

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

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ABSTRACT

Maintaining a blood product supply is essential to optimal patient care; however, daily use is difficult to anticipate. Platelet (PLT) products are the most variable in daily use, have short shelf lives, and are expensive to produce, test, and store. As a result of need, unpredictable demand, and short half-life, PLTs are frequently wasted because of expiration. The purpose of this study is to monitor the use of the Verax Biomedical Platelet Preimplantation Genetic Diagnosis (PGD) Test (PPT) on managing PLT waste and cost. Minimal research has been conducted on PPT's financial impact. PPT is used for bacterial monitoring and allows for the increased storage of PLTs by up to 7 days. Its implementation should reduce waste and contribute to efficient cost management of on-hand supplies. A secondary analysis was performed to compare data between a 6-month period in 2016 and the same 6-month period in 2017. The audit

reviewed the use and waste of PLT apheresis products (aPPT) prior to 2016 and after the implementation of PPT in 2017 at a local level 1 trauma center blood bank. A financial analysis was performed to determine the percent of cost attributed to both use and waste for each timeframe, with the addition of included PPT implementation cost for 2017. With the implementation of PPT, there was an average waste decrease of 43.48% from the 2016 to the 2017 6-month time periods and an estimated \$5,300 in savings over the 6 months. With PPT implementation, the blood bank was able to use 93.22% of their cost from the total cost of aPLTs ordered, including the cost of testing in the 2017 time period in comparison to 89.23% of cost use in the 2016 time period. The implementation of PPT was useful in monitoring inventory and extending the on-hand supply of PLTs.

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