Hypophosphatemia is a recognised complication of iron infusion. Patients receiving Home Parenteral Nutrition (HPN) due to intestinal failure are at additional risk of hypophosphatemia due to their underlying disease state. This study aimed to identify the extent of hypophosphatemia following iron infusion in this group of patients.

Methods The medical records of all HPN patients treated with parenteral iron infusion in the Department of Gastroenterology, Freeman Hospital, between April 2012 and February 2017 were retrospectively reviewed. Patients were identified from the regional HPN electronic database.

Results Thirty five patients (19 females, 16 males), mean age 54, received iron infusions. All patients received Ferrinject iron infusion (Vifor Pharma UK Limited) at a dose appropriate to manufacturer recommendations, based on bodyweight. Results demonstrated that phosphate levels fell in 7 out of 35 patients (20%) following iron infusion; 2 with severe hypophosphataemia (5.7%) and 5 with mild hypophosphataemia (14.3%). Table 1 summarises the effect on phosphate level of iron infusion. Twenty seven out of 35 patients (71%) had phosphate levels checked within 2 months post iron infusion.

One patient who developed severe hypophosphataemia had mild hypophosphataemia prior to iron infusion. All other patients had normal phosphate levels beforehand. Both patients with severe hypophosphataemia required intravenous phosphate replacement via manipulation of their HPN prescription. Of the 5 patients who developed mild hypophosphataemia, 4 resolved spontaneously, 1 required HPN prescription change. Time to normalisation of phosphate ranged from 4 weeks to 5 months.

Conclusions Severe Hypophosphatemia is a rare but potentially significant occurrence following iron infusion and can be prolonged in patients receiving Home Parenteral Nutrition. Numbers in this study are small and more studies are needed to investigate this further, including assessing the incidence using other preparations of intravenous iron in this group of patients. Routinely checking phosphate levels after iron infusions in this group of patients is probably warranted.