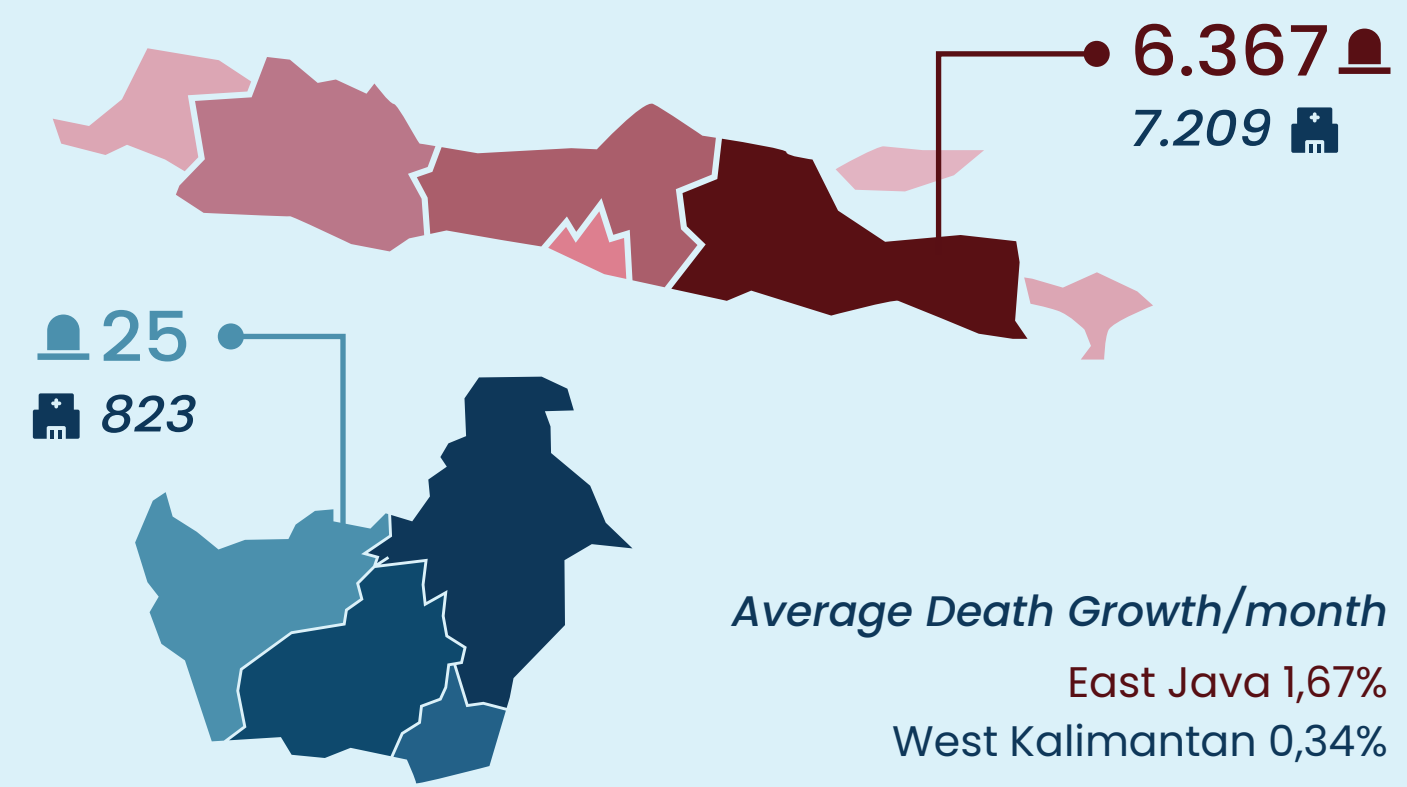


COVID-19 Death Growth & Number of Healthcare Facilities in Indonesia

(The highest and lowest total deaths by Province each year)

Total Deaths
 Total Healthcare Fac.

