

Clinical Review: FOCUS Trial

Functional Outcomes in Cardiovascular patients Undergoing Surgical repair of hip fracture

Carson JL, Terrin ML, Noveck H, et al.

N Engl J Med 2011; 365:2453-62.

Topic:

Liberal or restrictive transfusion in high-risk patients after hip surgery.

Patient Population:

2016 patients \geq 50 years old who had either a history or risk factors for cardiovascular disease and whose hemoglobin was $<$ 10g/dL following surgery for hip fracture.

Intervention:

Random assignment to a **liberal transfusion strategy** (transfuse RBC to keep the hemoglobin $>$ 10g/dL) or a **restrictive transfusion strategy** (symptoms of anemia or at physician discretion only if hemoglobin $<$ 8 g/dL).

Outcome:

Death or an inability to walk across a room without human assistance on 60-day follow up.

Results:

- Post-randomization transfusions were three times higher in the liberal group compared to the restrictive group (1,866 units vs. 652 units)
- Rates of primary outcome similar 35.2% in liberal group, 34.7% in restrictive group
- Rates of in-hospital cardiac event or death similar (4.3% vs. 5.2%)
- Rates of death at 60 day follow up similar (7.6% vs. 6.6%)
- Rates of other complications similar

Conclusion:

A liberal transfusion strategy, as compared with a restrictive strategy, did not reduce rates of death or inability to walk independently on 60-day follow-up or reduce in-hospital morbidity in elderly patients at high cardiovascular risk.

Haemonetics' Observations:

- This study demonstrates that limiting blood transfusion in this high-risk patient group is not associated with less favorable outcomes than a liberal transfusion policy. **Liberal blood transfusion does not improve outcomes.**
- The study is particularly important because of the high-risk study population: Average age = 82, 75% female.
- This study is of particular relevance to orthopedic surgeons and the results are likely applicable to patients having joint replacement surgery.
- Reducing "transfusion triggers" is an important part of blood management.

Link to Article: <http://www.nejm.org/doi/full/10.1056/NEJMoa1012452>