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### **MSA Capstone Abstract**

**Title:** Evaluation of Risk Factors associated with Development of Catheter-associated Venous Thromboembolism in Pediatric ICU Patients

**Objective:** Evaluate various risk factors associated with development of catheter-associated VTE (CA-VTE) in children admitted to the pediatric intensive care unit (PICU).

**Methods:** Data was obtained from chart review of patients under eighteen years of age admitted to Children's Hospital Colorado at its Anschutz campus location. Relative risk was evaluated for a number of risk factors for VTE.

**Results:** For 201 patient cases from 2016-2020, 98 CA-VTEs were identified. Univariate analysis showed significantly increased risk of development of CA-VTE for patients with primary condition of oncologic nature (RR 1.74; 1.18-2.55) and traumatic nature (RR 1.47; 1.01-2.15). Duration of catheter placement longer than 22 days was also associated with increased risk (RR 1.53, 1.22-1.89).

**Conclusions:** Placement of a central venous line (CVL) is a major risk factor for the development of VTE in children. Increased duration of catheter placement and primary conditions of oncologic and traumatic nature were found to have increased risk of VTE. Identifying additional risk factors that further increase this risk can aid in decreasing the rate of CA-VTE in critically ill children.