

BANNER BAYWOOD MEDICAL CENTER MESA, ARIZONA



BACKGROUND

Hip fracture surgery isn't an elective event. Most cases involve elderly patients who have fallen and are transported to the emergency room for care. They usually have complex medical histories that include anemia which is associated with an increased morbidity and mortality.

Larry Spratling, MD, chief medical officer at BBMC states "we should be screening patients for anemia. It's a very common condition affecting patients with heart failure, lung disease, those on dialysis and so many other conditions. At Banner Baywood we're focusing on readmissions, and what we've learned is that we have to proactively manage patients after they leave. We have to take care of their problems, keep them under control, and try to optimize the patient's medical status longitudinally if we're going to keep them from coming back."

Banner Health is one of the largest non-profit health care systems serving patients across seven states. Banner Baywood Medical Center (BBMC) located in Mesa, Arizona provides complete acute care services in its 388-bed hospital. Laboratory Sciences of Arizona/Sonora Quest Laboratories manages Banner Health Laboratories in Arizona to provide quality services to meet the widespread demands of this expanding network. The orthopedic unit at BBMC is one of the nation's premier orthopedic programs performing over 700 total joint replacements and treating 300 hip fractures annually. The center's commitment to patient care excellence has earned repeated recognition as having one of the Top 100 Orthopedic Programs in the U.S. by The Health Network and HCIA, Inc. BBMC is the first hospital in Arizona to earn certification for Disease-Specific Care in hip fracture management and one of only 15 nationwide to receive this distinction. The Gold Seal of Approval® by The Joint Commission was awarded to BBMC for its compliance with the organization's national standards for health care quality and safety.



GOALS AND ACHIEVEMENTS FOR IMPROVED PATIENT CARE

- Inclusion of the comprehensive reticulocyte blood test as part of a routine admission order set for hip fracture and elective joint replacement surgery patients.
- The comprehensive reticulocyte blood test includes the following: reticulocyte count (% and #), IRF (Immature Reticulocyte Fraction), and RET-He (Reticulocyte Hemoglobin).
- The comprehensive reticulocyte count is a low-cost test with a high potential to reduce readmissions and improve patient blood management.
- BBMC has reduced hip fracture readmissions by over 23 percent (from 13 to 10 percent) and reports similar results with patients who undergo elective joint replacement surgery.
- BBMC's collaborative involvement with community-based facilities has improved post-operative care, reduced anemia-related readmissions and decreased associated costs in their centers.
- BBMC has reduced transfusion rates from 60 percent to less than 10 percent among high risk patients as a result of collective blood product management initiatives.

OVERVIEW

Emergency Hip Fractures

BBMC reviewed causes for readmissions in the hip fracture patient population as well as visits to the emergency department after discharge. Anemia was one of the main reasons that these patients were returning to the hospital following their surgery. Today, the center has reduced hip fracture readmissions by over 23 percent (from 13 to 10 percent) which they attribute to their Joint Commission certified hip fracture program.

Young An, PT, DPT., director of rehabilitation at BBMC states “...for the hip fracture program when we started looking at the readmission rates, we were around 13 percent and since Joint Commission certification in July of 2013, we’ve dropped it to 10 percent.”

Elderly patients admitted following a fall have to be stabilized and thoroughly assessed which typically takes time. However, if practitioners wait too long, patients are at risk for complications that include aspiration pneumonia, pulmonary emboli or cardiac involvement leading to heart failure. Therefore, it is prudent to optimize their medical condition so that they can go to surgery, recover, and be discharged as soon as possible. Banner Baywood hospitalists and orthopedic surgeons now screen all hip fracture patients for anemia by ordering a comprehensive reticulocyte blood test upon admission. These results enable practitioners to identify patients with anemia or iron deficiency anemia so therapy can be proactively initiated. Post-operatively, more than 80 percent of hip fracture patients are discharged to rehabilitation centers for medical support and physical therapy. Many require IV or oral iron as well as EPOGEN® to more effectively manage their anemia.

“We know that patients cannot be transfused at these facilities so they will need to be readmitted either through the emergency department or as an inpatient to get that care. If we see that the RET-Hc is low, giving IV or oral iron is a better care option for the patient. It’s the right treatment at the right time rather than having them return to the hospital for a readmission at a cost to the patient, to the hospital, and to society,” Young said.

ELECTIVE JOINT SURGERY

BBMC recognized the significance of anemia in patients undergoing elective orthopedic surgery. Almost 60 percent of patients were receiving post-operative transfusions due to blood loss and low hemoglobin levels. Banner hospitals now proactively screen for anemia by ordering a CBC in addition to a reticulocyte comprehensive blood test prior to surgery. Banner Health has also eliminated autologous blood donations system wide because it further aggravates anemia which can impact surgical recovery.

“Use of RET-Hc allows us to recognize iron deficiency even when anemia isn’t present,” per Dr. Spratling.

“We’re tracking our blood use across the system, even down to the individual physician and it is having an impact there. We were able in 2013 to reduce blood use across Banner Health for the first time,” Dr. Spratling said.

As a result of collective blood management initiatives, the BBMC website reports, “Our program has successfully reduced blood transfusion rates from 60 percent to less than 10 percent among high-risk patients.”



A GREAT VALUE FOR ALL

As a result of the support and tireless efforts of several key champions, Dr. Holly McDaniel, Dr. Wendy McLaughlin, and Selke Mantie, BBMC recognized the value of using the comprehensive reticulocyte parameters.

...“the cost is very low and the return potentially great,” per Dr. Spratling.

The revised order set for anemia management in orthopedic surgical patients has accomplished four major goals:

1. Screening using the comprehensive reticulocyte blood test to identify patients with anemia.
2. Standardization of care guided physicians to diagnose and initiate therapy proactively to treat anemia.
3. Readmissions for hip fracture patients were reduced as a result of the comprehensive program.
4. Blood product management initiatives reduced transfusion rates among high risk patients.