

OVERVIEW OF BLOOD COMPONENT PRODUCTION AT THE PMI UDD CENTER IN MADIUN CITY IN 2024

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ABSTRACT

Background: Blood components are parts of blood that are separated from whole blood through processes such as centrifugation for specific use in transfusion therapy. This separation process produces several components, namely Packed Red Cells (PRC), Thrombocyte Concentrate (TC), and Fresh Frozen Plasma (FFP). The purpose of this study was to determine the production of blood components at the Madiun City PMI Blood Donation Center in 2024. **Research Design:** This study used quantitative descriptive research with secondary data obtained from the Blood Donor Management Information System (SIMDONDAR) of the Madiun City PMI Blood Transfusion Unit. The population in this study included all blood component production at the Madiun City PMI Blood Transfusion Unit in 2024 with a sample of 20,025 using total sampling technique. The data was processed using percentages and presented in graph form. **Results:** The study showed that the production of blood components was almost entirely Packed Red Cells (PRC) amounting to 15,231 bags (76%), a small portion was Thrombocyte Concentrate (TC) amounting to 3,810 bags (19.03%), Whole Blood (WB) 630 bags (3.15%), and Fresh Frozen Plasma (FFP) 354 bags (1.77%). Blood component production based on blood type shows that almost half is blood type O, namely 8,873 bags (44.31%), with a small portion being blood type AB, 1,016 bags (5.07%). Demand for blood components in 2024 was almost entirely for Packed Red Cells (PRC) at 15,112 bags (78.79%), and demand based on blood type was almost half for blood type O at 8,120 bags (42.34%). **Conclusion:** This indicates that blood component production is almost entirely PRC (76%) and nearly half is blood type O (42.34%).

Keywords: Blood components, Blood component production