

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

Beverly Hernandez, PhD, RD, LD/N; Renay Tyler, DNP, RN; Albert Barrocas, MD, FACS; Peggi Guenter, PhD, RN, FAAN, FASPEN; American Society for Parenteral and Enteral Nutrition (ASPEN) Value Project Scientific Advisory Council

## Description

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.

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

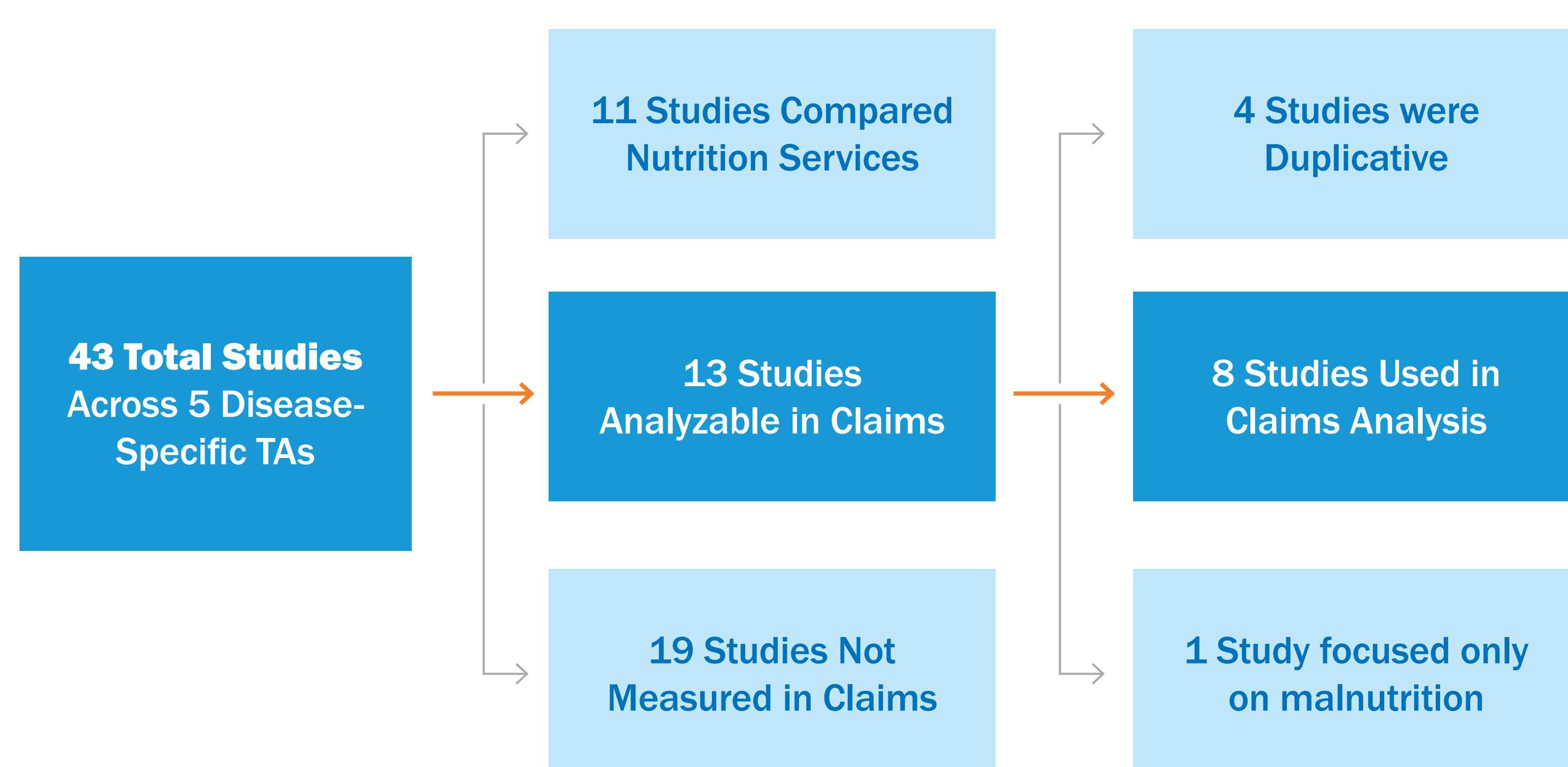
End-Stage Renal Disease (ESRD)	Pancreatitis	Chronic Heart Failure (CHF)	Gastrointestinal Cancers (GI Cancers)
Sepsis	Chronic Obstructive Pulmonary Disease (COPD)	Hospital Acquired Conditions (HACs)	Surgical Complications
IBD & GI Dysmotility	Hip Fracture	Short Bowel Intestinal Failure	Diabetic Wounds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

