

# TPN COST SAVINGS BY OPTIMALIZATION OF CLINICAL NUTRITIONAL CARE FOR ALL

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## INTRODUCTION

Total parenteral nutrition (TPN) costs and malnutrition are a big financial burden for hospitals. Increased TPN usage and costs and untreated malnutrition in patients had to be addressed. In 2009 a dietitian was appointed for malnutrition screening and monitoring of intramural patients with TPN and a nutritional management team was assembled. In the current study a procedure has been developed to assure optimal clinical nutritional care for all patients (oral, enteral and parenteral nutrition) and screening on malnutrition by EB practice tools.

## PURPOSE

Detection and treatment of malnutrition and structured follow up of TPN patients based on EB guidelines and cost savings of 10% in 2010 or 20% in 2010-2011. Since 2012 introduction of a TPN procedure and instruction tools for caregivers and ongoing follow up of TPN use and cost and malnutrition screening results assured sustainment of the approach.

## CONCLUSIONS

This study shows:

- Detection of malnutrition risk by EB screening and treatment
- Essential changes in management needed
- Essential role of dietitians as experts in nutritional assessment and follow up of clinical nutrition
- TP-EN instruction tools and protocols improve nutritional care
- Passing on our approach by training on the job of dietitian- / nutrition teams
- Ongoing cost savings
- Nutrition is part of the treatment plan and approved by NIAZ accreditation in 2015

## METHOD

TPN usage and costs over the years prior to 2010 were calculated. Causes for improper prescription of TPN were identified. TPN usage guidelines according EB ASPEN/ESPEN guidelines and procedures were developed. Nursing staff and dietitians were trained in proper administration and follow up of TPN and EN usage in patients. TPN-EN instruction tools for caregivers (physicians/dietitians) were presented and training on the job for dietitian teams/nutrition teams in other hospitals started. Inclusion of enteral and parenteral nutrition expertise in the job description of dietitians follows in 2016.

## RESULTS

TPN usage decreased by 52%, cost savings on TPN usage of 53% were obtained and the number of TPN users declined by 45% in 2015 compared to 2010. In 2015 41% of all admissions and 73% of admissions at higher risk units was screened on malnutrition risk, 9% of all hospitalized patients was diagnosed malnourished and treated by dietitians. In 2016 malnutrition risk screening of 80% of hospital admissions can be expected at higher risk units.

*Conflict of interest:* The authors of this document can confirm there is no conflict of interests

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Vlaamse Beroepsvereniging van  
Voedingsdeskundigen en Diëtisten  
wettig erkende beroepsvereniging

Brussels, June 10, 2016

**MNI Secretariat**

Rue de l'Association 50  
1000 Brussels

Dear Madame, Dear Sir,

**Re:** MNI Grant 2016 for the best national initiative for an optimal nutritional care approach  
"TPN Cost Savings by Optimization of Clinical Nutrition for All"  
First Author: Rian van Schaik

With this letter, we confirm to endorse the above mentioned study carried out by both the General Hospital AZ Sint-Lucas in Brugge and the Faculty of Bioscience and Engineering at the KU in Leuven.

Should you need any further information, please contact me.

Sincerely,

**Dirk LEMAITRE**

Honorary Chairman

Vlaamse Beroepsvereniging van Voedingsdeskundigen en Diëtisten