Provincial Clinical Knowledge Topic: Summary Statement

*Emergency Department*

*Upper Gastrointestinal Bleed*

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Important Information Before You Begin

The recommendations contained in this knowledge topic have been provincially adjudicated and are based on best practice and available evidence. Clinicians applying these guidelines should, in consultation with the patient, use independent medical judgment in the context of individual clinical circumstances to direct care. This knowledge topic will be reviewed periodically and updated as best practice evidence and practice change.
Clinical Recommendations

Clinical Recommendation #1: We suggest that pre-endoscopic proton pump inhibitor (PPI) administration should not be a routine treatment in all patients with non-variceal UGIB as it has not been shown to improve patient outcomes (i.e. - mortality, rebleeding and surgery) in this population. However, pre-endoscopic PPI administration does reduce the need for endoscopic therapy and may therefore be useful in patients judged to be at higher risk of requiring this intervention. This may especially be true in those patients with higher Glasgow-Blatchford scores, active clinically significant bleeding, and/or in whom endoscopy may be delayed or withheld due to local resource availability and/or individual patient factors. Ideally, the decision of whether to treat prior to endoscopy should be made in concert with the local / regional gastroenterology consultant. \textsuperscript{4,20,31,32}

\textbf{Quality of Evidence:} Moderate, GRADE B. We are moderately confident in the effect estimate. The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.

\textbf{Strength of Recommendation:} Weak, GRADE 2.

Clinical Recommendation #2: We recommend PPIs be administered after endoscopy confirms peptic ulcer disease to be the source of the bleeding. PPIs do not reduce mortality but are associated with a decreased risk of rebleeding and the need for surgery. \textsuperscript{4,20,22}

\textbf{Quality of Evidence:} High, GRADE A. We are very confident that the true effect lies close to that of the estimate of the effect. A systematic review including 12 RCTs was available.

\textbf{Strength of Recommendation:} Strong, GRADE 1.

Clinical Recommendation #3: We suggest that when PPIs are administered to patients with upper GI bleeding due to confirmed peptic ulcer disease, an intermittent dosing regimen be used. Bolus dosing followed by continuous IV infusion is not superior to intermittent dosing and is associated with higher costs. \textsuperscript{4,20,29}

\textbf{Quality of Evidence:} High, GRADE A. We are very confident that the true effect lies close to that of the estimate of the effect. A systematic review including 13 RCTs was available.

\textbf{Strength of Recommendation:} Weak, GRADE 2.

Clinical Recommendation #4: We suggest that the GBS score appears to have higher sensitivity and specificity for identifying high and low risk patients. There is conflicting data as to whether AIMS65 score is superior in predicting inpatient mortality; however, GBS appears to be superior in predicting the need for blood transfusions and high-risk clinical outcomes. \textsuperscript{17,42}

\textbf{Quality of Evidence:} Low, GRADE C. Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect. Only 2 non-randomized studies available.

\textbf{Strength of Recommendation:} Weak, GRADE 2
Clinical Recommendation #5: We suggest that vital signs may be used to prognosticate adverse events in patients presenting to the ED with upper GI bleeding. A pulse rate of greater than or equal to 100/min was found to be indicative of the need for urgent evaluation for upper GI bleed. In addition, the Blatchford score - which is a validated score used to assess the risk of poor outcomes in patients with upper GI bleeding in the ED - includes pulse rate and systolic blood pressure.\textsuperscript{6,11,19,25,30,34}

**Quality of Evidence:** Low, GRADE C. Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect. Only non-randomized studies available.

**Strength of Recommendation:** Weak GRADE 2.

Clinical Recommendation #6: There is insufficient evidence and lack of consensus to make a recommendation regarding the optimal fluid resuscitation regimen in acute UGIB. There are guidelines that make recommendations towards replenishing fluids in patients presenting with upper GI bleed but no evidence is provided.\textsuperscript{7,20,31}

**Quality of Evidence:** Very Low, GRADE D. We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect.

**Strength of Recommendation:** Insufficient evidence

Clinical Recommendation #7: We recommend that somatostatin or its analogues (octreotide and vapreotide, and terlipressin) should be initiated as soon as variceal hemorrhage is suspected and continued for 3–5 days after diagnosis is confirmed. These agents improve rates of hemostasis when used in combination with endoscopic therapy compared to endoscopy alone.\textsuperscript{3,10,13}

**Quality of Evidence:** High, GRADE A. We are very confident that the true effect lies close to that of the estimate of the effect. A meta-analysis including 15 trials was available.

