# Using Patient Outcomes Evidence to Demonstrate Economic Value of Nutrition Support Intervention

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## Description

FIGURE 1. Twelve Therapeutic Areas (TAs) Plus Cross-Disease Malnutrition Selected by ASPEN Scientific Advisory Council Based on High Impact Conditions

Healthcare leaders are looking for guidance on prudent investment in programs and resources that improve the patient experience, reduce hospital-acquired conditions, reduce length of stay, and decrease readmissions.

In 2017, ASPEN projected the need to expand from an organization promoting utilization of specialty nutrition services to one also clearly articulating the value proposition for nutrition support across the continuum.

This project meets several goals of ASPEN's strategic plan as it delivered evidence of the economic impact of nutrition on improved patient outcomes and facilitated effective value messaging to communicate with key healthcare decision makers.

## Aim

To describe the impact of nutrition care — in specific conditions — on healthcare outcomes and costs.

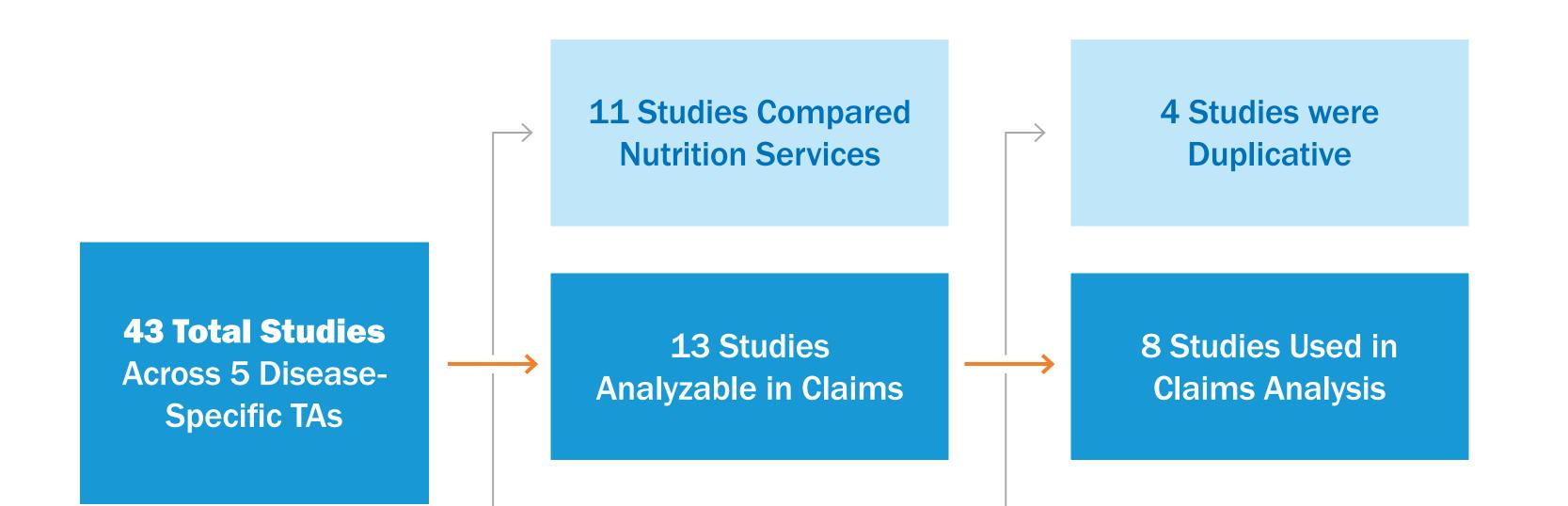
#### Gastrointestinal **End-Stage Renal Chronic Heart Pancreatitis** Cancers **Disease (ESRD)** Failure (CHF) (GI Cancers) **Chronic Obstructive Hospital Acquired** Surgical Sepsis **Pulmonary Conditions (HACs) Complications Disease (COPD)** Hip **Short Bowel IBD & GI Diabetic Intestinal Failure Fracture** Wounds **Dysmotility Cross-Disease Malnutrition**

### FIGURE 2. Literature Search Assigned Points Using Ranking Rubric (Began with 1,099 Articles)

Disease / Condition-Specific Therapeutic Areas	<b>Total Points</b>	<b>Total # Articles</b>	Studies > Median Score (10 pts.)	Avg. Points / Article
Cross-Disease	151	13	8	11.6
Pancreatitis	106	10	7	10.6
CHF	105	11	4	9.5
GI Cancer	103	10	5	10.3
Sepsis	102	10	3	10.2
ESRD	97	12	1	8.1
COPD	96	9	4	10.7
HACs	96	8	6	12.0
Surgical Complications	91	10	2	9.3
IBD and GI Dysmotility	88	9	2	9.8
Hip Fracture	42	5	2	8.4

## **Actions Taken**

Literature search was conducted on 8 specific therapeutic areas (TAs) where nutrition support intervention was administered, and clinical outcomes measured. Five TAs were chosen and the 8 study findings were modeled using Medicare 5% sample to determine cost savings when nutrition support was provided to all eligible patients.



Using 5% sample Medicare A and B claims, limit to ICD-10 codes reflective of October 2015 – June 2018 services, creating a time period of 33 months.	<text></text>	<text></text>	<ul> <li>→ The savings per patient is multiplied by the total number of patients identified in the sample; this result is then annualized (multiplied by 12).</li> </ul>	<ul> <li>Annualized result (\$2.58 million) is extrapolated to full Medicare population (100%) reflecting upper limit of possible savings to Medicare in a year.</li> </ul>
	<text></text>	The study reported a 38% reduction in LOS, and with the 309 cases across the full 33-month time period, there were about 9 cases per	The total Medicare spend decreases by approximately \$23,000 per case; when the savings are multiplied by the monthly sample, that	Up to \$52 Million in Annual Savings

#### FIGURE 3. Methodology for Analyzing Shirai (2015) Study on Patients with ARDS and EN



**1 Study focused only on malnutrition** 

month in the	equals over
5% sample.	\$215,000/
	month or \$2.58
	million per year.

Example of Modeling Analysis (Shirai K, Yoshida S, Matsumaru N, et al. Effect of enteral diet enriched with eicosapentaenoic acid, gammalinolenic acid, and antioxidants in patients with sepsis-induced acute respiratory distress syndrome. J Intensive Care. 2015;3:24.)

## **Summary of Results**

In 4 of the 5 TAs (sepsis, GI cancers, HACs, surgical complications), when 7 study results were modeled using the Medicare population, the applicable cost reduction results were about \$582 million in one year. These results demonstrated value of nutrition support in reducing length of stay and complication avoidance.

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