



Evaluation of Management of Anaemia in Pregnancy using IV Iron (Monofer®)

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Introduction

The worldwide prevalence of anaemia in pregnancy is estimated at **38%**. In the UK, it affects 24.4% of women antenatally and 33% postnatally.

Antenatal anaemia predisposes women to numerous risks, such as impairment to cardiovascular, thyroid or immune function, foetal growth restriction, prematurity and postpartum haemorrhage (PPH). Fatigue secondary to anaemia has a significant impact on women's quality of life as well, which can predispose to postnatal depression. Cardiac abnormalities, PPH and mental health issues are leading causes of maternal mortality.

Blood transfusions are associated with several risks including haemolytic and non-haemolytic reactions, fluid overload and transmission of blood borne viruses.

Compared to the oral route, intravenous (IV) Iron is a quick and effective way to manage anaemia. The United Lincolnshire Hospitals NHS Trust (ULHT) has been using IV Iron (Monofer®) for two years.

Aim

To evaluate the value of a Monofer® infusion in managing antenatal anaemia.

Objectives

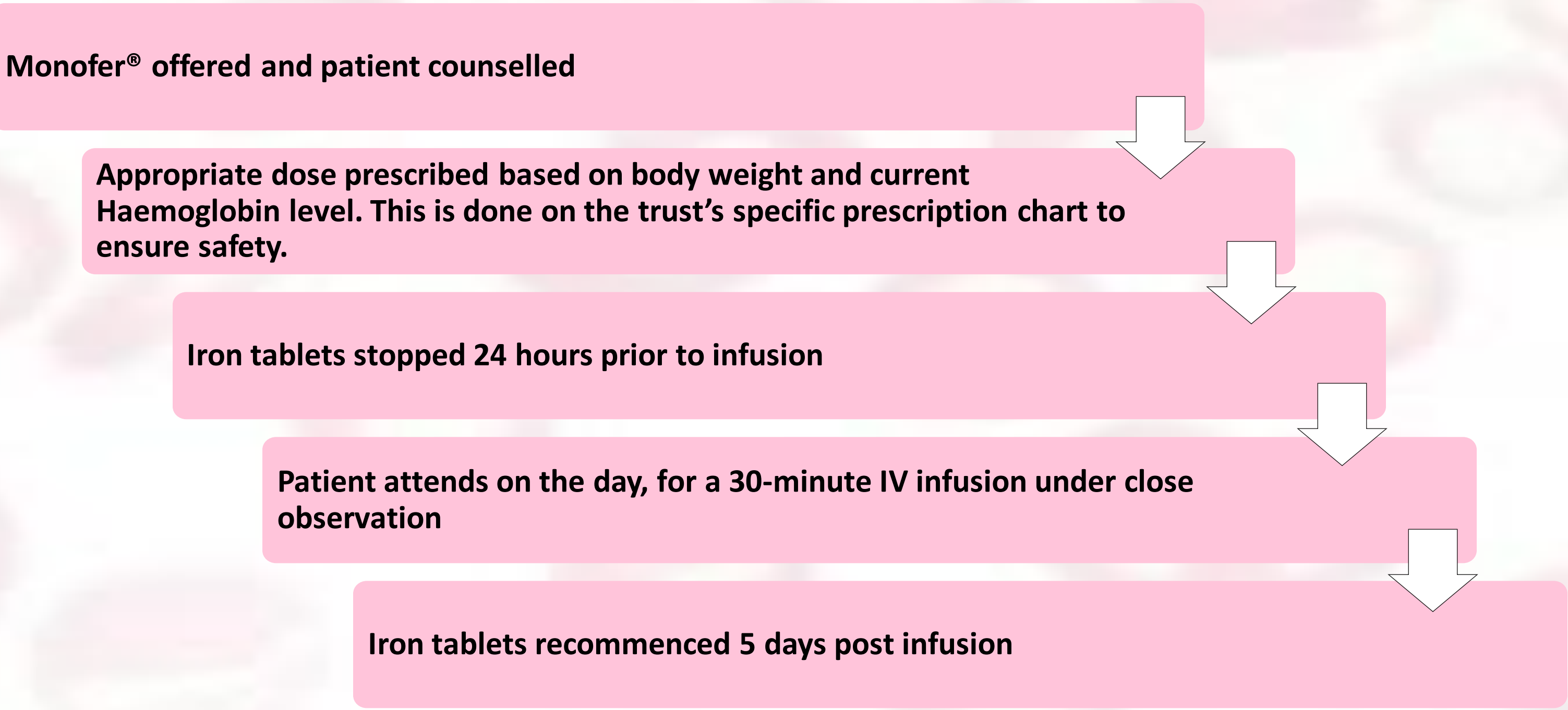
1. Assess effectiveness and safety of Monofer®
2. Determine the practicality of administering Monofer® in a busy hospital setting

Methods

This project was designed as an audit. We collected data from paper and electronic patients' records. This included demographics, blood test results before and after the infusion, record of adverse events during delivery and the documentation of the administration.

