

## Reducing Hospitalizations and Costs: A Home Health Nutrition-Focused Quality Improvement Program

Riley K, Sulo S, Dabbous F, Partridge J, Kozmic S, Landow W, VanDerBosch G, Falson, MK and Sriram K.

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### Objective:

Evaluate the effect of a nutrition-focused quality improvement program (QIP) conducted in a home health agency (HHA) on unplanned hospitalization rates (including hospital readmissions and admissions) and healthcare costs incurred over 90 days in adult patients with (or at-risk of) malnutrition.

### Methods:

- Multisite, pre-post QIP implemented at two branches of an Illinois-based HHA.
- QIP included 1546 adult patients ( $\geq 18$  years of age) who were:
  1. At-risk or malnourished hospitalized patients discharged to the HHA,
  2. At-risk or malnourished outpatients referred by a physician, and admitted to the HHA, or
  3. At-risk or malnourished patients discharged from a skilled nursing facility (SNF) and enrolled in the HHA
- A historic ( $n=7413$ ) and concurrent group ( $n=5235$ ) of HHA patients not enrolled in the QIP were used for comparisons.

### QIP Protocol:

- Patients were eligible for QIP if identified as with (or at-risk of) malnutrition upon hospital discharge (score of  $\geq 2$  on the Malnutrition Screening Tool (MST) and/or on admission to the HHA (score of  $\geq 30$  on the Nutritional Health Screen (NHS)).
- Upon enrollment in the HHA, all patients were screened for malnutrition risk with NHS, a tool used by Medicare-certified HHAs and built into the HHAs Allscripts EMR system.
- A customized nutrition care plan, including oral nutritional supplements (ONS) during HHA care, was generated in the EMR.
  - The admitting clinician ordered standard ONS (2 bottles/day), diabetes-specific ONS (2 bottles/day) or renal-specific ONS (1 bottle/day) according to patients' dietary needs; ONS was provided to each enrolled patient for up to 30 days, and delivered directly to the patient's home within 48-72 hours of HHA enrollment. Patients made ONS flavor choices.
- Patients were educated on the importance and benefits of ONS, and ONS compliance was encouraged throughout the QIP.
- Nutrition plan was reviewed at each patient visit, and

nutrition status was documented in the patient's chart.

- Coupons for discounts on ONS purchases were distributed to all QIP patients to replicate current practices.
- Within 30-45 days after admission to the HHA, QIP patients were contacted by telephone to participate in a survey addressing the patient experience, consumption of ONS, and likelihood of ONS use post-HHA discharge.

### Results:

- Of 5688 patients screened by the HHA, 39% were identified with (or at-risk) of malnutrition, and 83.5% of the patients were 65 years of age and older.
- Nutrition-focused QIP with ONS led to reduced relative risk of hospitalization post-enrollment to the QIP by 24.3%, 22.8% and 18.3% at 30, 60, and 90 days, respectively, when compared to the historic group, and by 18.2%, 16.2% and 12.1% when compared to the concurrent group.
- Total cost savings from reduced 90-day healthcare resource utilization was \$2,318,894, or \$1500 per patient treated.
- 94% of patients reported consuming ONS while receiving home healthcare and 60% of patients reported they were very likely to consume ONS beyond their home health episode, if prescribed.

### Conclusion:

Hospitalization rates and healthcare resources can be significantly reduced through the implementation of nutrition-focused QIP delivering ONS in home health settings for adults with (or at-risk) of malnutrition. These results highlight the importance of nutrition as a strategy for HHAs and other post-acute care institutions to improve patients' health outcomes and generate cost savings.

### Study summary prepared by Nestlé Health Science.

The complete study can be accessed at:

<https://www.ncbi.nlm.nih.gov/pubmed/31231830>