

UNDERSTANDING THE IMPACT OF MALNUTRITION

✓ **FACT 1**

Malnutrition is associated with increased in-hospital **morbidity** and **mortality**, **higher healthcare costs**, **longer length of stay**, and **higher rate of readmissions**.¹

✓ **FACT 2**

Most hospital malnutrition is not diagnosed and thus not treated and affects **7% of inpatient hospital stays**.¹

✓ **FACT 3**

Malnutrition may contribute to "post hospital syndrome"² which may **dramatically increase the risk for readmission** (and possible penalties to the healthcare system).^{3,4}

NEARLY 2.2 MILLION hospital inpatient stays related to malnutrition in 2016⁵



All ICU patients regardless of nutrition risk receive on average only

50-60% of prescribed calories or protein⁶



Important variables that seemed to be associated with a greater chance of successful feeding include **longer duration of time** on artificial nutrition, **geographic region** and being at a site that uses a **feeding protocol**.⁶

ECONOMIC BURDEN

Hospital stays related to malnutrition accounted for nearly **\$49 Billion in 2016**⁵

HUMAN COST

Most malnutrition related stays are associated with in-hospital deaths **1.5-5x higher** than those unrelated to malnutrition¹

LONGER HOSPITAL STAYS

Protein-calorie malnutrition is associated with hospital stays **2x longer** than non-malnutrition stays and with higher healthcare costs¹

Circumstances Where PN Is the Preferred Method of Nutrition Support for Adults⁷

Use PN in patients who are malnourished or at risk for malnutrition when a contraindication to EN exists or the patient does not tolerate adequate EN or lacks sufficient bowel function to maintain or restore nutrition status



Achieving **80%-90%** of prescribed calories in patients in ICUs around the world is a feasible goal . . . and is associated with the best clinical outcomes.⁸

"It is important to return to providing the full dosing of the PN components and sufficient quantities should be purchased to provide those full daily components to all patients requiring PN therapy."⁹



"The lack of observed adverse events or deficiencies during rationing of a PN component and the potential cost savings associated with "partial" dosing should not be the impetus to continue less than optimal dosing."⁹

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- 3 Suaer A. Luo M. Role of Malnutrition in Increasing Risk of Hospital Readmissions. Abbot Nutrition Health Institute. December 2015. <http://static.abbottnutrition.com/cms-prod/anhi.org/img/Role-Of-Malnutrition-In-Increasing-Risk-Of-Hospital-Readmissions-article.pdf>. Accessed September 13, 2016.
- 4 Guenter P, Jensen G, Patel V, Miller S, Mogensen KM, Malone A, et al. Addressing disease-related malnutrition in hospitalized patients: a call for a national goal. *Joint Commission Journal on Quality and Patient Safety*. 2015;41(10):469–73.
- 5 Barrett ML, Bailey MK, Owens PL. Non-maternal and Non-neonatal Inpatient Stays in the United States Involving Malnutrition, 2016. ONLINE. August 30, 2018. U.S. Agency for Healthcare Research and Quality. Available: www.hcup-us.ahrq.gov/reports.jsp.
- 6 Heyland D, Dhaliwal R, Wang M, Day A. The prevalence of iatrogenic underfeeding in the nutritionally at risk critically ill patients: Results of an international, multicenter, prospective study. *Clin Nutr* 2015; 34: 659–666.
- 7 Worthington P, Balint J, Bechtold M, et al. When is Parenteral Nutrition Appropriate? *J Parenter Enteral Nutrition* (JPEN). 2017; 44:324–377
- 8 Heyland D, Cahill N, Day A. Optimal amount of calories for critically ill patients: Depends on how you slice the cake. *Crit Care Med* 2011; 39:2619–2626
- 9 Holcombe B, Mattox TW, Plogsted S. Drug Shortages: Effect on Parenteral Nutrition Therapy. *Nutrition in Clinical Practice*, Volume 33 number 1, February 2018 53–61