

## **INTRAVENOUS IRON: THE PATHWAY REDESIGNED**

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**PROBLEM:** Efficient intravenous iron administration is vital in the effective treatment of renal anaemia, yet an audit carried out in 2007 revealed deficiencies in the process within our organisation. Referrals for intravenous iron were being made in an *ad hoc* way with no system in place to ensure that other serious or treatable causes of anaemia had been ruled out. Many patients were waiting far in excess of 18 weeks for their treatment and Erythropoiesis stimulating agent (ESA) doses were perceived to be high as a consequence.

**PURPOSE:** We needed to identify current problems and streamline the IV iron service to improve patients' quality of life by effective management of renal anaemia.

**DESIGN:** A multidisciplinary group undertook service review and redesign. The IV iron pathway was process mapped, demonstrating a complicated series of steps. The pathway was streamlined and a new iron therapy policy was produced according to the NICE and Renal association guidelines. A simple IV iron referral form was produced with mandatory data entry to ensure that alternative causes of anaemia were ruled out, potential for allergic reaction minimized and correct iron dose could be calculated. A dedicated clerical team was supported by both a nursing and medical lead.

The medical records of the 406 patients on the waiting list were reviewed and patients requiring intravenous iron were allocated to single dose iron dextran (Cosmofer) treatment or 5 doses of iron sucrose (Venofer). Patients who were found to be suitable for oral iron treatment were removed from the list.

Intravenous iron administration was performed on the renal short stay ward and nursing staff were trained by pharmacy to make up infusions. Additional capacity was provided in the evenings and weekends, making the service more patient-friendly. Clerical staff coordinated the waiting list and any problems encountered were rapidly overcome by close multidisciplinary working.

**FINDINGS:** 1023 doses of IV iron were administered to 790 patients over a period of 20 months. 600 doses of IV iron were administered during 2007, with an average wait time of 143 days (s.d. 207 days, range 1-1487). 423 doses were administered in 2008 with an average wait time of 31 days (s.d. 19 days, range 1-112). Urgent patients can now be treated within 5 – 14 days.

**CONCLUSION:** We have transformed our service over a 2 year period, with attention to process mapping, clear policies and protocols and a focused multidisciplinary approach. This has created a rapid, safe, patient-centred service and motivated the multidisciplinary team to take on future challenges. We believe this is an excellent example of using process mapping to successfully improve service quality.

**RELEVANCE:** The 18 week pathway is of critical importance at present. We present a systematic approach to service redesign which could be applied in any setting.