

Intravenous Iron Sucrose Appropriateness Based on a Hospital Guidance Document



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BACKGROUND

- A yearly review process is conducted by the request of the Pharmacy and Therapeutics committee of selected restricted medications, including intravenous (IV) iron.
- An IV iron guidance document was approved through the committee in March of 2018 to limit inappropriate use.
- The guidance document includes two algorithms to determine appropriateness of use. One algorithm is for patients with chronic kidney disease (CKD), while the other is for patients with normal renal function.
- IV iron is not only costly, but inappropriate use can increase the risk for iron overload, hypotension and other adverse reactions.

OBJECTIVES

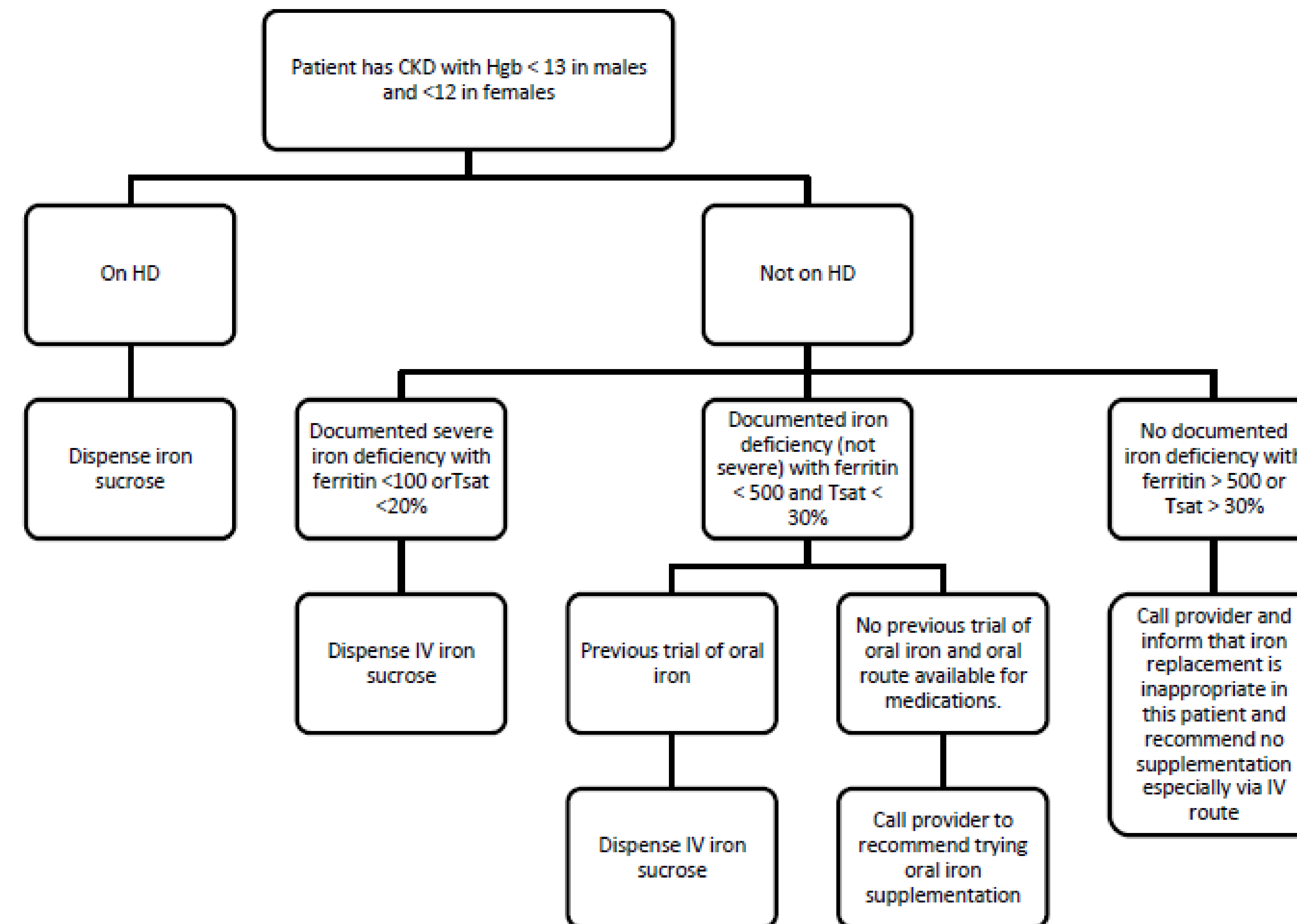
- The primary objective was to assess the appropriateness of IV iron based on the approved guidance document.

