Surrey and Sussex NHS Healthcare NHS Trust

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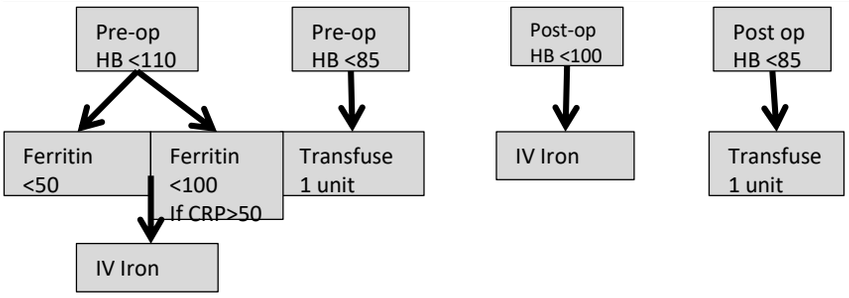
Transfusion of patients with a #NOF in a Busy District General Hospital before and after publication of Intavenous Iron in #Neck of Femur policy

Patients with #NOF are some of the most medically complex admissions to SASH. These patients are often anaemic, and there is evidence to support pre-operative optimisation with Intravenous Iron. A policy was written to address this need, and this audit was designed to look at blood and iron transfusion in these patients before and after publication of the policy and incorporation into the clerking proforma.

IV Iron policy (simplified from SASH policy April 2015, and #NOF clerking proforma May 2017)



Audit design.

Two months were assessed from the #NOF database; December 2016 and December 2017. Transfusion data relating to all the patients in each month was obtained from APEX. Data relating to Hb, Ferritin and iron studies was obtained, IV Iron data was obtained from Discharge summaries, and may under-represent IV iron use.

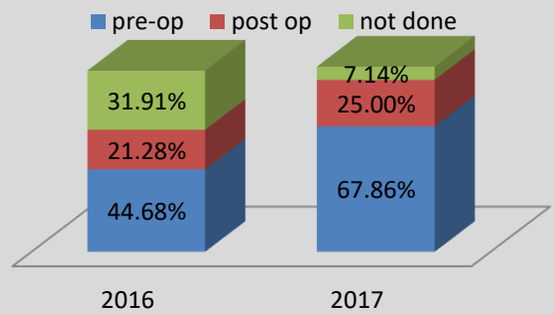
514 patients were admitted in 2017 with #NOF. The average age was 82.59yrs, and in the year 32 passed away during their IP stay. Their average length of stay was 17 days. Average Hb pre-op was 120 in both years, and post op HB was 92g/L in 2017 and 93g/L in 2016. In both years 43% of patients had a post op HB <85 which would trigger transfusion according to the protocol

Challenge 1.

Do #NOF patients have iron studies checked Pre-Op?

The % patients having their iron studies checked has dramatically risen in 2017. Increasingly pre-op. In 2016, 9 of 48 (19%) patients were admitted with Hb <110, and 0 of 5 of these patients had a ferritin <100. 3 of these 9 (33%) received IV iron. In 2017 9 of 56 (16%) patients were admitted with Hb <110, and 7 of 8 of these had ferritin <100. Only 1 of these 9 patients received IV Iron.

When were iron studies checked?



Challenge 2.

Are patients getting IV Iron according to protocol?

- **In 2017**, **20%** (11 of 56) received IV iron.

15 of 51 **(29%)** patients had ferritin<100, of whom 2 (13%) received IV iron. 23 of 50 (46%) patients had TFN saturation <14%, of whom 6 (26%) received IV iron.

38 of 56 (68%) patients had post-op HB <100 and all 11 IV iron and 23/24 transfusions were given to this group

Post-op Transfusion Trigger HB averaged 82.2g/L.

14 of 51 ferritins were checked post op and ?post IV iron.

- **In 2016**, **13%** (6 of 47) patients received IV iron.

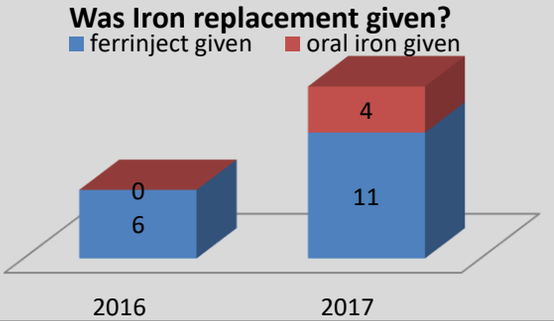
7 of 31(23%) patients had ferritin <100, of whom 1 received IV Iron. 15/33(45%) had TFN saturation <14%, of whom 0 received IV Iron.

30 of 47 (64%) patients had post op HB <100, and all 6 IV Iron, and 12/13 transfusions were to this group.

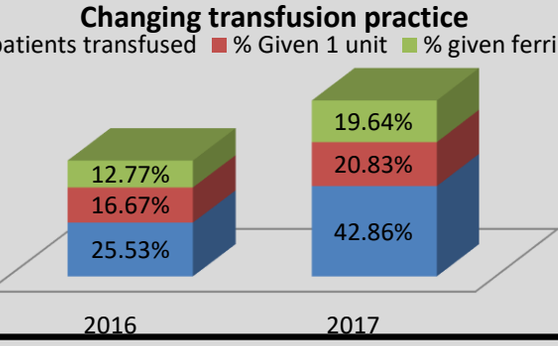
Post-op Transfusion Trigger HB averaged 78.2g/L.

4 of 26 ferritins were checked post op, ?post IV iron.

Was Iron replacement given?



Changing transfusion practice



Conclusions; **1.** Iron studies are checked much more efficiently and more often pre-op. **2.** It does not appear that iron studies are influencing IV Iron use ?due to delay in results, ?interpretation of results. **3.** We need to further optimise IV iron use, especially PRE-OP. **4.** Post-op Hb <100 is the trigger for nearly 100% transfusion and 100% IV iron. **5.** Ferritin and Transferrin saturations may be falsely normal when checked post op and may mean that IV Iron is not given. **6.** Use of 1 unit transfusions is increasing, but can be further improved.

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