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Shaffer K, Pearman D, Galen R, Carville D	A Rapid Platelet Function Assay Used to Regulate Platelet Transfusion Prophylaxis Following Cardiopulmonary Bypass Surgery	2004	36	2	145 - 148

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**Abstract:** Subsequent to cardiac surgery with cardiopulmonary bypass (CPB), patients are at risk of postoperative bleeding caused by acquired defects associated with the procedure. As such, many patients receive prophylactic blood product transfusion. The effectiveness of measuring platelet function using a near-patient platelet function analyzer for the purpose of regulating platelet transfusion and potentially modulating other blood products including fresh frozen plasma (FFP) and cryoprecipitate (CRYO) transfusion was evaluated prospectively in patients undergoing CPB. A 6-month prospective study was designed that encompassed all CPB patients at Aultman Hospital (Canton, OH) during 2001. Each patient was assessed postoperatively for platelet count and function using a point-of-care analyzer. Data were used to help determine whether a platelet transfusion would be administered. Transfusion of CRYO and FFP was also recorded. The data were then compared to the retrospective same 6-month period in the preceding year for the purpose of determining the value of this system in guiding transfusion triage. There were 1770 platelet packs transfused during the study period, representing a 34% reduction in platelet usage. Platelet transfusions were reduced by 51% (5.75 in 2001 vs. 11.75 in 2000) per patient. CRYO/FFP usage was also substantially reduced. During the study period, the patient caseload had increased by 72 (310 vs. 238). Monitoring platelet count and function as a result of CPB and administering an appropriate transfusion protocol can positively impact transfusion outcome.

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