Comprehensive nutrition program informs potential cost-savings for Latin American hospitals: A budget impact analysis

Juan Vargas, Juan Diego Misas, Cory Brunton, Gabriel Gomez, Daniela Gracia, Suela Sulo

Overview & Objective

- In Latin America, approximately half of hospitalized patients experience malnutrition or its risk, while many others experience deterioration of their nutritional status while in the hospital[1,2].
- These patients often experience poor health outcomes resulting in increased costs of care[3].
- We estimated potential savings associated with the implementation of an early nutritional care program in malnourished or at-risk hospitalized patients via a budget impact model analysis.

METHODS

- The model compares the clinical and economic outcomes (length of stay, complications, and 30-day hospital readmissions) of patients assigned to receive early nutritional therapy program (started within 24-48 hours after hospital admission) compared to patients receiving delayed nutritional therapy.
- The early nutritional therapy program consists of malnutrition screening with validated tool, early intervention with oral nutritional supplement, and discharge education/follow-up.
- Results are projected over a 60-day time horizon, with probabilities of occurrence of events taken from published data.
- Costs and epidemiological data were evaluated from Latin American countries (Colombia, Ecuador, Mexico, Peru, Panama, Dominican Republic, El Salvador, Guatemala, and Costa Rica).

Early Nutritional Therapy Program Reduces Hospitalization Related Costs Among Latin American Countries

Figure 1. Nutrition Program Characteristics / Steps

SCREEN AND RECOGNIZE

•Systematically screen patients for malnutrition risk with validated screening tool

INTERVENE

•Early intervention with oral nutritional supplement (started within 24-48 hours after hospital admission)

EDUCATE

•Educate patients and caregivers on the importance of proper nutrition

FOLLOW

•Follow-ups (in-person or telehealth) with patient to emphasize education and compliance

RESULTS

- Total healthcare costs in Latin America over 60-days averaged $1,912 for patients with early nutrition therapy vs $3,031 for patients with standard nutrition therapy.
- Cost differences between the groups for hospital-associated costs, 30-day readmissions, and malnutrition-associated complications are reported in Table 1.
- Applying these potential savings from individualized early nutrition care to a one-year estimate based on the countries' population of hospital patients with malnutrition or its risk, the average total of overall savings for public health expenditures was $6.7 billion-per year.

Table 1. Cost Differences of Early Nutrition Therapy vs. Standard Nutrition Therapy

Costs	With Early Nutrition Therapy ($USD/per patient)	With Standard Nutrition Therapy ($USD/per patient)
Hospital-associated Costs	$1,219	$1,600
30-Day Readmissions Costs	$227	$311
Malnutrition-associated Complications Costs	$413	$1,087

Conclusions

- The results demonstrate the potential for hospital-based nutrition care programs to reduce hospitalization related costs among 9 Latin American countries. These findings provide rationale for Latin American healthcare institutions to implement programs of comprehensive nutrition-focused care for inpatients with malnutrition or its risk.

References

1. Correia MI, et al. JPEN 2016;40(3):319e25.
2. Castillo Pineda JC, et al. Nutr Hosp 2016;33(3):665e72.
3. Martinez-Reg M, et al. Clin Nutr 2018;37:1299e305.