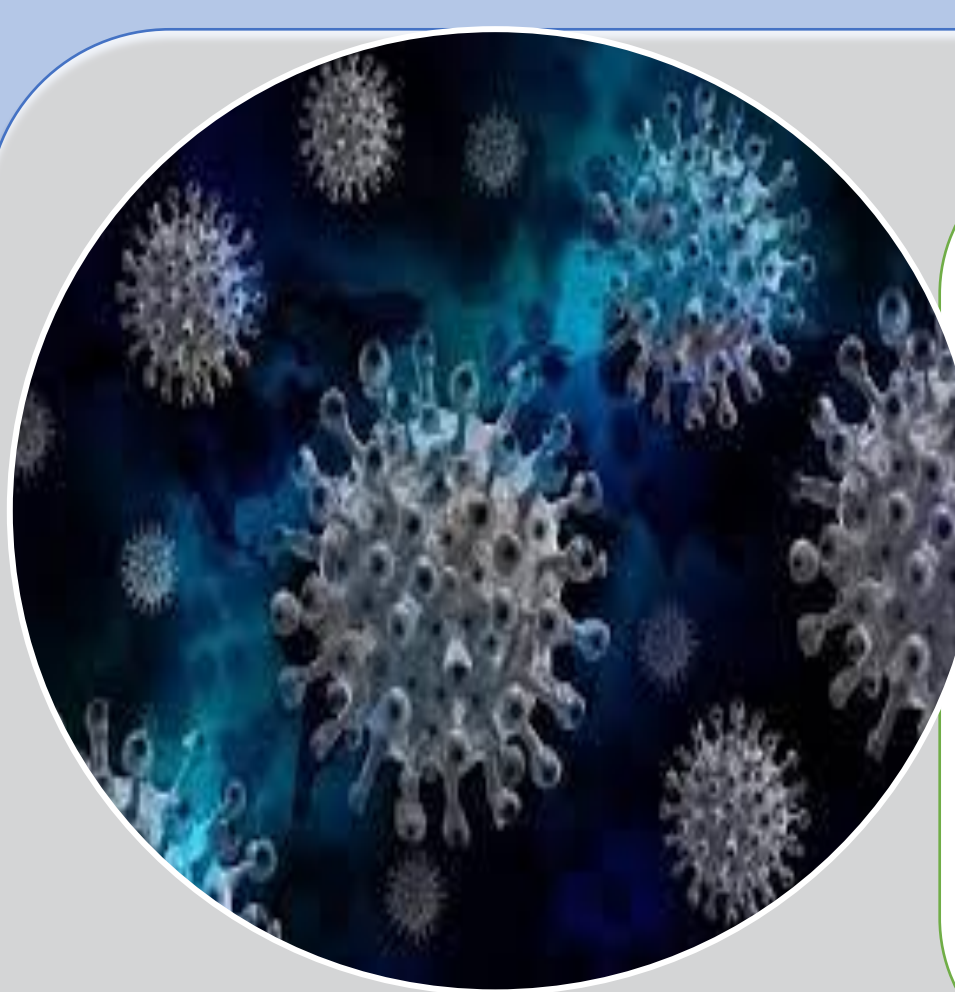# EPIDEMIOLOGICAL AND CLINICAL FEATURES OF CORONAVIRUS (COVID-19) PATIENTS IN THE SOUTHERN REGION OF MALAYSIA

Mohamad Nasri Mohamad Isa[1], Khairul Anuar Abdullah[1], Zulraini Jusof[1], Ruzita Mustaffa[1], Rusdi Abdul Rahman[1]
[1]Melaka State Health Department, Melaka, Malaysia

INTRODUCTION

❑ An enormous worldwide disease outbreak known as Coronavirus disease (Covid-19) is being brought on by the SARS-CoV-2 virus, which was first identified in Wuhan, China, in December 2019.

❑ About 45,000 fatalities and over 10 million new COVID-19 cases were recorded globally until 31st March 2022.

❑ Similarly, Covid-19 infection in Malaysia has been alarmingly spreading across the country, with recorded cumulative cases totaling over 4 million and over 30,000 fatalities until 31st March 2022 (1).

❑ Given the number of COVID-19 cases, analyzing the sociodemographic and clinical features of COVID-19 cases is crucial to improve our understanding of the disease. By doing so, we can better manage and prevent the spread of COVID-19.

❑ This study aimed to determine the epidemiological characteristic COVID-19 infection in Melaka from 1st March 2020 to 31st March 2022.