2020



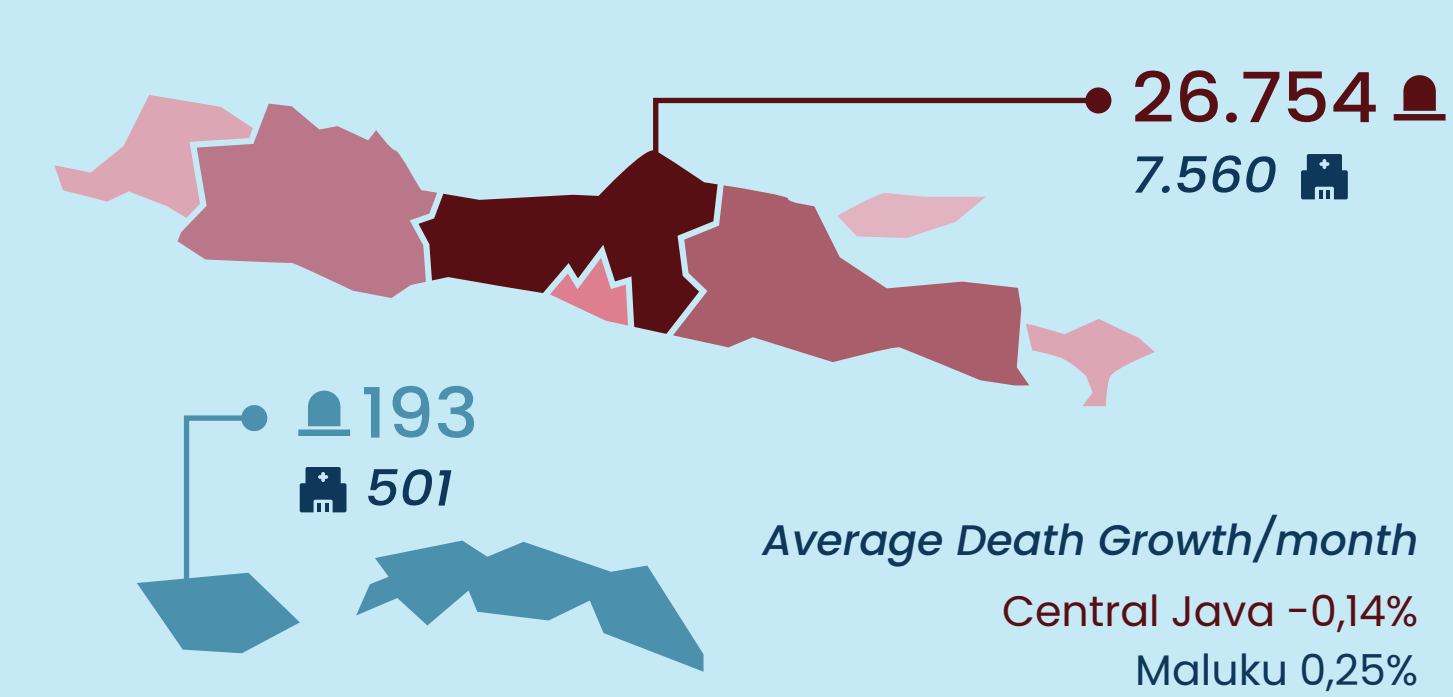
- March 2nd First Confirmed Case
- April 10th PSBB started from Jakarta
- December 6th First Vaccine Arrived

There is a **strong positive correlation** ($r=0,5599$) between COVID-19 death growth with the number of healthcare facilities in 34 provinces. It means that the higher growth death occurs in the provinces that have a higher number of healthcare facilities, and vice versa.

However, from these results, it cannot be obtained that the death growth is caused by the high number of healthcare facilities, because the correlation between these two variables is not a causal relationship.

We suspect that there is another variable (x) that becomes a confounding variable that affects the second variable studied. In another study, it was also explained that the low number of healthcare facilities in an area could indicate a lack of recording/diagnosis of COVID-19 victims.

