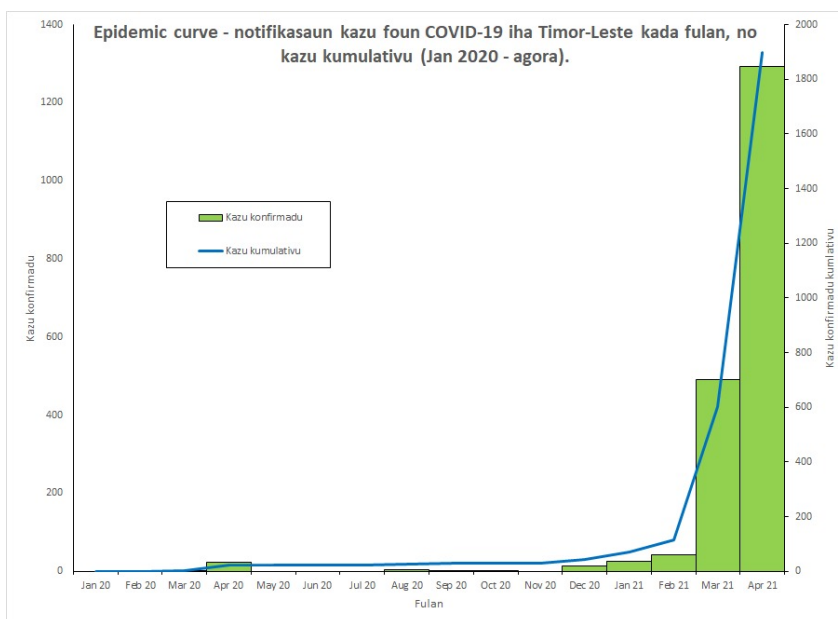
### Epidemiological Brief Nº1: 19 April – 25 April, 2021

A regular brief edited by: (1) Pilar 3 of the Ministry of Health (as part of the Task Force for the Prevention and Mitigation of Covid-19 Outbreak, Integrated Centre for Crisis Management, Situation Room), (2) Instituto Nacional de Saúde, (3) WHO, (4) AusMAT, (5) Menzies School of Health Research.

#### 1. Epidemic curve

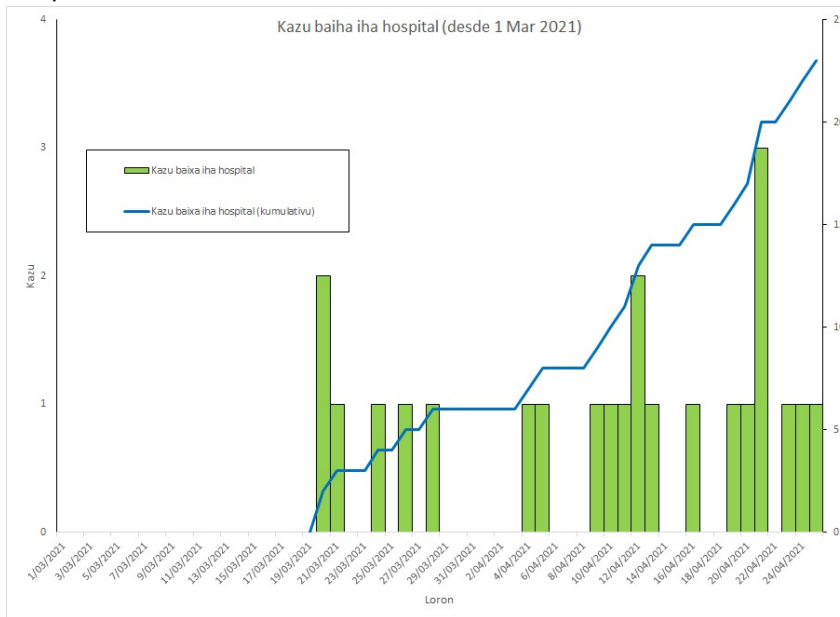


The epidemic curve shows the total case numbers for each day, in the green bars. The blue line shows the cumulative total case numbers, which have risen now to 1,897 since the beginning of the global pandemic (as at 25 April, 2021). The steep rise in the curve shows that the total case numbers are rapidly increasing, as transmission continues within the community.

