

## **ABSTRACT**

*The COVID-19 pandemic that occurred from 2020 to 2022 has resulted in millions of cases of infection and death worldwide, including in Indonesia. This has become a significant global challenge with varying mortality rates across different regions. Understanding the risk factors that influence mortality rates is crucial for identifying vulnerable groups such as age, gender, and duration of illness. By knowing these factors, the government can plan more targeted mitigation measures, such as vaccination priorities, allocation of medical resources, and health policies to protect the public. K-Means Clustering algorithm is used to identify patterns and risk factors associated with mortality rates and to develop predictive models to identify patients at high risk of dying from COVID-19. The method involves collecting COVID-19 patient data from reliable sources, preprocessing the data to ensure its data integrity, the application of the K-Means Clustering Algorithm to group patients based on risk factors, and perform cluster analysis to identify significant risk factors. This concludes that the K-Means Clustering Algorithm can be used to analyze the risk factors for COVID-19 patient mortality and identify patterns related to mortality rates. The results of this study are also expected to assist the government in developing more effective and efficient COVID-19 response strategies and improving the quality of care for COVID-19 patients in Indonesia.*

*Keywords: COVID-19, K-Means Grouping, Risk Factors for Mortality Rate*