

Diagnosis and Management of Iron Deficiency Anemia (IDA) in Home Parenteral Nutrition Patients: A Clinical feasibility study to determine treatment and practice patterns of physicians and pharmacists



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Introduction/Background

Iron deficiency anemia (IDA) is the most common cause of anemia in the world and is typically caused by inadequate intake of iron or malabsorption, chronic blood loss, or a combination of both. The current first line of therapy for patients with iron deficiency anemia is oral iron supplementation. Oral supplementation is inexpensive, safe, and effective at correcting iron deficiency anemia; however, it is often not well tolerated by many patients and it is insufficient in others. This population of patients proves to be challenging to manage. Historically, these patients have required numerous and frequent blood transfusions and suffer end-organ damage resultant from their refractory anemia. The use of intravenous iron as a supplement decreased significantly secondary to the presence of infrequent but serious side effects.⁽¹⁾ Newer and safer intravenous iron preparations are now available, but require an office or infusion clinic visit, disruption to the patient routine and, as a result, are likely currently underutilized. ⁽²⁾ Many patients on home infusion therapy suffer from diseases with which iron deficiency and anemia are commonly associated, but current treatment patterns are inadequate. Limitations with the current approach can lead to a vicious cycle of late diagnosis and treatment, inconsistent follow-up, and increased risk of office visits or hospitalizations. In-home iron infusion therapy can potentially benefit patients with convenience of administration, improvement in quality of life and avoidance of additional trips to the clinic. Home infusion patients are at particularly high risk for iron deficiency anemia. IDA falls into the category of a condition that is relatively simple to identify but challenging to treat with current IV formulations. IDA is estimated to occur in 40% to 55% of all patients on long-term parenteral nutrition. ^(3,4) The American Society for Parenteral and Enteral Nutrition (ASPEN) recommends that patients receiving home parenteral nutrition be screened regularly for anemia and treated with parenteral iron when iron is recommended by the physician.⁽⁴⁾ Though IDA is most common in patients with parenteral nutrition needs, many patients on home infusion therapy, such as those receiving therapy for hydration ⁽⁵⁾, long-term inotropes ^(6,7), anti-neoplastic therapy ⁽⁸⁾ and irritable bowel disease ⁽⁹⁾ suffer from iron deficiency anemia is with reported prevalence of 33-50%, but currently treatment patterns are inadequate.

Purpose/Objective

To conduct a clinical feasibility study to assess treatment and practice patterns and attitudes towards management of iron deficiency anemia (IDA) in the home infusion population. The purpose of the study was to inform the design of future clinical development programs for a novel approach to iron replacement in the home infusion population.

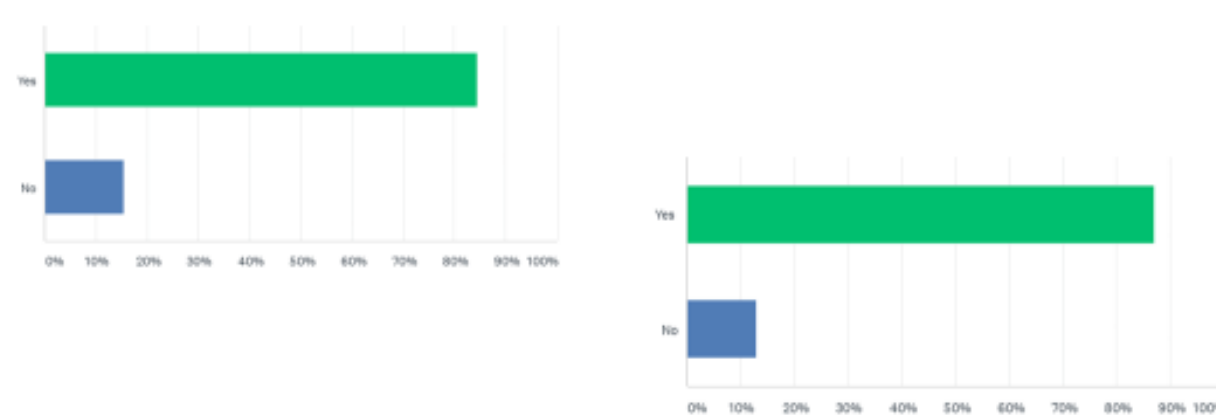
Methods

US physicians and pharmacists actively engaged in the identification and management of IDA were identified in conjunction with the Oley Foundation. Outreach was conducted via a SurveyMonkey questionnaire that was developed in cooperation with Key Opinion Leaders in gastroenterology and TPN. The study was conducted in November – December 2020.

