

# A Survey Assessing Medical Professional's Confidence and Understanding of Iron Studies in Older People

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## Introduction

Iron deficiency anaemia (IDA) is common in older people, a higher serum ferritin (e.g. 45) has been suggested as a more appropriate cut-off, but many people use serum iron and total iron binding capacity when there is a low or normal ferritin. Iron studies are increasingly being used to diagnose IDA, with serum ferritin being the most reliable marker of iron status<sup>1</sup>. We wish to update guidance for diagnosing IDA, but first wished to survey current knowledge.

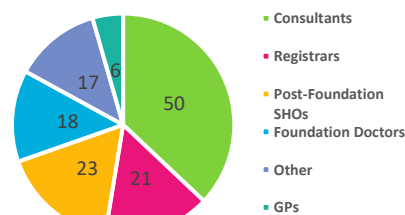
## Methodology

Clinical staff working with older people were asked to filled in a survey. All participants were asked to answer:

- What grade they are.
- 2 questions asking participants to rate their confidence in interpreting ferritin and iron studies on a scale of 1 to 5.
- 2 multiple choice questions illustrating common scenarios whereby participants interpreted iron studies to determine the most likely diagnosis: anaemia of chronic disease but with a low total iron (Case 1), and IDA(Case 2).
- 'True/ False' to the question 'In anaemia, a low serum iron accurately predicts IDA.' (Statement 3) and to answer 'What is the best test in predicting IDA?' (Question 4).

135 healthcare professionals answered the survey, see Figure 1. Within the 'Other' category: 9 were advanced clinical practitioners (ACPs), 2 were pharmacists, 3 were physician associates (PAs), and 3 did not specify.

Figure 1: Number of participants by grade



## Results

The mean self-reported confidence at interpreting ferritin was 3.7 For iron studies, it was 3.2. Consultants were the most confident in interpreting ferritin and iron studies, and Foundation Doctors the least (see Figure 2). At each grade, more participants answered Case 2 correctly than Case 1 (see Figure 3). In response to Statement 3, 83% of participants answered 'false'. In response to the questions Question 4, only 46% of participants answered 'ferritin' (see Figure 4).

Figure 2: Mean Self-Confidence Ratings at Interpreting Select Investigations

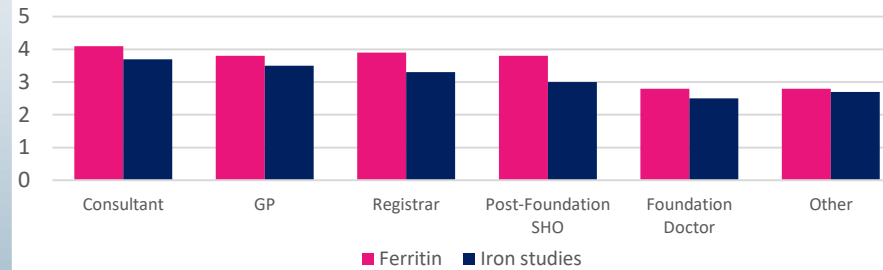


Figure 3: % of Participants Who Answered Each Case Study Correct

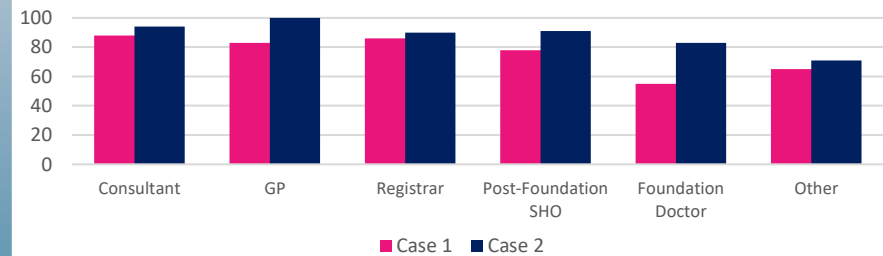
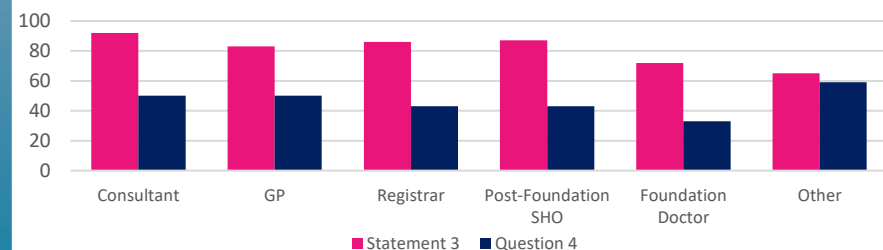


Figure 4: % Who Provided Correct Answer



## Conclusions

The data suggests that clinicians of all grades felt less confident at interpreting iron studies than ferritin. A significant proportion of medical professionals did not correctly interpret iron studies, with more participants at each grade answering Case 1 incorrectly, a case of anaemia of chronic disease, over Case 2, a case of iron deficiency anaemia. More junior clinicians, such as foundation doctors and post-foundation SHOs, had less self-confidence and answered more questions incorrect than more senior grades.

The majority of participants did not recognise ferritin as the most useful test in the diagnosis of iron deficiency anaemia, and many thought that a low serum iron accurately represents iron deficiency. This misconception may have contributed to why many clinicians answered Case 1 incorrect.

## Recommendations

We have consulted with our colleagues in haematology and gastroenterology and drafted a revised guideline to help interpretation, requesting short guidance on iron studies interpretation to be put in the comments within our results. We will also examine IV iron prescription use and provide clear guidance on indications, tracking costs related to this.

## References

1. Jennifer Kirsty Burton, Luke C Yates, Lindsay Whyte, Edward Fitzsimons, David J Stott, New horizons in iron deficiency anaemia in older adults, *Age and Ageing*, Volume 49, Issue 3, May 2020, Pages 309-318, <https://doi.org/10.1093/ageing/afz199>