

OFFICIAL ABSTRACT and CERTIFICATION

Iron Deficiency and Anemia in Heart Failure Patients - A Quality Improvement Project

Makayla Mackey

Academy of the Holy Names, Albany NY, United States

Background: Iron deficiency is an independent predictor of impaired functional capacity and decreased survival in patients with congestive heart failure (CHF). IV iron administration has been associated with improvement of functional capacity in CHF regardless of whether or not anemia is present. However the frequency of IV iron utilization in iron-deficient CHF patients has not been well studied.

Methods: We conducted a retrospective analysis of consecutive patients admitted to a single tertiary medical center between May 2019 – May 2021 with the primary diagnosis of CHF exacerbation.

Results: The study cohort included 2,069 individual patients (44% females) who had 2,732 visits during the study period. Iron studies results with both ferritin and transferrin saturation were available in 579 visits (21.2%). Of these, in 250 patient visits ferritin was <100 and in 84 patient visits ferritin level was 100-300 with transferrin saturation < 20%. Overall, indications for iron replacement were met during 334 admissions, however the IV therapy was prescribed in only 82 (25.1%) patient visits.

Conclusion: Despite known benefits of IV iron replacement in CHF patients, only a minority of in-patients admitted for CHF exacerbation are being evaluated for iron deficiency and/or receive indicated IV iron replacement therapy. Interventions to increase the awareness on this subject are warranted.

Category
Pick one only —
mark an “X” in box
at right

- Animal Sciences
- Behavioral & Social Sciences
- Biochemistry
- Biomedical & Health Sciences
- Biomedical Engineering
- Cellular & Molecular Biology
- Chemistry
- Computational Biology & Bioinformatics
- Earth & Environmental Sciences
- Embedded Systems
- Energy: Sustainable Materials and Design
- Engineering Mechanics
- Environmental Engineering
- Materials Science
- Mathematics
- Microbiology
- Physics & Astronomy
- Plant Sciences
- Robotics & Intelligent Machines
- Systems Software
- Translational Medical Sciences

1. As a part of this research project, the student directly handled, manipulated, or interacted with (check ALL that apply):
 - human participants
 - potentially hazardous biological agents
 - vertebrate animals
 - microorganisms
 - rDNA
 - tissue
2. I/we worked or used equipment in a regulated research institution or industrial setting: Yes No
3. This project is a continuation of previous research. Yes No
4. My display board includes non-published photographs/visual depictions of humans (other than myself): Yes No
5. This abstract describes only procedures performed by me/us, reflects my/our own independent research, and represents one year’s work only: Yes No
6. I/we hereby certify that the abstract and responses to the above statements are correct and properly reflect my/our own work. Yes No

This stamp or embossed seal attests that this project is in compliance with all federal and state laws and regulations and that all appropriate reviews and approvals have been obtained including the final clearance by the Scientific Review Committee.

