Implementation of Alert in the Electronic Medical Record Reduces Incidence of Non-OR Blood Transfusions for Hb > 8.0 g/dL

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**Background:**
- A multicenter, randomized clinical trial of transfusion requirements in critical care¹ concluded that restrictive transfusion strategies for RBCs in critically ill patients were at least as effective, if not superior, in patient outcomes.

**Objective:**
- Implement an EMR alert to reduce exposure of patients to unnecessary transfusions and utilization of limited resources.

**Methods:**
- Beginning September 2012, an EMR alert was initiated if a patient’s last hemoglobin (Hb) was > 9.0 g/dL.
  - Alert stated recent Hb level and prompted RBC transfusion justification.
- Hb of 9.0 g/dL selected to reduce likelihood of sending alerts for patients with active hemorrhage.
- Obtained transfusion information immediately pre/post alert implementation.

**Results:**
- Marked reduction in the % of blood transfusions “post-alert” implementation.
- Average transfusion rate for > 8.0 g/dL “pre-alert” (Oct ’11-Feb ’12) was 34% vs. 27% “post-alert” (p<.001) for the same time period, and was lower “post alert” at each time point (Figure 1).
- February transfusion rate > 8.0 g/dL was 10% lower (34% vs. 24%) “post alert,” meaning 136 fewer units of RBCs transfused (Figure 2).

**Conclusions:**
- Implementation of an alert when ordering RBC transfusions significantly reduced incidence of transfusion for Hb >8.0 g/dL.
- Data require further investigation to determine other factors that contribute to poor transfusion guideline compliance.

**References:**