METHODOLOGY

❑ This is a cross-sectional study involving all individuals in Melaka state with confirmed positive laboratory reverse transcription polymerase chain reaction (RT-PCR) Test, Rapid Molecular Test, Rapid Test Antigen (RTK-Ag), or Rapid Self-Test and notified to Melaka State Health Department from 1st March 2020 until 31st March 2022.

❑ The sources of the data include SIMKA Outbreak system (online database for Covid-19 test), mySejahtera data, e-COVID system or data from Health District Offices in Melaka.

RESULTS

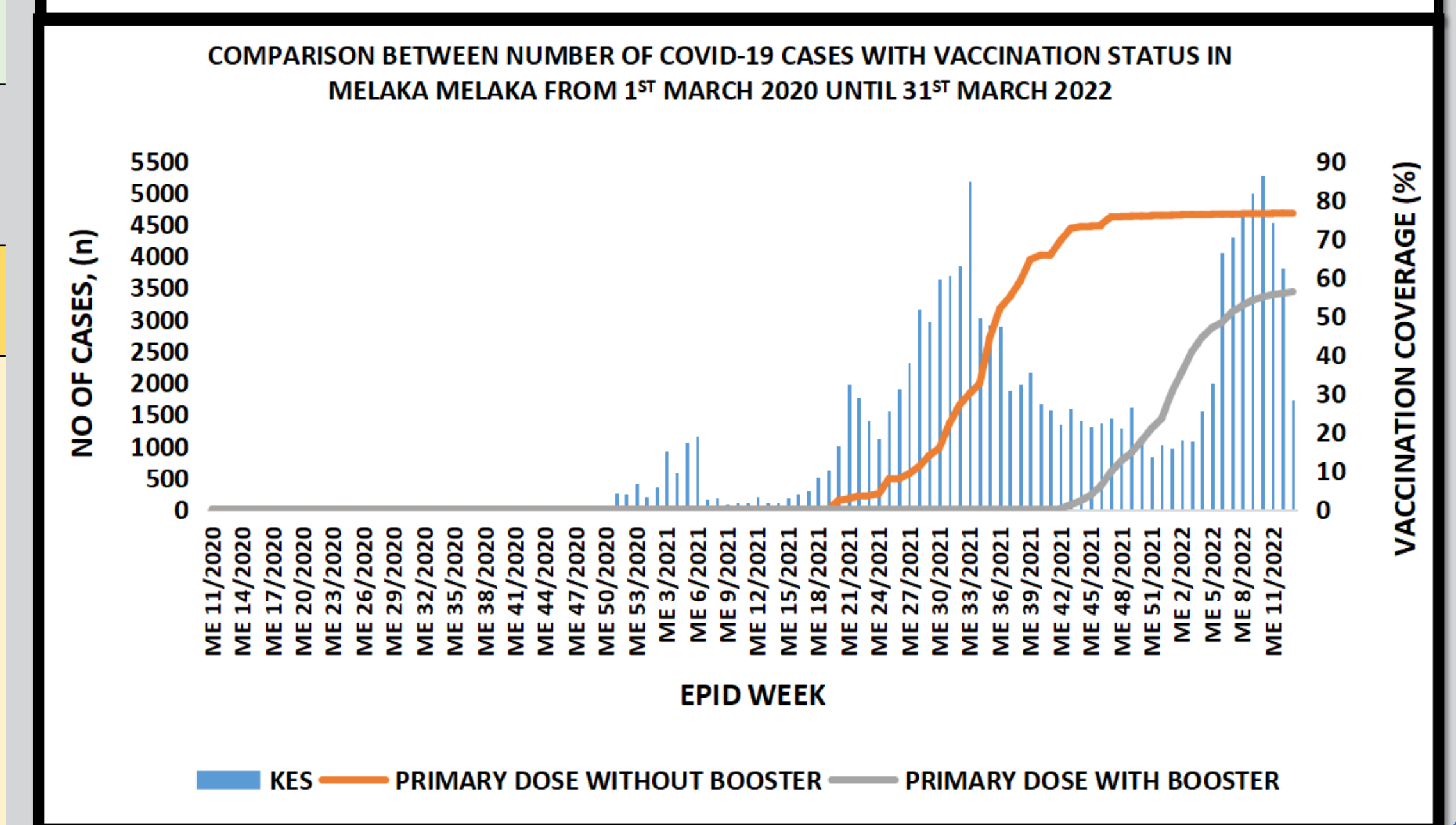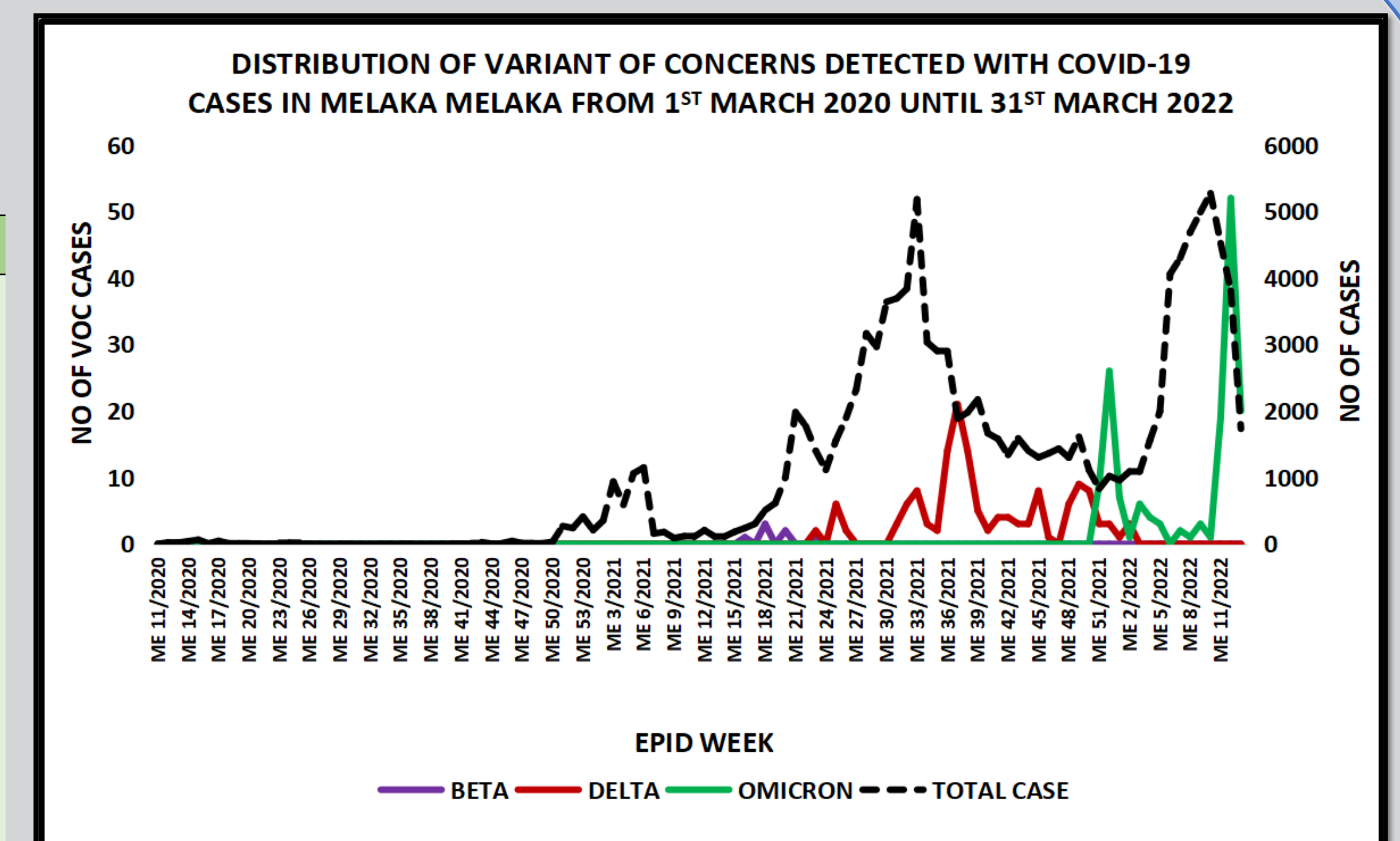Table 1: Sociodemographic characteristic of Melaka COVID-19 cases from 1st March 2020 until 31st March 2022.

