

Projected Impact of a System-Wide Preoperative Nutrition Strategy for Foregut and Pancreatic Cancer Patients

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INTRODUCTION

- Preoperative nutrition has been shown to improve surgical outcomes.
- However, the implications of introducing a system-wide nutritional bundle remain unexplored.
- We project the value implications of providing routine preoperative nutrition to a cohort of cancer surgery patients within an integrated cancer network.

POPULATION STUDIED

- Patients who underwent esophagectomy, gastrectomy, or pancreatectomy under a single insurance plan within a regional health system between July 1, 2020, and June 30, 2021

METHODS

- We used administrative claims data to determine the total healthcare utilization (HCU).
- Projections were adjusted to account for the anticipated number of surgeries performed within our cancer network in a year: 50 gastric, 75 esophageal, and 100 pancreatic.
- We conducted a comprehensive literature review to estimate the potential reduction in complications and length of stay (LOS) associated with the use of preoperative nutrition for these procedures.
- After considering the estimated costs of delivering nutrition to each patient, we project the comprehensive financial implications of the program.

RESULTS

- The total projected HCU for these 225 procedures is \$4,374,476.
- We projected an average LOS reduction of 18% resulting in:
 - 220 in-patient hospital days reduced
 - 11 outlier days reduced – resulting in cost savings of \$43,050 for the payer
- Projected reduction in complications would result in HCU savings of \$74,660.
- Cost of direct delivery of the nutritional bundle to each patient (225 claims x \$60 per bundle) is \$13,500.
- The total projected annual savings for the payer/insurance sector is \$104,210.

Disease Site	Total Claims	Total Costs (\$)	Total Cost Per Day (\$)	Assumed LOS Reduction	Hospital Days Reduced	Outlier Days Reduced	Outlier Cost Savings (\$)	Complication Reduction Impact (\$)	Total Payer Cost Savings (\$)
Stomach	50	863,084	4,508	30%	38	2	10,848	522	11,370
Esophagus	75	1,653,218	5,102	13%	15	1	3,213	71,782	74,995
Pancreas	100	1,858,174	1,992	16%	167	8	28,989	2,356	31,345
TOTAL	225	4,374,476	3,867	18%	220	11	43,050	74,660	117,710

CONCLUSIONS

- Providing standardized delivery of preoperative nutrition to patients undergoing oncologic surgery offers improved outcomes and cost savings to both payers and providers within an integrated cancer network.

CONTACT INFORMATION

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