A Study of Supply and Clinical Utilization of Blood Products in the Central Plateau, Haiti

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BACKGROUND
• The adequacy of the blood supply, transfusion practices, and associated clinical outcomes in Haiti are unknown
• Blood collection in Haiti is well below the recommended WHO collection rate
• Global Healing is a non-governmental organization with the goal of establishing a safe, sustainable and self-sufficient, modern transfusion program at the Hospital Universitaire de Mirebalais (HUM), a 300 bed tertiary teaching hospital serving the Central Plateau that opened May 2013
• Prior to May 2013, Cange Hospital was the primary area treatment facility and blood center in this region
• Slow transition of inpatient care and blood collection duties from Cange to HUM was planned

PURPOSE
• Evaluate the blood supply
• Quantify the blood shortage reported by local physicians
• Study the clinical utilization of blood products
• Assess clinical outcomes of transfusion and shortages
• Develop a data collection tool to help better estimate future blood needs

METHODS
• Data regarding blood utilization from Cange Hospital (January 1, 2012 to December 31, 2012) and HUM (May 29, 2013 to September 16, 2013) were obtained via chart review
• Evidence-based transfusion guidelines of patient blood management at the University of California San Francisco Medical Center were used to define the appropriateness of utilization

Indication For RBC transfusion
Appropriate
Maintaining hgb ≥ 10g/dL in "at-risk" patients (co-existing heart / lung disease, ischemic vascular disease)
Stable, asymptomatic anemia
Medically correctable anemia (e.g., Iron, VD, SLE deficiency with mild symptoms responsive to temporary decrease in physical activity while the anemia is being corrected)
Inappropriate

BLOOD COLLECTION AND DONOR DEMOGRAPHICS AT CANGE

CANGE BLOOD DISTRIBUTION

BLOOD UTILIZATION AT CANGE

BLOOD UTILIZATION AT HUM

PROJECTED ANNUAL UTILIZATION

METHODS
• Current rate of blood collection at Cange is insufficient for HUM's future needs
• Donation rates among females and older population (age 35+) are low and may represent targeted populations for donor recruitment
• According to utilization data at Cange, internal medicine is a significant consumer of blood products, which was not currently open during the data collection period at HUM
• Almost one third of units requested at HUM were not filled
• No recorded major transfusion reactions or mortalities resulted during the study period
• Current shortages will likely worsen within the first year of HUM opening as medical services fully open
• Further development of blood collection strategy and future analysis of transfusion data collected are needed to ensure adequate blood supply for this new tertiary hospital