

ABSTRACT

Rendra Jihan Wicaksono (2022). *Forecasting Analysis of Blood Demand in Unit Transfusi Darah (UTD) Palang Merah Indonesia (PMI) Malang City Using Method ARIMA BOX-JENKINS. Scientific Papers. Diploma III Study Program in Blood Bank Technology. Department of Pharmacy and Food Analysis Major. Health Polytechnic Ministry of Health Malang, Supervisor (main) : Dr. Ekowati Retnaningtyas, S.Kp., M.Kes. Supervisor (companion) : Dr. Roni Yuliwar, S.Kp, Ns, M.Ked*

Blood is an important component in the body that carries nutrients and oxygen to all organs of the body, including vital organs such as the brain, heart, kidneys, lungs, and liver. Blood transfusion has become an important part of health care. If blood transfusion is applied correctly, transfusion can save the patient's life and can improve the patient's health status. Many methods can be used to predict an event, one of the forecasting methods most developed today is time series, such as the ARIMA model. The ARIMA (Box Jenkins) technique shows that this method is suitable for predicting a number of variables quickly, simply, easily because it only requires variable data to be predicted. The Subject under study is the number of blood demands at UTD PMI Malang City in November 2017- October 2022. The results showed that the appropriate model for predicting the number of blood demands was ARIMA (0,1,1) with the equation with an MSE value of 0,11648. Prediction of the number of blood demands for November 2022 until October 2023 ranges from 2236 blood bags to 2764 blood bags.

Key words : Time series, Blood demands, ARIMA