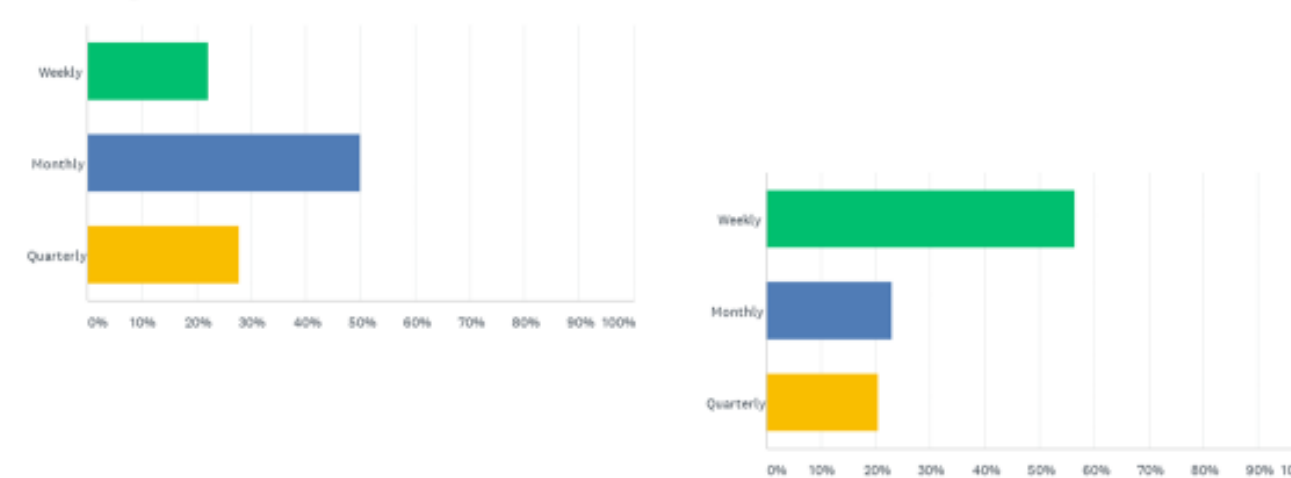
Topline Results

A total of 26 Physician responses and 39 Pharmacist responses were recorded and analyzed.

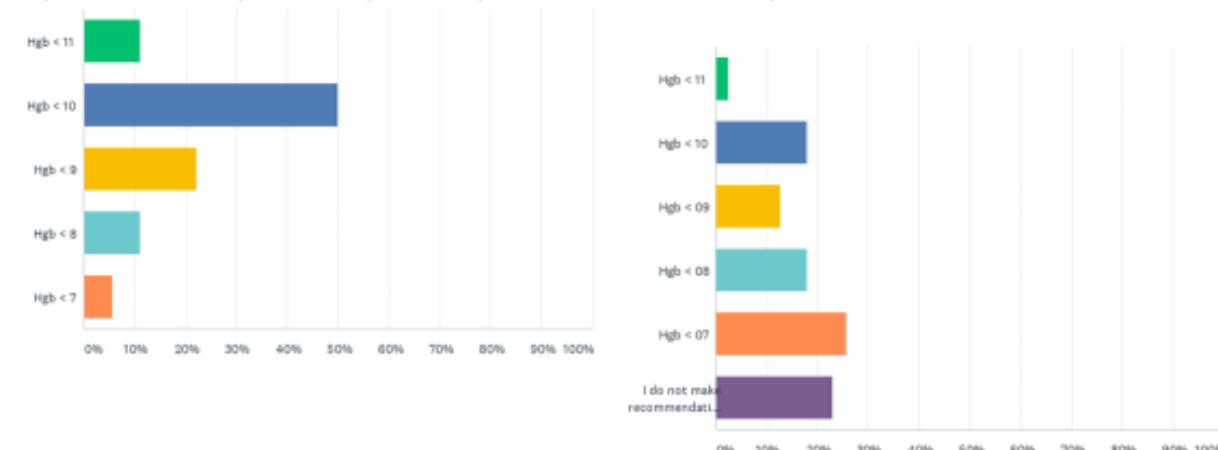
Q1: Do you prescribe intravenous iron (IV Iron) for your home parenteral nutrition patients who have iron deficiency anemia? (MD) Would you recommend the use of intravenous iron (IV iron) for home parenteral nutrition patients you are monitoring who have iron deficiency anemia and are not candidates for oral iron therapy? (RPh)



