

Choose Wisely:

# Treating & caring for hemodynamically stable patients with iron deficiency anemia

## Definition:

### Hemodynamically stable

Patient does not have:

- The need for active resuscitation to keep urine output **above 0.5 ml/kg per min**
- Systolic blood pressure **lower than 90 mmHg**
- Heart rate **above 120 bpm.**

Toward Optimized Practice Iron Deficiency Anemia Clinical Practice Guideline (2017)

## Hemoglobin levels & appropriate treatments:

### Choosing Wisely Canada™

Clinical Setting/ Patient Status	Recommendation & Dose
Hemoglobin < 6g/dL	<ul style="list-style-type: none"> <li>• A transfusion is likely appropriate.</li> <li>• Transfuse 1 unit, reassess before 2nd.</li> </ul>
Hemoglobin < 7g/dL	<ul style="list-style-type: none"> <li>• Consider a transfusion.</li> <li>• Transfuse 1 unit, reassess before 2nd.</li> </ul>
Hemoglobin < 8g/dL	<ul style="list-style-type: none"> <li>• Consider a transfusion for patients with a pre-existing cardiovascular disease or evidence of impaired tissue oxygenation.</li> <li>• Transfuse 1 unit, reassess before 2nd.</li> </ul>
Hemoglobin 8 - 9 g/dL	<ul style="list-style-type: none"> <li>• It is likely inappropriate to transfuse unless there is evidence of impaired tissue oxygenation.</li> </ul>
Hemoglobin > 9g/dL	<ul style="list-style-type: none"> <li>• It is likely inappropriate to transfuse.</li> <li>• If a transfusion is ordered, clearly document the indication in patient charts &amp; discuss why with your patient.</li> </ul>

"Why give two when one will do: A toolkit for reducing unnecessary red blood cell transfusions in hospitals." 2017. www.choosingwiselycanada.org

## Relevant findings:

### Transfusion strategies for acute upper gastrointestinal bleeding

Villanueva et al. (2013)

	Treatment Strategy	
	Restrictive	Liberal
Hemoglobin Threshold Value	7 g/dL	9 g/dL
Post-Transfusion Target	7-9 g/dL	9-11 g/dL
Protocol	<ul style="list-style-type: none"> <li>• 1 unit of RBC transfused immediately</li> <li>• 1 more if hemoglobin level is below threshold value</li> </ul>	
Results	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #008080; color: white; padding: 5px;">Restrictive (461)</div> <div style="background-color: #e67e22; color: white; padding: 5px;">Liberal (460)</div> </div>	
Did not receive a transfusion	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #008080; width: 60%;"></div> 225 (51%)                     <div style="background-color: #e67e22; width: 10%;"></div> 61 (14%)                 </div>	
Rate of complications	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #008080; width: 40%;"></div> 179 (40%)                     <div style="background-color: #e67e22; width: 48%;"></div> 214 (48%)                 </div>	
Violated transfusion strategy	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #008080; width: 10%;"></div> 39 (9%)                     <div style="background-color: #e67e22; width: 5%;"></div> 15 (3%)                 </div>	
45-day mortality rate	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #008080; width: 10%;"></div> 23 (5%)                     <div style="background-color: #e67e22; width: 15%;"></div> 41 (9%)                 </div>	
Average number of units transfused	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #008080; padding: 5px;">1.5 ± 2.3</div> <div style="background-color: #e67e22; padding: 5px;">3.7 ± 3.8</div> </div>	
Length of stay (LOS)	<div style="background-color: #008080; color: white; padding: 5px; text-align: center;">The restrictive strategy had a shorter LOS</div>	

Villanueva, Cándid, et al. "Transfusion strategies for acute upper gastrointestinal bleeding." New England Journal of Medicine 368.1 (2013): 11-21.

## Hemoglobin levels & appropriate treatments

### Toward Optimized Practice

	Hemoglobin level	Oral Iron	IV Iron	RBC Transfusion
Asymptomatic	< 6g/dL	✓	✓	• Maybe 1 unit
	6 - 9g/dL	✓	✓ ★	✗
	>9g/dL	✓	★	✗
Symptomatic	< 7g/dL	✓	✓	<ul style="list-style-type: none"> <li>• 1 unit at a time</li> <li>• Reasses in-between</li> </ul>
	7 - 10g/dL	✓	✓	• Maybe 1 unit

★ Only required for patients who fail oral iron due to tolerance or lack of efficacy

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Revised on February 5th, 2018

## Choosing Wisely questions to ask your patients

### Four questions to discuss with your patients

- 1 Do they really need this test, treatment or procedure?
- 2 What are the downsides?
- 3 Are there simpler, safer options?
- 4 What happens if they do nothing?