Objectives
Hemophilia is an X-linked genetic bleeding disorder that affects approximately 18,000 people in the United States [1]. Cost of care, including medication and hospitalization is estimated to be over $125,000 annually per patient [2]. It is also estimated that the average hospitalization rate for the bleeding disorder patient with hemophilia averages greater than $75,000 per admission, according to a study done by the U.S. Department of Health and Human Services. There are a limited number of studies documenting hospitalization rates for patients with bleeding disorders. One study revealed a 40% higher hospitalization rate for patients not seen at a Hemophilia Treatment Center (HTC). Additionally, this four-year study utilizing 808 patients enrolled in HTCs provides hospitalization rates of 21.2 admissions per 100 patient years (PYs)[3].

A state Medicaid agency that advocates for comprehensive care, will demonstrate decreased hospitalization rates for patients with bleeding disorders receiving care administered by healthcare professionals at federally recognized HTCs versus patients receiving care elsewhere.

Methods
Data from January 1st, 2007 through December 31st, 2008 on all active bleeding disorder (n>170) patients with paid claims was utilized for this study. Patients with bleeding disorders such as hemophilia, von Willebrand Disease and other factor deficiencies were included in the data set.

Utilization of patient years (PYs) allowed for inclusion of patients that were on service at the beginning of the study period and for patients that came on service after January 1st, 2007. The use of PYs also allowed for the inclusion of patients that experience a gap in coverage. Additionally, by including PYs, comparisons to the benchmark study could be made.

Comprehensive care at HTCs is provided by multi-disciplinary teams consisting of physicians (hematologists), nursing coordinator, nurses, social workers, physical therapist and geneticist. Care planning, patient training and compliance tools were used to monitor progress and direct interventions when indicated.

Outcome data was collected utilizing proprietary and commercially available electronic outcomes tracking tools.

Summary
The hospitalization rate for all the combined bleeding disorder patient population was reported as 24.42 admissions per 100 PYs.

Further investigation revealed the hospitalization rate for patients under the care of the comprehensive team at HTCs was 18.98 admissions per 100 PYs, while the patients cared for by clinicians not affiliated with an HTC had a hospitalization rate of 48.53 admissions per 100 PYs.

Three patients (2 adult, 1 pediatric) that were admitted to the hospital in 2007 and were not seen at an HTC, switched care to an HTC after their last admit or during their hospital stay. None of these three patients were admitted the remainder of 2007 or 2008 while they were being seen at an HTC. There were no patients admitted to the hospital in 2008 that were previously seen at an HTC and switched to a non-HTC.

The cost per admit for hemophilia related hospitalizations in this entire study group (n>170) was > $105,000.

Conclusion
The continuity of care provided by the staff at the HTC with patients being treated by a multi-disciplinary team contributes to a remarkable decrease in hospitalization rates for patients with bleeding disorders.

Patients with bleeding disorders utilizing care provided by an HTC had a decreased hospitalization rate of >60% compared to patients receiving care outside of the HTC.

Extrapolating the average hospitalization cost for this study group and the difference in hospitalization rates, utilization of the HTC for care demonstrated a cost-savings of >$3,200,000 versus utilization of non-HTCs per 100 PYs.

References

Disclosure
Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation:
Jay Bryant-Wimp - MO HealthNet Employee, AccurateRx Employee
D.J. Johnson - MO HealthNet Employee
Roxanna Halderman - MO HealthNet Employee
Sarah Cooper - Pharm D St. Louis College of Pharmacy

The data presented herein was collected by a state Medicaid agency for the purpose of evaluating the success of treatment by professionals at HTCs. Hospitalization rates were used as the measure of differentiation.