

An economic analysis of costs associated with development of a cell salvage program.

Waters JR, Meier HH, Waters JH.
[Anesth Analg.](#) 2007 Apr;104(4):869-75

BACKGROUND: The increasing cost of blood products and associated risks of transfusion have lead to a heightened interest in techniques which reduce or replace allogeneic blood transfusion. The use of cell salvage is being explored in a number of institutions. We present financial information which may be useful to institutions that are considering the addition of a cell salvage service.

METHODS: A review of the cell salvage data from 2328 patients was used to estimate the average cost of a packed red blood cell unit equivalent processed by cell salvage equipment. In addition, an analysis was performed to assess the break-even point of establishing a cell salvage service.

RESULTS: Initial capital outlay to establish a cell salvage service at this institution was \$103,551. The annual fixed operating cost was \$250,943. The average cost of transfusion of an allogeneic packed red blood cell unit was \$200. For an equivalent cell salvage unit, the cost was \$89.46. The payback period was 1.9 mo.

CONCLUSION: This analysis suggests that cell salvage can be significantly less expensive than allogeneic blood. The cost of cell salvage in other institutions will vary depending upon case volume, expected levels of blood loss per case, and initial investment costs. A step-by-step formula is provided to assist in the evaluation of a cell salvage service in hospitals of various sizes.