

The Perfect Bleed: Guideline Adherence and Outcomes in Variceal Hemorrhage

The Problem

Acute variceal hemorrhage in patients with portal hypertension is associated with a mortality rate of 10-20% within 6 weeks. The Baveno VI guidelines have been developed to guide treatment in variceal hemorrhage. They include recommendations such as endoscopy within 12 hours, use of somatostatin analogs, use of antibiotics, and use of banding as important components of patient care during an episode of acute variceal hemorrhage.

Our team identified individual examples of inequity in the management of variceal hemorrhage and for this reason we sought to identify the rate of adherence to the guidelines. This analysis encompasses work on the Institute of Medicine dimensions of effectiveness, timeliness, equitability and patient safety.

Aim/Goal

Adherence to Baveno VI guidelines was assessed with medical record review and statistical analysis at Beth Israel Deaconess Medical Center and Baystate Medical Center.

The effect of adherence versus non-adherence was compared using the metrics of mortality and 30-day re-admission rate. In fewer than 60% of patients with variceal bleeding were all four of these metrics followed (Figure 1). By developing an education program for nurses, physicians and attendings the goal is by 2017 for there to be >90% adherence to Baveno VI guidelines sustained through 2018.

The Team

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The Interventions

- Develop bleeding registry to track adherence and outcomes
- Partner with Baystate Medical Center to develop multicenter benchmarks and analyze outcomes
- Develop an educational curriculum based on Baveno VI guidelines
- Improve the educational program based on feedback and assess whether it can modify adherence to Baveno VI
- Place guidelines on hospital intranet by 2017 to allow for interdisciplinary standardization of the management of acute variceal bleeding

Progress to Date

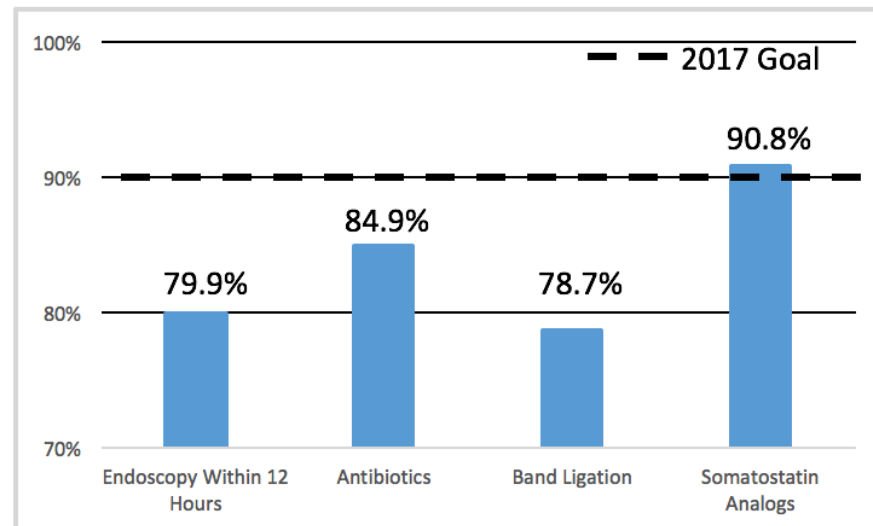


Figure 1. Adherence to Baveno VI guidelines.

This study includes data from 06/01/2010- 06/30/2015 (~5 years of data)

Lessons Learned

- Start small and limit QI analysis and improvements to one medical center at a time
- Use a multidisciplinary approach, and note that for there to be a systemic shift in management then medical students, residents, fellows, attendings and nursing staff should all be involved
- Have specific metrics to assess the impact of an intervention

Next Steps

- Refine educational program for Baveno VI guideline adherence and variceal bleeding management
- Work with faculty to promote broad exposure of the guidelines and seek feedback for improvement
- Re-assess adherence at Beth Israel Deaconess Medical Center to the guidelines, with a goal of 90% adherence by 2017
- Develop standardized Beth Israel Deaconess Medical Center guidelines on variceal hemorrhage that can be placed on the hospital intranet for quick reference