

Direct Cost of Anesthesia in Traumatic Patients with Massive Bleeding: A Prospective Micro-Costing Study

Authors : Asamaporn Puetpaiboon, Sunisa Chatmongkolchart, Nalinee Kovitwanawong, Osaree Akaraborworn

Abstract : Traumatic patients with massive bleeding require intensive resuscitation. The actual cost of anesthesia per case has never been clarified, so our study aimed to quantify the direct cost, and cost-to-charge ratio of anesthetic care in traumatic patients with intraoperative massive bleeding. This study was a prospective, observational, cost analysis study, conducted in Prince of Songkla University hospital, Thailand, with traumatic patients, of any mechanisms being recruited. Massive bleeding was defined as estimated blood loss of at least one blood volume in 24 hours, or a half of blood volume in 3 hours. The cost components were identified by the micro-costing method, and valued by the bottom-up approach. The direct cost was divided into 4 categories: the labor cost, the capital cost, the material cost and the cost of drugs. From September 2017 to August 2018, 10 patients with multiple injuries were included. Seven patients had motorcycle accidents, two patients fell from a height and another one was in a minibus accident. Two patients died on the operating table, and another two died within 48 hours. The median Sequential Organ Failure Assessment (SOFA) score was 8. The median intraoperative blood loss was 3,500 ml. The median direct cost, per case, was 250 United States Dollars (2017 exchange rate), and the cost-to-charge ratio was 0.53. In summary, the direct cost was nearly half of the hospital charge, for these traumatic patients with massive bleeding. However, our study did not analyze the indirect cost.

Keywords : cost, cost-to-charge ratio, micro-costing, trauma

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