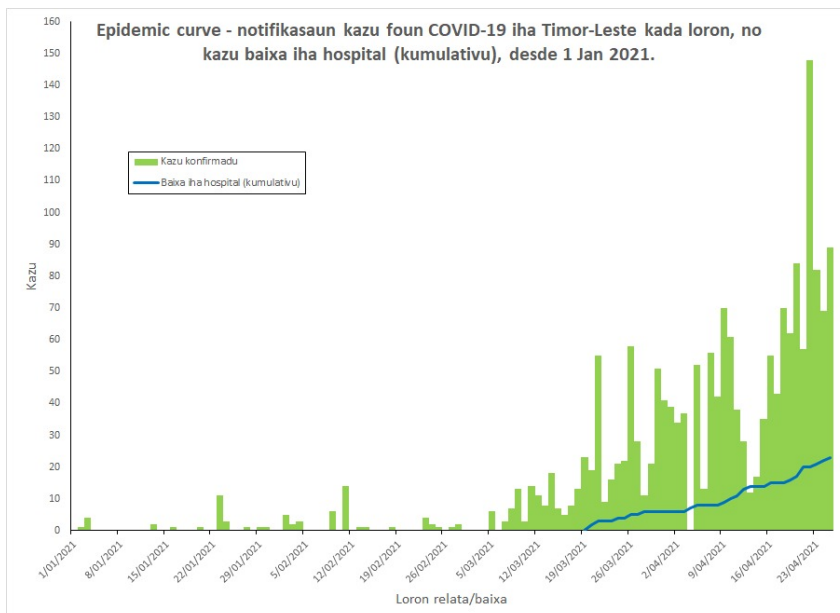


The epidemic curve can also be shown with the total number of cases per month. The steep increase in March and April is due to transmission within Timor-Leste.

2. Hospitalisations

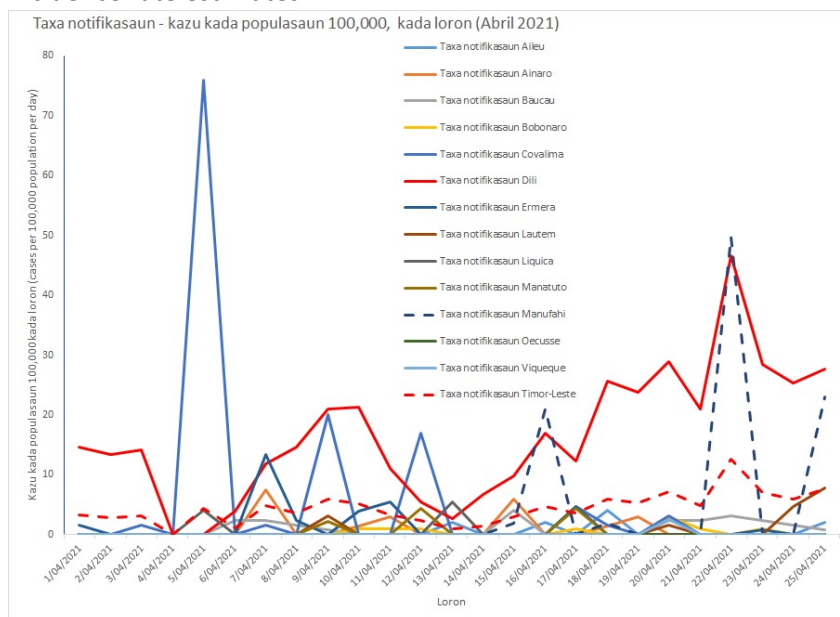


For the first 12 months of the pandemic, all cases were diagnosed in quarantine and all patients had mild or asymptomatic infection. They were isolated to protect against transmission, but none required hospitalisation. Since 20 March 2021, there have been 23 people with COVID-19 who have required hospitalisation. This graph shows the cases that have needed hospitalisation since March 2021 in green bars. The blue line shows the cumulative number of people who have needed hospitalisation.



As case numbers increase, the number of people who are sick and require hospitalisation will also increase. Hospitalisation rates usually follow after increasing case numbers. This graph shows the hospitalisation numbers with a blue line, starting to increase, after the case numbers started to rise in March 2021. Mortality will also increase. There have been three deaths associated with COVID-19 in Timor-Leste so far.

