

# Influence of nutritional status on hospital length of stay in patients with type 2 diabetes

Serrano Valles C, López Gómez JJ, García Calvo S, Jiménez Sahagún R, Torres Torres B, Gómez Hoyos E, Ortolá Buigues A, de Luis Román D. *Endocrinol Diabetes Nutr.* 2020; 67:617-624

## Background

Globally, around 463 million people have type 2 diabetes (T2D), and the prevalence is increasing as the population ages, lifestyles change, and rates of obesity increase. In addition, hyperglycemia occurs in at least 20% of hospitalized patients. T2D is a leading cause of premature morbidity and mortality and is a major contributor to overall health-care expenditures. Studies have found hospitalized patients with T2D are at increased risk for malnutrition, which prolongs length of stay and healthcare costs. Identifying and addressing malnutrition and minimizing glycemic variability remain key challenges for this population.

## Objective

The study aimed to compare the nutritional status of hospitalized patients with and without T2D and to determine the impact of T2D on length of hospital stay in patients with malnutrition.

## Methods

This cross-sectional observational cohort study included 1017 medical and surgical inpatients referred for specialized nutrition support. Participants were stratified into those with and without T2D. Baseline data collection included anthropometrics and serum albumin. Nutritional status was assessed using both the Mini-Nutritional Assessment (MNA) and Nutritional Risk Index (NRI).

## Results

### Demographics

Overall, 24.4% of all patients had T2D, according to the American Diabetes Association diagnostic criteria. More than half of the patients were male (58.9%) and the mean patient age was 73.0 years (range 61-82).

The complete study may be accessed at: <https://pubmed.ncbi.nlm.nih.gov/33054996/>

## Nutritional risk

The presence of T2D was associated with a significantly increased risk of malnutrition (MNA score <17.5 points). The odds ratio was 1.39 (95% CI 1.04 to 1.86,  $p=0.02$ ) representing an almost 40% increased risk. This relationship was attenuated after adjusting for age. The delay in nutritional consultation was longer for those with T2D than for those without (7 days vs. 5 days,  $p=0.01$ ).

## Hospital Length of stay (LOS)

Mean LOS was longer in patients with T2D than in those without (20.0 days vs 16.0 days,  $p=0.02$ ). Among patients with malnutrition, those with T2D had a longer mean LOS vs. those without T2D (21.0 days [range 12-36] vs 17.0 days [range 9-30],  $p=0.01$ ). There were no significant differences in LOS among patients with MNA scores >17.5.

## Conclusion

Hospitalized patients with T2D had increased risk of malnutrition, longer delays in nutritional consultation, and longer hospital stays. Early identification of malnutrition in patients with T2D is critical for improving clinical outcomes.

