

**ABSTRACT**

The greatest surgery activity at Dr. Soetomo Public Hospital was done in Emergency Departement (IRD) and Central Integrated Surgery Building (GBPT). For the sake of supporting the surgery activities, sterile linen inventory at the operating theatre has to be controlled, so that there are not any late, lack of inventory or under quality inventories.

The objective of this research is to operate the master production schedule method (MPS) for determining the optimal production quantity at Central Sterilized Service Departement (CSSD) for the effort to control the sterile linen inventory at the operating theatre. This research was observational research and the data was taken cross sectionally. The forecasting of the need for sterile linen was done by using software quantity system business plus (QSB+) and the inventory control was done by using master production schedule (MPS).

This research showed that the arrangement system for sterile linen was done at this moment, was not effective, because there were organizational protection and less coordination. The chosen forecasting method was simple average and weighted moving average. The selection of the forecasting method was done by using the smallest value of the mean absolute deviation (MAD) and the mean squared deviation (MSD).

The design production capacity at Central Sterilized Service Departement was 324 set sterile linens and laundry capacity was 2,700 kg. The respon time for the dirty linens to be cleaned until to be sterile linens need 19,84 hours with holding time and 7.8 hours without holding hours. The optimal production was done at the lot size 63 set.

At Emergency Departement there were some safety stocks, although the amount was not enough and at GBPT there were no safety stock. There were 100% violation for the policy of safety stock at the whole operating theatre.

Master Production Schedule could control the inventory of sterile linen by determining the quantity, production schedule and could become mediation between the need and the production in keeping the stock of sterile linen at operating theatre.

Keywords : - sterile linen inventory – operating theatre – safety stock – master production schedule - forecasting