### 3. Incidence rate estimates



The incident rate measures the number of confirmed cases in a population, per day, and is usually measured as cases per 100,000 people per day. This graph shows that the notification rate (or incident rate) changes from one day to the next, but is trending up. This is most obviously seen for Dili, which is represented by the solid red line. The average daily notification rate for Dili over the past 7 days (19 April – 25 April, 2021) is 28.8 cases per 100,000 population per day.

### 4. Growth rate and basic reproduction number

The daily growth factor in case numbers is approximately 1.05. This results in a doubling time of approximately 14 days. Recent data with sharp increase in prevalence estimates, suggest the doubling time may have shortened to 8 days. Based on these estimate, the basic reproduction number ( $R$ -naught) is likely to be between 1.6 and 2.4 in Timor-Leste. This means that for every person who has COVID-19, another two people will be infected within 10 days. This leads to exponential growth in case numbers, unless public health measures are enforced that limit transmission.

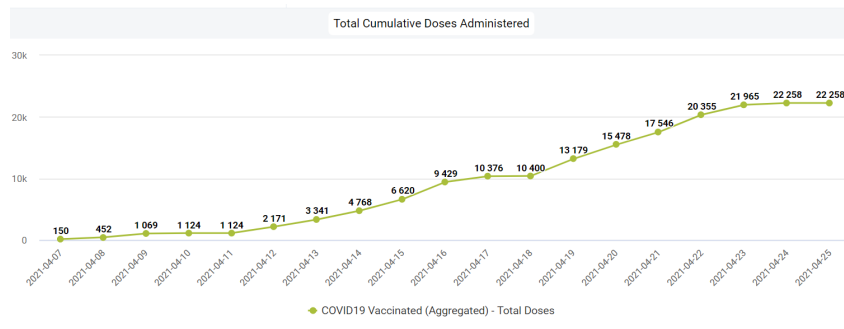
### 5. Prevalence estimates

The prevalence of COVID-19 in Dili can be estimated, based on the proportion of people who test positive for COVID-19 when they get a COVID-19 PCR test before travelling to leave the sanitary fence. In the seven days from the 18 April – 24 April 2021, there were 3,311 tested for this purpose; 271 (8.2%) were positive. This can be used to estimate prevalence, and a calculation of 95% confidence intervals, suggests the current prevalence of COVID-19 in Dili is between 7.3% and 9.2%.

### 6. Undetected case numbers

Based on an estimated population of 300,000 in Dili, and the lower estimate of prevalence, it is estimated that there are at least 21,900 people in Dili who have COVID-19 at the moment. This suggests there are at least 20,000 people with undiagnosed COVID-19, who are at risk of spreading the infection to others in the community.

## 7. Vaccination update



As of 25 April 2021, 22,258 first doses of AstraZeneca have been given, predominantly to frontline workers in all 13 municipalities of Timor-Leste. A total of 7,940 healthcare workers have received their first dose.

## 8. Predictions

If the growth in daily notifications of COVID-19 continues at the current rate, we would expect to see close to 2,000 new cases of COVID-19 diagnosed in the next two weeks, associated with increasing hospitalisations, and deaths.

## 9. Recommendations

Transmission rate can be reduced by effective public health and social measures, including the use of masks, hand washing and physical distancing. Lockdown measures which limit physical interactions, travel and mass gatherings, have been shown to be effective in many countries around the world. During lockdown, people typically are required to stay at home unless they are leaving for essential work (like frontline health workers), essential shopping (like for food), or to access health care. Lockdowns can reduce the basic reproduction number to less than 1.0, which can lead to a reduction in daily case numbers, and flattening or turning of the curve.

Strong and clear public messaging is needed, to encourage the community to follow public health directives, respect health workers working on the front line, and to limit physical interaction to essential interactions with immediate household groups.

In addition, ongoing vaccine rollout is crucial, to provide protection against COVID-19 infection and especially against severe disease and death.

Target the vaccination of vulnerable groups in TL who are not frontline, commencing with elderly and those with underlying health conditions.

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