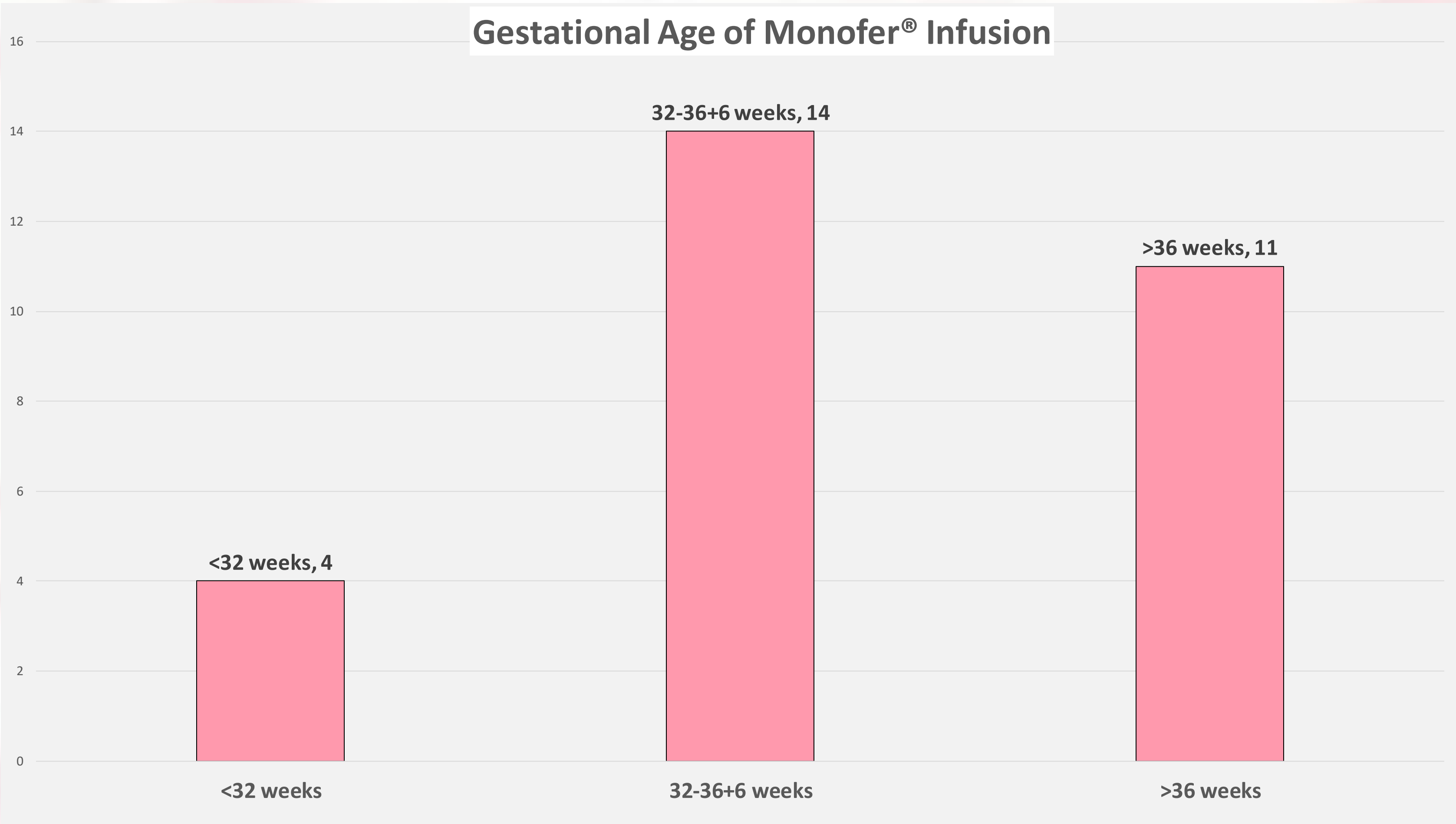
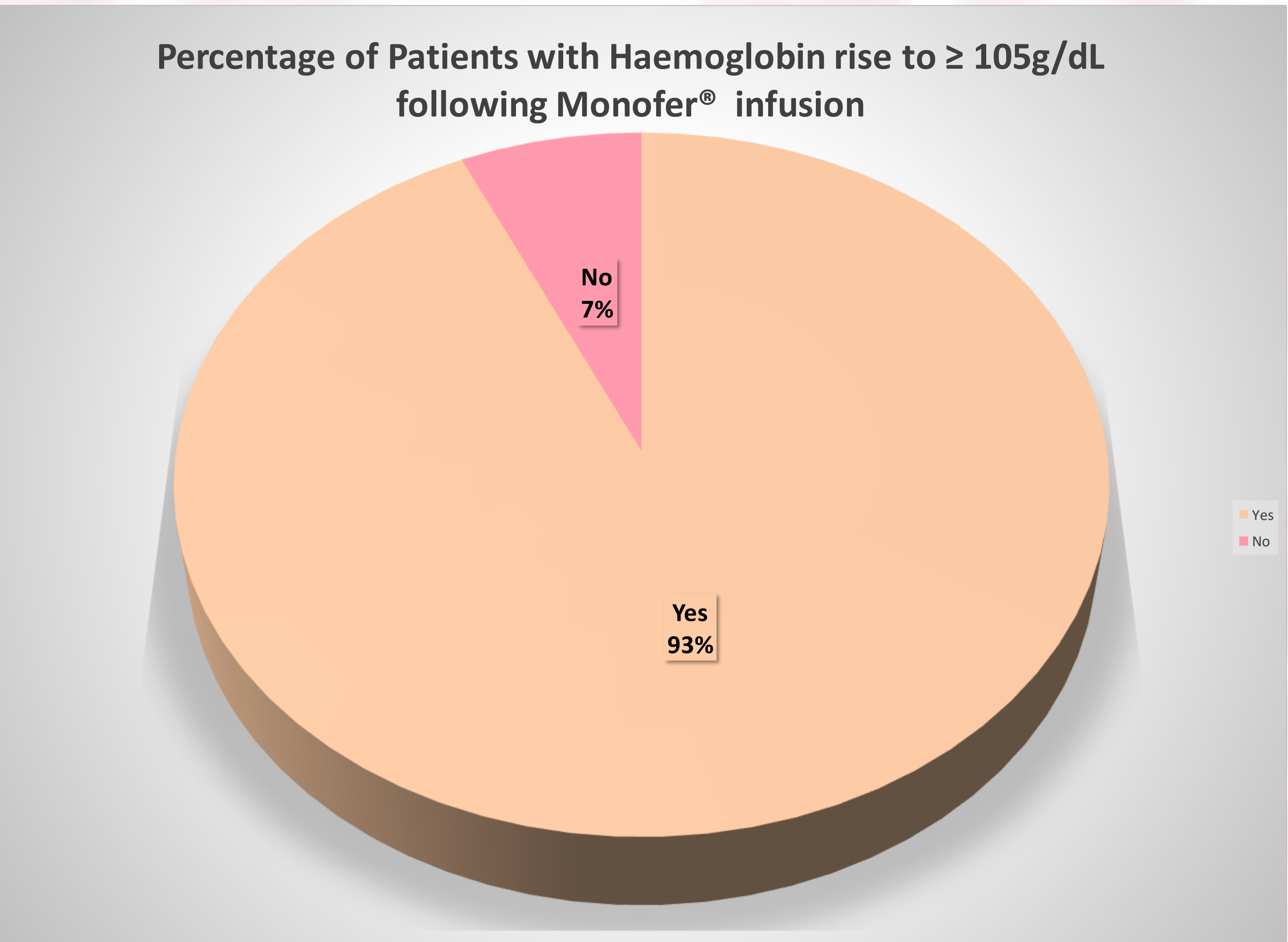
This data was collected from January to June 2021; 45 patients were advised to have Monofer® in this period.

