

# Preventing and improving rates of anaemia in pregnant women in Dumfries and Galloway

Supported by PrAMS – Pregnancy Anaemia Management Scotland, part of the Modernising Patient Pathways Programme  
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## Introduction

The Quality Improvement project of preventing and improving rates of anaemia in pregnant women in Dumfries and Galloway is supported by the Modernising Patient Pathways Programme. The Scottish Government and the Centre of Sustainable Delivery identified anaemia in pregnancy as a key area for improving maternal and fetal outcomes.

In Scotland, approximately a fifth of women experience anaemia in their pregnancy. The impact on the woman and her baby can be long term and considerable and yet anaemia is a fairly simple, cost effective and achievable condition to prevent and treat.

## Why prevent and improve rates of anaemia in pregnancy?

### For the mother

- Reduce fatigue, palpitations, shortness of breath
- Reduce time off work and impact of family life
- Reduce blood loss at birth and rates of Post Partum haemorrhage
- Reduce risks of placental abruption and placental insufficiency
- Reduce risk of pre term labour
- Reduce risk of postnatal depression
- Reduce length of hospital stay and hospital costs

**Overall improve quality of life for the mother**

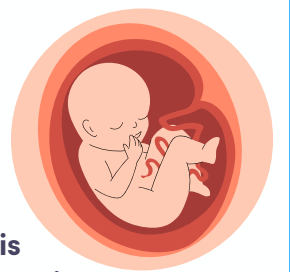


## Why prevent and improve rates of anaemia in pregnancy?

### For the baby

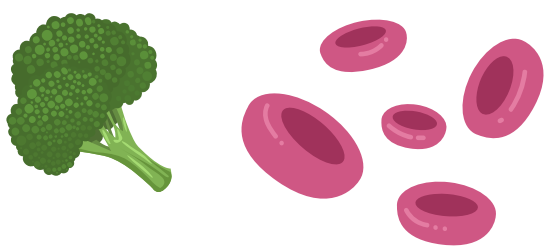
- Reduces risks of premature birth and implications associated with prematurity
- Reduces incident of low apgar score at birth
- Reduces risks of growth restriction
- Improves neurodevelopment of the infant
- Improves breastfeeding rates
- Reduces chances of anaemia in the neonate

**Reduced concentration, cognition and motor function is measurable up to 25 years of age in children who are born iron deficient compared with those born with sufficient iron.**



## Aims and objectives

- To develop a new up to date guideline on anaemia management in pregnancy
- To educate women and staff on the importance and benefits of anaemia management in pregnancy
- To look at how and when we diagnose anaemia in pregnancy
- To reduce the side effects from iron treatment with correct prescribing and advice
- To improve compliance of women taking iron
- To update iron infusion protocol
- Overall improve rates of anaemia at birth and reduce the morbidities associated with anaemia.



## What has been done so far?

- Learnt from the pilot health boards in the PrAMS programme
- From some data gathering, established that women were being both over and under prescribed iron supplements.
- Developed a guideline flowchart for midwives and medical staff to ensure appropriate prescribing of prophylactic and treatment iron supplements.
- Developed a flowchart for interpreting blood results
- Started taking serum ferritin at booking to identify early anaemia
- Worked with pharmacy lead to allow prophylactic iron supplements to be offered to women at first scan and at detailed scan.
- Developed a patient information poster for women to access on Badgernet app.
- Development letters to communicate with GPs and Primary care prescribers
- Started education/refresher sessions with midwives about anaemia in pregnancy
- Started to gather data

## What is there still to do?

- Develop a full guideline for NHS D&G
- To continue to roll out education to all midwives and obstetric medical staff.
- To look at changing iron infusion protocol from Cosmofer to Monofer to reduce hospital costs through reduced inpatient time for women.
- Further engagement with GPs and Primary Care prescribers.
- Develop digital communication with GP surgeries around prescription requests.
- Look at possible postnatal anaemia issues.
- Look at possible links to SSI rates and anaemia in pregnancy – early data suggest tentative link.
- Link the work with Scottish Patient Safety Programme – tie in with reducing rates of Postpartum haemorrhage.
- Continue to gather data to ensure rates of anaemia are reducing through the measures implemented.



## Methodology

Pilot health boards in Scotland started work under the banner of PrAMS – Pregnancy Anaemia Management Scotland and supported by Modernising Patient Pathways to explore ways of improving anaemia rates for women in pregnancy. The strategies adopted by NHS Dumfries and Galloway are based on the work and data from the pilot health boards.

Work has also been based on the recommendations from the most up to date guideline from The British Journal of Haematology.

Initial data collection looked at rates of anaemia in pregnant women and analysed how well the existing anaemia guideline was followed before the changes were implemented. Documentation was looked at and areas for improvement and best practice were explored.

Discussions took place with the laboratory around the additional costs and work load of additional testing. Support and advice came from the Senior Clinical Pharmacist to procure and label supplies of iron supplements.

## Analysis and Conclusion

Initial data showed that women were being both over and under prescribed iron despite a guideline being in place before this project took place. Women at risk of anaemia were not being identified for prophylactic iron. Almost 50% of women being treated for anaemia were over prescribed iron leading to side effects and poor compliance. This identified areas for improvement.

The cost of prophylactic iron was worked to be around £1.20 for a 9 week supply .

The cost of additional ferritin testing by labs is around £1000 a year. Both easy and cheap measures to implement.

The new measures plus education of women and midwives are predicted to see improvements in rates of anaemia at birth.



**There is still a lot of work to do and data to collect!**

## Syndeo: a leadership, quality improvement and network development programme

The project was initially started in 2022 but stalled following a change of role and loss of protected time for the project as well as other staffing and financial challenges. Through participation in the new RCM course Syndeo: a leadership behaviour, quality improvement and network development programme for band 7 leaders, this developed the QI and leadership skills and confidence to push the project forward to the implementation phase. The course explored

- How to build an effective and cohesive team
- Quality Improvements techniques and analysis



- The culture of change
- Self-discovery and self-leadership
- Managing conflict
- Compassionate leadership
- Accountability
- An analysis of my own leadership qualities

## References

Pavord et al. UK guidelines on the management of iron deficiency in pregnancy. British Journal of Haematology 2019, Volume 188, Issue 6, Pgs 819–830  
<https://doi.org/10.1111/bjh.16221> 2. Benson C et al (2021) The effect of iron deficiency and anaemia on women's health. Anaesthesia, Volume 76, (Suppl.4), Pg84–95.

