Massive transfusion protocol for pediatric trauma (estimated weight less than 30 kg)

1. Cryoprecipitate at a volume of 4 mL/kg may be administered after administration of all three components (after estimated loss of two blood volumes) or if fibrinogen levels fall below 1-1.5 g/L.

2. Consider off-label use of recombinant factor VIIa (rFVIIa), 90 μg/kg, if ongoing bleeding persists after loss of 3 blood volumes.

For patients who weigh more than 30 kg, a 1:1:1 algorithm should be followed. Transfuse blood component volumes of 1 unit of PRBCs to 1 unit of FFP to 1 unit of pooled platelets, as in adult protocols (see text).

*BV = estimated Blood Volume (generally 70-90 mL/kg based on weight of child as shown in Table 1)*

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Figure appears in Dehmer JJ, Adamson WT. Massive transfusion and blood product use in the pediatric trauma patient. Seminars in Pediatric Surgery (2010) 19, 286-291.

Figure modified from Paterson NA. Validation of a theoretically derived model for the management of massive blood loss in pediatric patients—a case report. Paediatr Anaesth 2009;19:535-40.