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

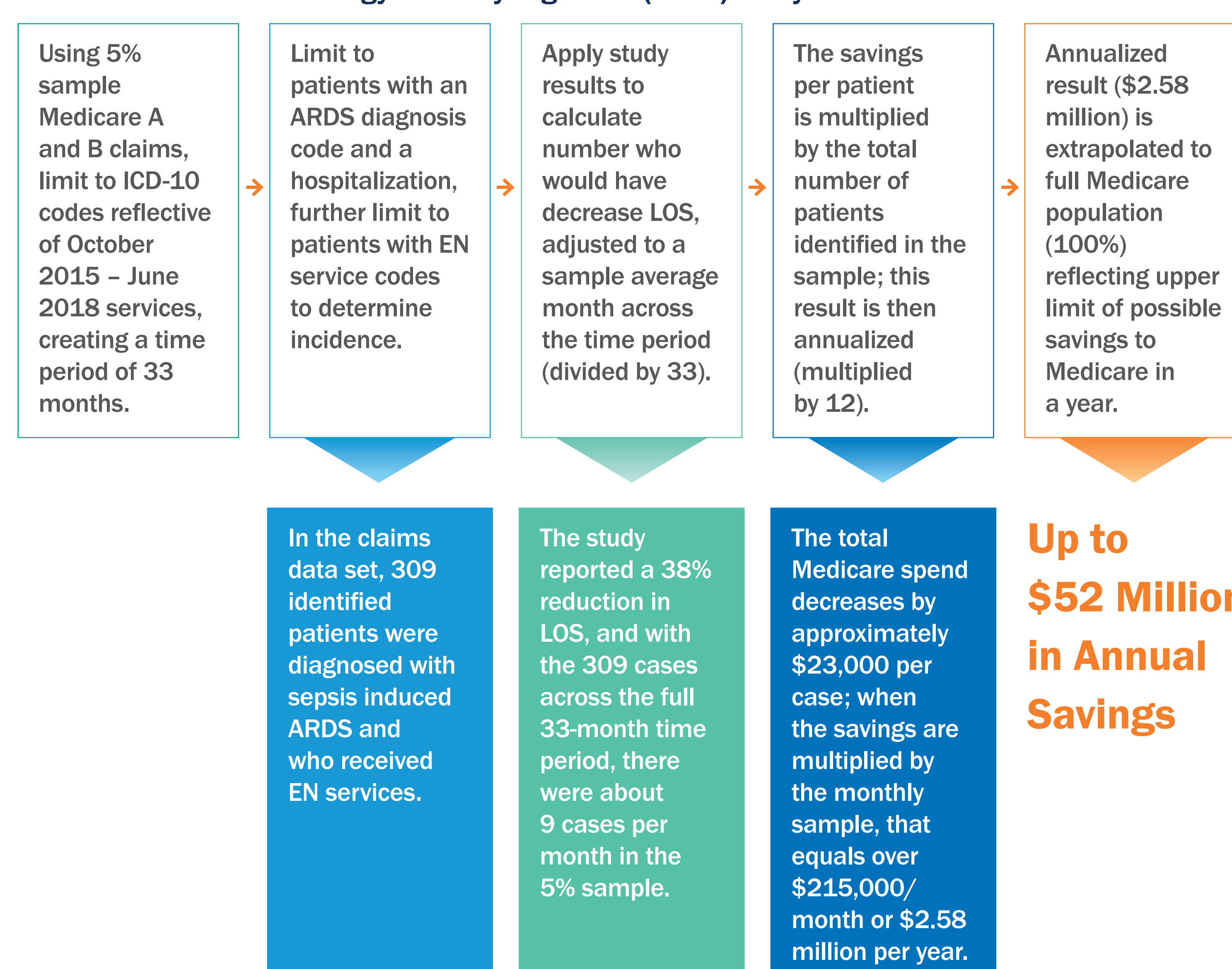
Disease / Condition-Specific Therapeutic Areas	Total Points	Total # Articles	Studies > Median Score (10 pts.)	Avg. Points / Article
Cross-Disease	151	13	8	11.6
Pancreatitis	106	10	7	10.6
CHF	105	11	4	9.5
GI Cancer	103	10	5	10.3
Sepsis	102	10	3	10.2
ESRD	97	12	1	8.1
COPD	96	9	4	10.7
HACs	96	8	6	12.0
Surgical 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.



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



Example of Modeling Analysis (Shirai K, Yoshida S, Matsumaru N, et al. Effect of enteral diet enriched with eicosapentaenoic acid, gamma-linolenic 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.

## Acknowledgements

Funding for the ASPEN Value Project was contributed by: Nestlé Nutrition Institute; Abbott Nutrition; Cardinal Health; and B. Braun Medical, Inc.