DESIGN

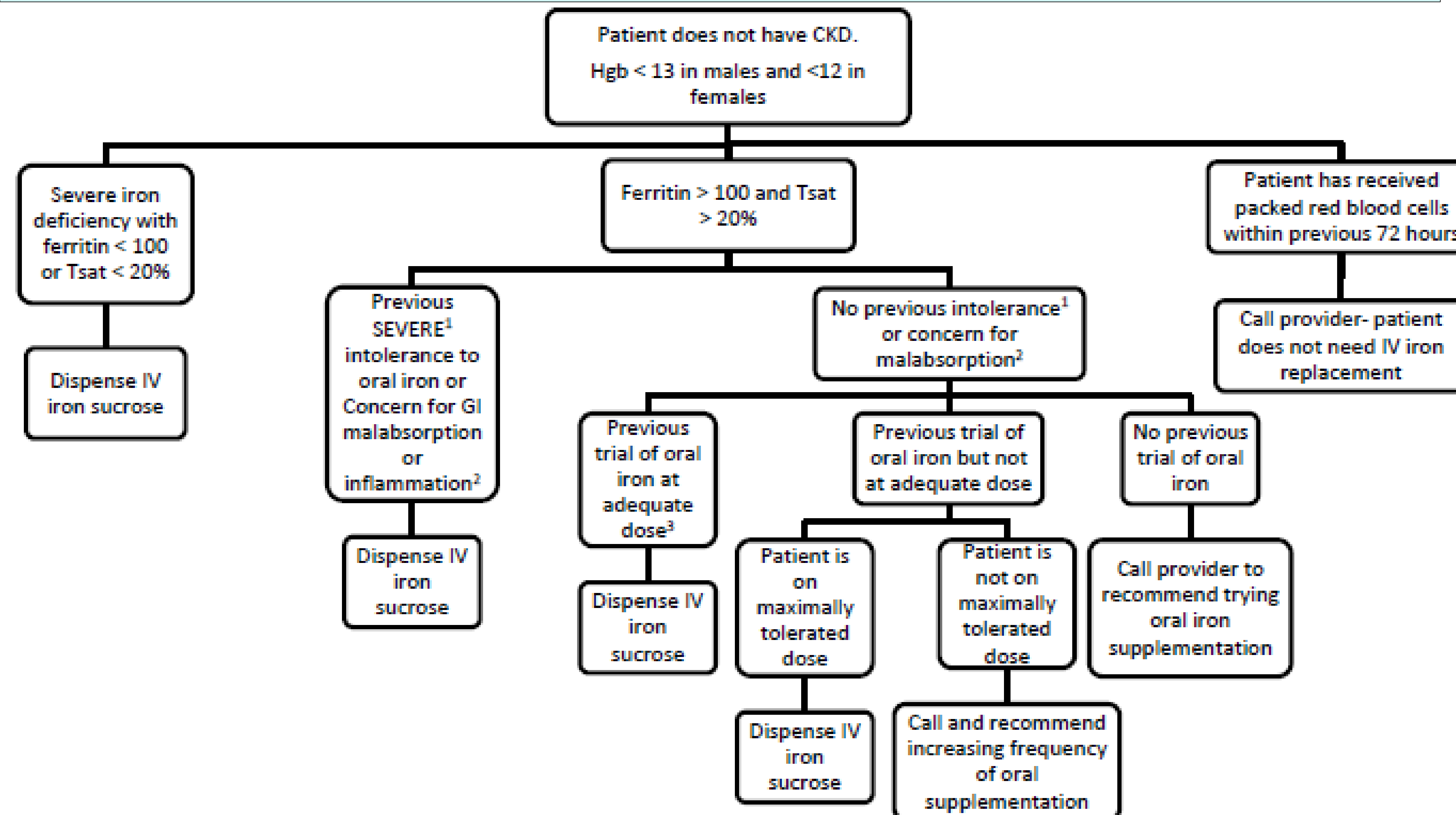
- Retrospective chart review at Buffalo General Medical Center and Millard Fillmore Suburban Hospital
- A medication administration report was generated which identified all patients who received IV iron from July 1, 2019 to September 30, 2019.
- Inclusion**
 - All patients who received IV iron during the time period
- Exclusion**
 - None

GUIDANCE DOCUMENT

Algorithm 1: Patents with CKD



Algorithm 2: Patents without CKD



RESULTS

Outcomes: Patients with CKD (n=37)

Appropriate use of IV iron [n(%)]	33 (89.2%)
Hemodialysis [n(%)]	9 (24.3%)
Use of epoetin alfa [n(%)]	15 (40.5%)
Iron studies (within last 30 days) [n(%)]	33 (89.2%)
Mean values (range)	
Ferritin (ng/mL)	243.4 (4-1102)
Serum Fe (mcg/dL)	26.0 (6-79)
TIBC (mcg/dL)	244.6 (71-461)
Tsat (%)	13.6 (3-79)
Mean Hgb (range)	8.0 (6.6-10.2)
Trial of oral iron before IV therapy [n(%)]	6 (16.2%)

Outcomes: Patients without CKD (n=65)

Appropriate use of IV iron [n(%)]	43 (66.2%)
GI malabsorption [n(%)]	3 (4.6%)
Packed red blood cell (PRBC) transfusion within 72 hours prior [n(%)]	17 (26.2%)
Based on the assumption that 1 unit of PRBC=250 mg of iron, number of patients receiving >1000 mg of IV iron [n(%)]	7 (10.7%)
Mean values (range)	
Ferritin (ng/mL)	110.5 (5-821)
Serum Fe (mcg/dL)	20.2 (8-93)
TIBC (mcg/dL)	300.6 (79-611)
Tsat (%)	7.7 (2-29)
Mean Hgb (range)	8.1 (5.3-11.8)
Trial of oral iron before IV therapy [n(%)]	18 (27.7%)

CONCLUSIONS

- IV iron was used more appropriately in patients with CKD than in patients without CKD (89.2% vs. 66.2%, respectively).
- Education to pharmacists and providers to recommend iron studies and limiting use in patients who received PRBCs within 72 hours can increase appropriateness in patients without CKD.