Healthcare Organization Commitment

Contact Details

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Commitment Details

**Commitment Name**
Advanced intra/post-operative monitoring systems in order to improve transfusion appropriateness, increase patient safety and reduce complications.

**Participants**
Tiziana Rumi

**What Patient Safety Challenge does your Commitment address?**
Challenge 5 - Patient Blood Management
Commitment Summary
Patient continuous monitoring during major orthopedic surgeries (hip, knee, spine) is essential in order to early detect hemodynamic unbalances and treat accordingly on time. Intra/Post operative anemia-related mortality and morbidity can be reduced by using an appropriate tool able to provide real-time and non-invasive data on hemoglobin levels thus guiding clinicians to an improved transfusion decision making process along with additional patient parameters and signs. Clinical outcomes associated with anemia in patients undergoing hip and knee surgeries have been proven to be poor in terms of physical function (distance walked at discharge), length of stay and mortality.

Commitment Description & Detail
The algorithm-based process developed in this hospital requires to take into consideration a list of specific clinic and hematologic parameters before taking any RBC transfusion decision. Among these the real-time SpHb hemoglobin value and trend provided with Radical-7 by Masimo Corp. is an useful predictive indicator of occurring intra/post operative bleeding helping clinicians to immediately visualize whether Hb is stable, increasing or decreasing. In addition to other fluid responsiveness parameters the advanced monitor could lead to an optimization of blood and fluid thus improving patient outcomes and safety.

Action Plan
The aim of the action plan is providing results after comparing outcomes on patients undergoing prosthetic and spinal surgeries. Continuous and non-invasive monitoring of SpHb will be guaranteed during the entire intra/post operative period as long as a specific decision-making support tool form based on clinical and hematologic assessment in order to make the transfusion administration just in-time and only when really needed. A second group of patients, adjusted for risks, will not be monitored with SpHb but only with conventional monitoring / procedures already existing in the hospital. Outcome results from two groups will be compared based on objective assessments and scores.

Commitment Timeline
The estimated completion date of the commitment is 31th of December 2016.