

ABSTRACT

The increasingly widespread existence of pharmacies encourages each pharmacy to be able to survive and face every challenge, both in the sales process and in improving services for consumers. Customers purchase products simultaneously to address various medical symptoms, which raises demand for multiple medications at once and causes the medicine supply to deplete more quickly than anticipated. Therefore, an analysis is needed using data mining based on transaction data from pharmacies regarding medicine purchase patterns simultaneously. This research used a priori algorithm to identify possible relationships of itemsets that often appear together from pharmacy transaction history purchases data, so that when stock supplies are found to be almost out or empty, the pharmacy can predict the need for additional supplies of other related medicine

From the experiments that have been carried out, using 1% and 60% for support and confidence minimum threshold, 3 association rules were obtained from the purchasing pattern. The association rule with the highest confidence, reaching up to 79.6%, shows that customers who purchased LANARHEUMA 20 mg were also likely to purchase CARBIDU 0.75 mg TAB. The medications that fulfil the minimum support and confidence threshold include LANARHEUMA 20 mg, CARBIDU 0.75 mg TAB, WIROS, and MOLACORT 0.75 mg TAB. By implementing safety stock and reorder point calculations in maximizing drug stock management, several products were found, namely ASAM MEFENAMAT 500mg TAB, CETIRIZINE 10mg TAB, METIL PREDNISOLONE 4mg, MOLACORT 0.75mg TAB, NATRIUM DICLOFENAC 50 mg, and PROMAG TABLET STRIP, which must be readjusted to the minimum limit to avoid stock outs, especially for related combination products.

The results of the research are expected to help ZamZam Pharmacy through the implementation of an interactive dashboard on drug stock management based on consumer purchasing patterns that can improve accuracy in the procurement process and avoid stock shortages on related products. In addition, this research can be developed using other algorithms, such as FP-Growth and ECLAT, so that it can be a comparison of better algorithms used to find product recommendations.

Keywords: *Apriori algorithm, business intelligence, data mining, drug supply, pharmacy*