

## CLINICAL SUMMARY

# The five-year evolution of a malnutrition treatment program in a community hospital

This study population was adult hospitalized patients at St. Francis Hospital (SFH), a 395-bed community acute care facility in Wilmington, Delaware, USA.

Studies have shown that 30-55% of hospitalized patients are at risk for malnutrition, and that malnutrition is associated with increased hospitalizations, readmissions, length of stay, complications and mortality. Moreover, studies have demonstrated that early and frequent nutrition interventions for malnourished patients result in positive health outcomes. However, various issues have impacted many hospitals from implementing effective nutrition intervention programs.

## OBJECTIVE

To conduct a quality improvement project and subsequent outcomes research studies to maximize quality patient care with a malnutrition treatment program that evolved during a five-year period.

## METHODS

The program began with participation in a nationwide benchmarking study, which resulted in the identification of opportunities for improvement, and continued with two outcome studies.

**Benchmarking Study:** SFH participated in a nationwide benchmark study in the fall of 1993. The study compared 12 participant hospitals in terms of timeliness of nutrition intervention and hospital length of stay.

**Nutrition Screening Pilot:** A 6-month pilot study was implemented in 1994 to identify nutritional needs within 38 hours of admission as a first step in the improvement process. The nutrition risk screen was performed by the nursing staff and assigned patients to a level of malnutrition risk ranging from Level 1 (lowest) to Level IV (highest).

**Malnutrition Clinical Pathway:** In 1995, the Nutrition Care Committee (NCC) developed a malnutrition pathway that would serve as an integrated plan for providing nutrition care to high-risk patients. The pathway was organized into four stages – identification of high-risk patients, nutrition care decisions, treatment, and discharge planning.

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**Outcomes Studies:** Two outcomes studies were conducted in 1996 and 1998 to assess the impact of the malnutrition treatment pathway on patients' health outcomes and cost of care.

### RESULTS

**Benchmarking Study:** In comparison to the 12 hospital mean, data for SFH showed both delays in identifying (only 26% of high-risk patients received nutrition care) and initiating a nutrition care plan for acutely ill patients (average time of intervention was 6.9 days).

**Nutrition Screening Pilot:** The pilot results showed that the percent of high-risk patients receiving nutrition care improved (from 26% to 37%) and the timeliness of intervention improved (from 6.9 days to 3.4 days). However, although interventions occurred earlier for a greater number of high-risk patients, nutrition intervention was not being provided in a uniform and timely manner.

**Malnutrition Clinical Pathway:** The goal of the malnutrition clinical pathway was to describe the typical course of nutrition and was intended to result in decreases in length of stay and the cost associated with delayed nutrition intervention. The goals were to decrease average time to nutrition intervention to <3 days and to provide nutrition intervention to >75% of high risk patients. Two outcomes studies were conducted to gather that data.

**Outcomes Studies:** The outcomes studies involved 1,105 patients identified to be at high risk for malnutrition. The 1996 outcome study showed significant improvements in the identification of high-risk patients (from 37% to 86%) and the timeliness of nutrition intervention (from 3.4 days to 2.4 days). The 1998 outcome study compared the 1996 after-pathway patient population with a matched study group and showed a further increase in the identification of high risk patients (from 86% to 95%) and the timeliness of nutrition intervention (from 2.4 days to 1.9 days). Further, the study demonstrated reductions in average length of stay (from 10.8 to 8.1 days), incidence of major complications (from 75.3% to 17.5%), and 30-day readmission rates (from 16.5% to 7.1%).

### NUTRITION CONCLUSION

St. Francis Healthcare implemented a five-year performance improvement project, malnutrition treatment program, and outcomes studies to improve nutrition care for malnourished. Their program was integrated into the care plan for all acute care patients and is including in the discharge planning process. Outcomes study results demonstrated improvements on patient recovery and cost of care with the nutrition care improvements.