Platelet PGD: Effect on Platelet Waste and Financial-efficiency in a Local Blood Bank

Janelle Chiasera, PhD
Mohammed Albalawi, BS
Abdulaziz Alhebaishi, BS
Mercedes Dongen, BS
University of Alabama at Birmingham
Birmingham, AL

Maintaining a blood product supply is essential to optimal patient care; however, daily use is difficult to anticipate. Platelet products are the most variable in daily usage, have short shelf lives, and are expensive to produce, test, and store. As a result of need, unpredictable demand, and short half-life, platelets are frequently wasted due to expiration. The purpose of this study is to monitor the use of the Verax Biomedical Platelet PGD Test (PPT) on managing platelet (PLT) waste and cost utilization. Minimal research has been conducted on PPT's financial impact. PPT is used for bacterial monitoring and allows for the increase storage of PLTs of up to 7 days. Its implementation should reduce waste and attribute to efficient cost management of on-hand supplies. A secondary analysis was performed to compare data between a six-month period in 2016 and the same six-month period in 2017. The audit reviewed the utilization and waste of PLT apheresis products (aPPT) prior to (2016) and after the implementation of PPT (2017) at a local level 1 trauma center blood bank. A financial analysis was performed to determine the percent of cost attributed to both utilization and waste for each timeframe, with the addition of included cost of PPT implementation for 2017. With the implementation of the PPT there was an average decrease of 43.48% of waste from the 2016 to the 2017 six-month time periods, an estimated $5,300 in savings per 6-months. With PPT implementation, the blood bank was able to utilize 93.22% of their cost from the total cost aPLTs ordered including the cost of testing in the 2017 time period in comparison to 89.23% of cost utilization in the 2016 time period. The

implementation of PPT was useful in monitoring inventory and extending the on-hand supply of platelets.