

## **ABSTRACT**

*The number of Covid-19 cases in Indonesia continues to increase every day. The increasing number of positive cases of Covid-19 has made the government make efforts to improve the system in monitoring patient conditions to reduce the number of positive cases in Indonesia. Patients are divided into 2 categories of self-isolation and isolation in hospital. Patients who are of concern to the authors are self-isolated patients. Self-isolated patients can be categorized as asymptomatic patients or mild symptoms. However, one of the main symptoms felt by the patient is the lack of oxygen flow in the blood vessels which causes shortness of breath. The pulse oximeter is a tool for monitoring the condition of Covid-19 patients that is used to measure oxygen saturation. However, because this tool is portable, there are drawbacks, namely in the process of collecting and sending data which is still done manually by officers so that it is not effective. The importance of a remote monitoring system to facilitate the process of collecting and sending data on the condition of self-isolated patients in real time to officers. This research was conducted to see the accuracy and success in the process of sending data from the pulse oximeter and to analyze the relationship between the saturation data and the real time difference generated from the pulse oximeter in 1 minute. At the end of the study, it was concluded that the remote pulse oximeter monitoring system was successfully carried out and there was a relationship between saturation data and the difference in delivery time as a determinant of critical patient data.*

**Keywords:** *COVID-19, saturation, pulse oximetry, realtime.*