Characteristics	Frequency (n)	Percentage (%)
District		
Alor Gajah	32898	28.2
Jasin	21531	18.5
Melaka Tengah	62092	53.3
Age		
Paediatric (0 - 11) years	16143	13.9
Adolescent (12 - 17) years	7255	6.2
Young Adult (18-40) years	62024	53.2
Adult (41 - 60) years	22130	19.0
Elderly (> 60) years	8969	7.7
Gender		
Male	64325	55.2
Female	52196	44.8
Citizenship		
Malaysian	101894	87.4
Non-Malaysian	14627	12.6
Ethnicity		
Malay	86103	73.9
Indian	5796	5.0
Chinese	9252	7.9
Others	15370	13.2

Table 2 : Distribution of types of comorbidity among Melaka COVID-19 cases from 1st March 2020 until 31st March 2022.

Comorbidity	No of cases (n)	Percentage (%)
Diabetes mellitus	6720	5.8
Hypertension	5025	4.3
Lung diseases	3226	2.8
Other diseases	1222	1.1
Cardiovascular disesase	556	0.5
Hyperlipidaemia	424	0.4
Obesity	420	0.4
CNS diseases	247	0.2
Cancer	148	0.1
Renal disease	127	0.1

Table 3: Types of clusters involving COVID-19 cases in Melaka from from 1st March 2020 until 31st March 2022

Type of Cluster	No of Clusters (n)	Percentage (%)
Factory	89	38.4
Community	36	15.5
Workplace	36	15.5
Education Institution	30	12.9
Prison / Detention Centre	13	5.6
High Risk Group	11	4.7
Religious	10	4.3
Construction Site	7	3.0

DISTRIBUTION OF VARIANT OF CONCERNS DETECTED WITH COVID-19 CASES IN MELAKA MELAKA FROM 1ST MARCH 2020 UNTIL 31ST MARCH 2022

COMPARISON BETWEEN NUMBER OF COVID-19 CASES WITH VACCINATION STATUS IN MELAKA MELAKA FROM 1ST MARCH 2020 UNTIL 31ST MARCH 2022

DISCUSSIONS

❑ A total of 116,521 COVID-19 positive cases with 1,097 deaths were recorded. The mean (± SD) for age was 31.7 (± 17.8). Majority of cases were from Melaka Tengah District (53.3%), were male (55.2%), and aged between 18 to 40 years (53.2%)

❑ During the study period, our borders remained closed to other countries, resulting in local infections accounting for 95.8% of the cases.

❑ Diabetes mellitus (5.8 %) and hypertension (4.3 %) were the most common comorbidity seen and our findings were similar to multiple studies in Malaysia (2,3).

❑ Majority of the clusters were involving factory workers. However, during the second year of the pandemic in Melaka, workplaces clusters and educational institutions clusters started to increase as during our National Recovery Plan, more businesses, workplaces and schools just started resuming their operations.

❑ In 2021, the Delta variant caused a spike in COVID-19 cases and deaths, however, our vaccination programs have temporarily lowered case numbers, but the emergence of the Omicron variant later on caused another significant increase in cases.

CONCLUSIONS

❑ The trend of Melaka's COVID-19 incidence has changed due to policy shifts, new variants, and vaccination coverage.

❑ Strict enforcement and awareness campaigns have helped control infections, but community involvement is crucial to make the disease endemic.

❑ Educating our citizens about infection control and keep analyzing epidemiological changes of the disease can aid policymakers in planning public health measures for better prevention.

ACKNOWLEDGEMENT

REFERENCES

1. Kenyataan Akhbar KPK 31 Mac 2022 – Situasi Semasa Jangkitan Penyakit Coronavirus 2019 (COVID-19) – From the Desk of the Director-General of Health Malaysia [Internet]. [cited 2023 Apr 15]. Available from: https://kpkesihatan.com/2022/03/31/kenyataan-akhbar-kpk-31-mac-2022-situasi-semasa-jangkitan-penyakit-coronavirus-2019-covid-19/

2. Hasani WSR, Ganapathy SS, Lin CZ, Rifin HM, Bahari MN, Ghazali MH, et al. Comorbidities and clinical features related to severe outcomes among COVID-19 cases in Selangor, Malaysia. Western Pac Surveill Response J. 2021 Jan 1;12(1):46–52.

3. Lim Heng Sim B, Kumar Chidambaram S, Ci Wong X, Dass Pathmanathan M, Peariasamy KM, Peng Hor C, et al. Clinical characteristics and risk factors for severe COVID-19 infections in Malaysia: A nationwide observational study-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/). The Lancet Regional Health-Western Pacific [Internet]. 2020;4:55. Available from: https://doi.org/10.1016/j.lanwpc.2020.10