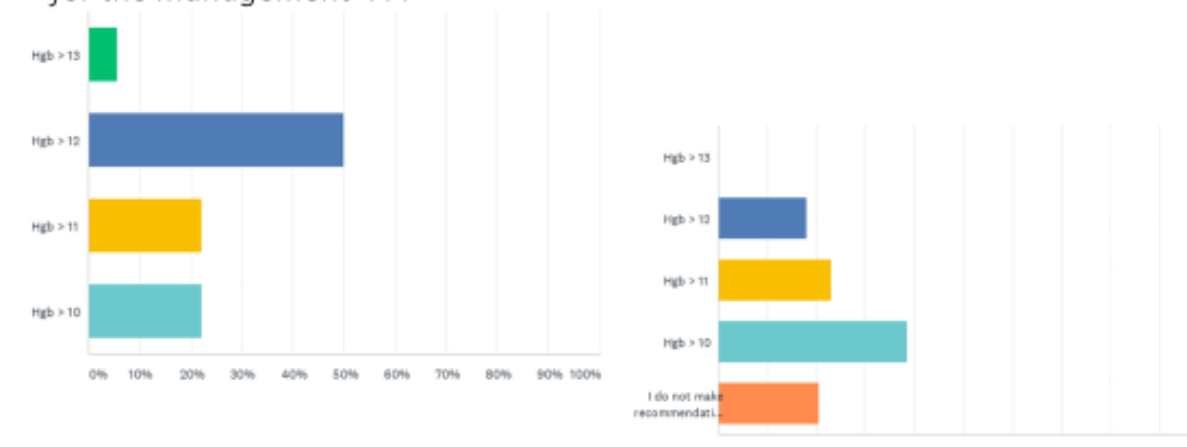
Q4: Generally, how often do you check hemoglobin and or hematocrit in your home parenteral nutrition patients? Generally (as per your Standard of Care), how often do physicians/clinicians managing home parenteral nutrition patients check hemoglobin and or hematocrit?



Q10: What is your trigger for initiating IV iron therapy to your home parenteral nutrition patients? If you recommend providing IV iron therapy for the management of home parenteral nutrition patients . . .



Q11: What is your therapeutic target for iron therapy in your home parenteral nutrition patients? If you recommend providing IV iron therapy for the management . . .



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Key Insights

- More than 85% of physicians and pharmacists recommend IV iron for HPN patients (Q1 chart))
- Oral iron remains first-line therapy in ~50% of respondents in both groups
- Standard iron panel (Fe, TIBC, ferritin, TSAT) employed in the HI setting for assessment of iron status
- Outreach validates literature reports that ~ 50% of HPN patients suffer from IDA, however
 - No clear consensus on treatment or practice patterns (Q4 chart)
 - No clear consensus from outreach for Hb target to initiate therapy. Literature supports <12 ♀ & <13 ♂ g/dL. (Q10 chart)
 - No clear consensus from outreach for Hb target for goal directed therapy. (Q11 chart)
- Treatment plans indicative of current therapeutic options

Discussion

Many patients on home infusion therapy suffer from diseases with which iron deficiency and anemia are commonly associated, but current treatment patterns are inadequate. IV iron supplementation is more effective than oral formulations however, concern for adverse events is a deterrent. Home infusion of traditional IV iron is limited due to risk of hypersensitivity and concerns about incompatibility with other infused drugs. An office visit for infusion of IV iron is costly, inconvenient, and often does not fit the physician practice care model. Limitations with the current approach can lead to a vicious cycle of late diagnosis and treatment, inconsistent follow-up, and increased risk of office visits or hospitalizations.

Conclusions

The study results validated our initial assumptions that management of IDA in this home infusion population is suboptimal and remains an unmet clinical need. Further, that a safe, effective and convenient IV iron compound could have a dramatic impact on patient care and Quality of Life

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