2021



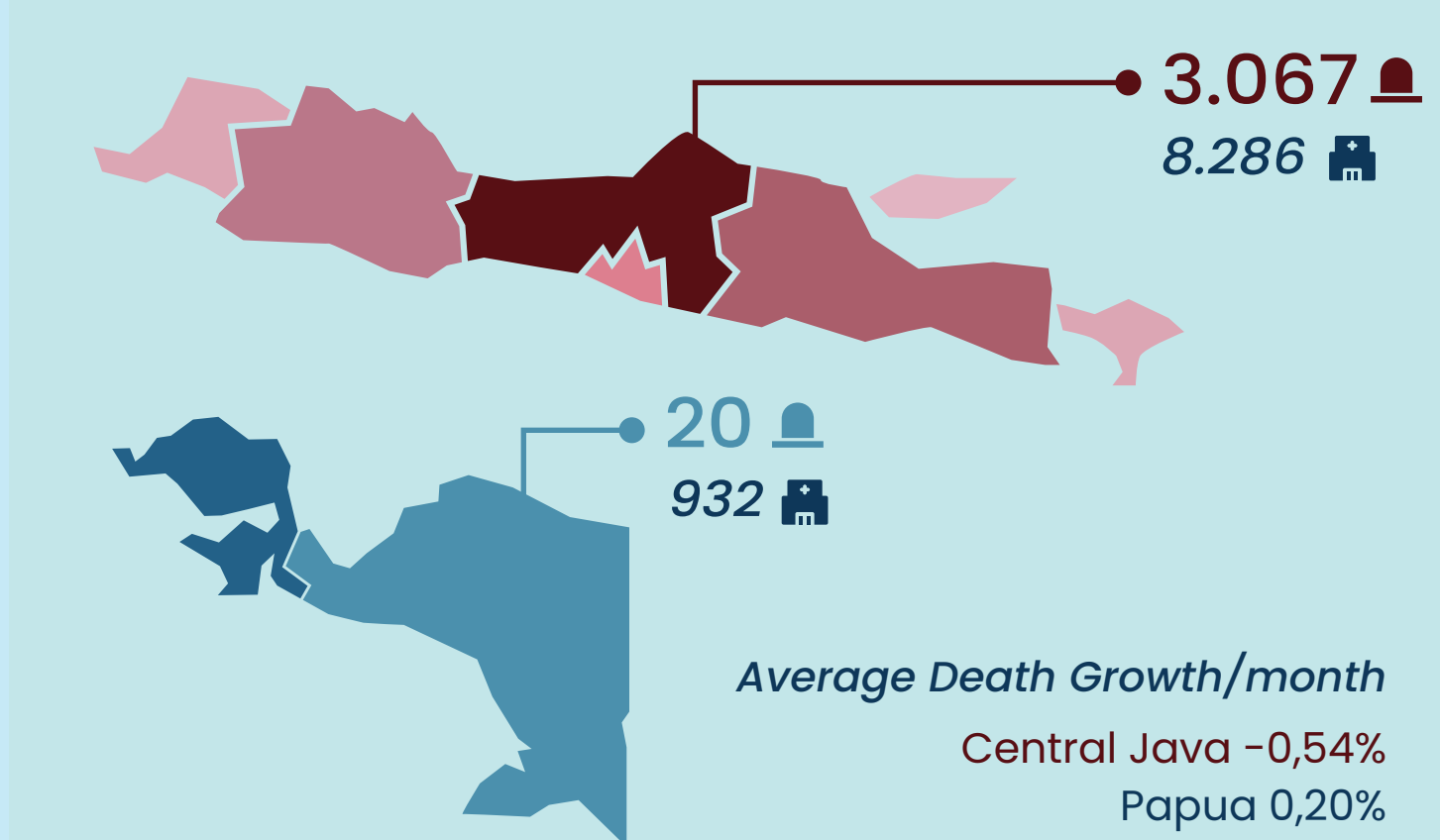
- January 1st Vaccine Program
- May 3rd First Confirmed Delta Variant
- July 3rd PPKM
- November 27th First Confirmed Omicron Variant

There is a **moderate negative correlation** ($r=-0,3602$), which means the higher death growth occurs in the provinces that have a lower number of healthcare facilities, and vice versa.

Although active cases in the middle of the year were not under control, in the same year there was a vaccination program that helped flatten the death curve.

This indicates that the vaccination program in provinces with a high number of healthcare facilities has been effective in suppressing the death growth.

2022 (until September)



- January 12th Booster Vaccine Program
- October 21st First Confirmed XBB Variant

A p-value of more than 0.05 ($p\text{-value}=0,3190$) indicates that there is **no correlation** between the number of healthcare facilities and the death growth in 2022.

Policy Recommendations

- Government:
Distribute evenly healthcare facilities which include: Infrastructure, Health Programs, Health Workers, and Hospital Beds, based on the ratio of the population of each province.
- Next Research:
Recommends further research that focuses on other supporting variables (Ratio of Health Facilities to Population, Case Fatality Rate, etc.)

