Reviewer’s report

Title: Microcytosis and possible early iron deficiency in paediatric in-patients: a retrospective audit

Version: 1 Date: 2 January 2009

Reviewer: Dan Coyne

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Review of “Microcytosis and possible early iron deficiency in paediatric in-patients: a retrospective audit”

This is a well written manuscript which is well organized, logical, and easy to follow. There is no extraneous information meriting exclusion. The conclusions of the authors are reasonable. The information of the value (and weakness) of this quality improvement intervention may be of use to others.

Major Compulsory changes
None

Minor compulsory changes

Abstract
1. The abstract should make clear that an educational presentation to the Medical staff occurred after the first audit, and therefore likely accounts for the marked increase in documentation of low MCV in the second audit
2. The abstract refers to 85% of patients having no clear explanation for low MCV, but the data indicate about half were categorized as having “potential explanations”. This subtlety should be reflected in the abstract.

Methods
1. Were some subjects in both of the two audit periods? If so, give the percentage that appear in both audit periods, and if it is substantial, perform analyses without them included in the second audit period.
2. Describe in greater detail exactly what the educational presentation to the Medical staff covered. You note marked increase in recognition, but little increase in subsequent diagnostic testing or therapeutic interventions. Were these latter things not covered during the presentation?

Results
1. Though the number is given, please state explicitly that in the first audit period only 4 of 33 pts (12%) with low MCV received iron deficiency treatment or follow up for this problem.
2. This sentence makes much of the fall off in treatment among patients recognized as having low MCV: “Of the twenty-one patients whose results had been documented, two (9.5%; as compared to 57.12% from first audit, p =
0.0039) received iron-deficiency treatment and/or follow-up…” The first audit results state only 4 of 33 (12%) with low MCV received treatment or f/u. Looking at this another way, a similar number of patients 4/33 vs 2/27 with low MCV received appropriate follow up diagnostic or therapeutic actions.

Discussion

1. It would be helpful to state the prevalence of iron deficiency among children seen in other studies.

Minor Discretionary revisions

Results

1. Were any of the subjects with normal MCV in the first audit patients with low MCV’s in the second audit? Also, were any subjects with low MCV in the first audit, subjects with normal MCV the second audit? If so, were they one of the 4 treated patients?

Discussion

1. The discussion makes much of the fall off in follow-up Dx and Rx (from 4/7 to 2/21). As stated in #3 above, this is presumable a product of success with the education on recognizing and noting a low MCV. This emphasizes the importance of telling us whether the education included what should be done next. You may wish to discuss the weaknesses of the educational intervention which was performed.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

'I declare that I have no competing interests'