

Nutrition Screening and Early Nutrition Intervention Improves Clinical and Financial Outcomes



Nutrition intervention via streamlining clinical nutrition department consultations significantly reduced the hospital length of stay (LOS) of malnourished patients, which emphasizes the need for regular nutritional consultations for such patients.

Given today's economy, programs and policies that can considerably reduce cost and improve health outcomes should be strongly encouraged.

Malnutrition is a common problem in hospital patients and often goes unrecognized, undiagnosed, and untreated. Research has shown that malnutrition occurs in 30-55% of hospital patients and leads to significant negative outcomes. Research also shows that early nutrition intervention can improve health outcomes, morbidity and mortality, and reduce length of stay (LOS) in hospital patients.

Researchers from Johns Hopkins Hospital in Baltimore, Maryland conducted a study to:

- 1) estimate the percentage and severity of malnutrition, LOS, and delays in implementing nutrition support, as well as ascertain the DRG coding of malnutrition cases.
- 2) evaluate the role of nutrition intervention on LOS to reduce delays in implementing nutrition support, and to calculate the potential financial benefits of DRG coding and nutrition intervention.

The study was conducted in adult patients in 2 medical wards (ward A and ward B) in 2 phases. Phase 1 collected baseline data on approximately 200 patients in wards A and B. Phase 2 involved using a new screening tool, which was completed by nursing upon admission, and an increased focus on time to nutrition intervention for patients from ward A. Additionally, on ward A, the clinical nutrition department consultation was initiated by the nurse manager, who sent a list of malnourished patients via the physician-order entry (POE) method. Ward B served as the control group, where the clinical nutrition department used the existing nutrition screening tool.



The average time it took for a nutrition consult was 4.90 ± 7.34 days.

53.1-55.8% of patients were found to be malnourished upon admission.

The results of this study showed a high prevalence of malnutrition, improved identification of patients with malnutrition, along with decreased time to nutrition intervention as well as clinical and financial benefits.

- The overall prevalence of malnutrition was similar in phase 1 and phase 2, 53.1% and 55.8%, respectively.
- Nutrition intervention significantly decreased LOS in malnourished patients. The LOS in the total malnourished group with nutrition intervention decreased significantly by 2.6 days vs. the historical control. The LOS in the severely malnourished group with nutrition intervention decreased significantly by almost 5 days vs. the historical control.
- Nutrition intervention also resulted in cost savings. For patients with severe malnutrition, \$1,514 in hospital costs was saved (\$473/day x 3.2 days) due to the decrease in LOS.
- The new nutrition screen process decreased the time to nutrition consultation. In phase 1 in ward A, only 20% of malnourished patients had a nutrition consultation, and the time to consultation was 4.90 ± 7.34 days from admission. In phase 2 of the study with nutrition intervention, 44% of malnourished patients had a nutrition consultation, and the time to consultation was 47% shorter at 2.63 ± 1.82 days from admission.
- With the assistance of nursing in the initial nutrition screen, and the nurse manager taking action toward nutrition intervention via the POE consult, more patients were identified at risk for malnutrition and there was a decrease in the time to nutrition intervention. This study shows that nutrition screening and early nutrition intervention of malnourished patients improves clinical and financial outcomes. Of the 63,000 patients discharged from JHH in 2005, only 4% were coded as being malnourished. However, this study found the actual prevalence of malnutrition to be 53-55%, indicating that many malnourished patients were being missed and not provided appropriate nutrition intervention.

Conclusion

Malnutrition in acute care remains a significant issue and must be identified and addressed early in the patient's stay. Nutrition intervention has been shown to result in numerous benefits including decreased length of stay, improved patient care, and decreased costs.

Reference: Somanchi M, Tao X, Mullin GE. *JPEN J Parenter Enteral Nutr* 2011; 35: 209-216.