We analysed the data on Microsoft Excel and the results were discussed in the local audit meeting.



Results

- 66.7% of patients were antenatal
- 33.3% were postnatal
- 87% of patients accepted Monofer
- Average infusion time 30 – 60 minutes
- Average time of Hb rise to 105g/dL is 2-3 weeks
- 8% of patients reported side effects
- Only 1 patient discontinued the infusion because of side effects



Side Effect	Number of Patients	Percentage (%)
Headache	1	2.56
Shortness of Breath	1	2.56
Tachycardia and Tachypnoea	1	2.56
Anaphylaxis	0	0.00
No reactions	36	92.31

Conclusion and Recommendations

Monofer® is effective in managing both antenatal and postnatal anaemia and is a suitable alternative to oral iron or blood transfusions. It has a wide safety margin and is easy to administer, therefore should be used more widely to manage anaemia in Obstetrics.

This is especially useful in situations such as late gestation, ineffective or poorly tolerated oral therapy and non-compliance with iron tablets.

We would recommend counselling patients about the infusion and providing them with an information leaflet prior to the infusion. Staff education about the benefits of Monofer is essential in order to facilitate its appropriate use.

References: Pathologists, T., 2022. *Anaemia in pregnancy and the postpartum period*. [online] Rcpath.org. Available at: <<https://www.rcpath.org/profession/publications/college-bulletin/july-2021/anaemia-in-pregnancy-and-the-postpartum-period.html>> [Accessed 2 June 2022]; Pavord, S., Daru, J., Prasannan, N., Robinson, S., Stanworth, S. and Girling, J., 2019. UK guidelines on the management of iron deficiency in pregnancy. *British Journal of Haematology*, 188(6), pp.819-830; Obeagu, E. and Oshim, I., 2016. Iron and blood donation: A Review. *Israel Journal of Medical Sciences*, 2(10), Figure 7.