## ABSTRACT

XYZ hospital is the hospital class B which is located at Bandung. One part of XYZ hospital has duty to manage the blood supply in BDRS XYZ. The management of the blood supply at XYZ BDRS hasn't been properly as evidenced by blood shortages amounting to 2% of the total demand during 2015.

This research aims to improve the level of service based on existing conditions that occur in the XYZ BDRS. The methods used to conduct the policy of supplies blood product are joint replenishment method. The selection of these methods because the supplier of BDRS XYZ only one supplier so that in accordance with the joint replenishment method. Calculations using the joint replenishment method will result reorder point jointly. After that calculation of optimum reorder quantity, maximum inventory and safety stock.

The result from calculation can increase service levels of 98% from existing condition to 99,05%. In addition to an increase in the service level that occurred, the study also reduces the total cost of inventories *Rp* 8.023.534 from total inventory cost existing to *Rp* 15,705,477. The total reduction in inventory costs amounted to 48.51%.

Keywords: Inventory Policy, Joint replenishment, Periodic Review, Stockout