**Strength of Recommendation:** Strong, GRADE 1.

Clinical Recommendation #8: We suggest that balloon tamponade should be used as a temporizing measure (maximum 24 hours) in patients with uncontrollable life-threatening bleeding for whom a more definitive therapy (e.g. TIPS or endoscopic therapy) is planned. Balloon tamponade devices, while effective in reducing active bleeding, increase the risk of severe complications; their risks and benefits must be carefully considered prior to use.\textsuperscript{9,12,14,15}

**Quality of Evidence:** Very Low, GRADE D. We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect.

**Strength of Recommendation:** Weak, GRADE 2.
Clinical Recommendation #9: We suggest that in patients with higher risk clinical features with a Blatchford score greater than or equal to 12, or signs of hemodynamic instability that endoscopy within 12 hours should be considered to potentially improve clinical outcomes.\textsuperscript{4,20,23,24,31}

**Quality of Evidence:** Very Low, GRADE D. We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect.

**Strength of Recommendation:** Weak, GRADE 2.

Clinical Recommendation #10: We recommend that a restricted blood transfusion strategy (threshold of 70 g/L) be employed for stable patients with upper GI bleeding over a more liberal blood transfusion strategy (threshold of 90 g/L).\textsuperscript{4,16,18,20,31,40}

**Quality of Evidence:** Moderate, GRADE B. We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.

**Strength of Recommendation:** GRADE 1, Strong.

Clinical Recommendation #11: We suggest that early endoscopy may improve resource utilization (admission rates, length of stay, overall costs of care) in those patients requiring endoscopy for acute upper GI bleeding.\textsuperscript{4,5,7,20,21,31,33}

**Quality of Evidence:** Moderate, GRADE B. We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.

**Strength of Recommendation:** Weak, GRADE 2.

Clinical Recommendation #12: We suggest that antibiotics be administered prophylactically to patients with cirrhosis presenting with acute upper GI bleeding. Prophylactic antibiotics appear to have beneficial effects on mortality, rebleeding, and the incidence of bacterial infections within this population.\textsuperscript{8,27,31}

**Quality of Evidence:** Moderate, GRADE B. We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.

**Strength of Recommendation:** Weak, GRADE 2.

Clinical Recommendation #13: We suggest that low risk patients with a GBS score of 0 can typically be safely discharged with outpatient management. Disposition decision-making should take into account additional patient factors (e.g. – medical comorbidities, social factors, etc.).\textsuperscript{20,3,35,42}

**Quality of Evidence:** Low, GRADE C. Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect.

**Strength of Recommendation:** Weak, GRADE 2.
Clinical Recommendation #14: No recommendations in guidelines, reviews, or studies could be identified regarding the role of fecal occult blood testing in the Emergency Department in patients with new onset anemia of uncertain cause. An appropriate investigation strategy will require careful clinical assessment, a review of initial laboratory studies, and consultation with the appropriate specialists.

**Quality of Evidence:** Very Low, GRADE D. We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect.

**Strength of Recommendation:** There is insufficient evidence and lack of consensus to make a recommendation regarding the sensitivity or specificity of stool occult blood testing for determining the presence of GI bleeding.

Clinical Recommendation #15: We recommend that IV and oral proton pump inhibitors (PPIs) be considered equally effective in reducing mortality, blood transfusions, hospital length of stay, and blood transfusions. Intravenous administration appears to have no additional benefits over oral PPIs in regards to patient outcomes.29,36,39

**Quality of Evidence:** High, GRADE A. We are very confident that the true effect lies close to that of the estimate of the effect. One systematic review was available which included 6 RCT’s. An additional meta-analysis was available which indirectly examined this question.

**Strength of Recommendation:** Strong, GRADE 1.

Clinical Recommendation #16: It is suggested that an intravenous infusion of erythromycin (250 mg approximately 30 min before endoscopy) should be considered to improve diagnostic yield and decrease the need for repeat endoscopy, however, there is no consistent evidence to show improved clinical outcomes.20,37,38

**Quality of Evidence:** Moderate, GRADE B. We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different. One systematic review conducting a meta-analysis of 6 RCT’s was identified.

**Strength of Recommendation:** Weak, GRADE 2.

Clinical Recommendation #17: We suggest that the placement of a nasogastric tube is not adequately sensitive to assist in diagnosis, prognosis or visualization of a bleeding source.1,2,4,20,28

**Quality of Evidence:** Moderate, GRADE B. We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.

**Strength of Recommendation:** Weak, GRADE 2
References:


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938.
28. Rokey DC, Melo SW, Ahn C. A randomized controlled trial of nasogastric tube placement in


Additional Readings and General References:
