

Category : **Nutritional support**

**A46 - Early macronutrient restriction is more commonly used in Belgian than in other European ICUs**

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**Introduction:**

The EuroPN survey<sup>1</sup> was a prospective cohort study that assessed nutrition practice in European ICUs and its association with clinical outcomes. The aim of this post-hoc subgroup analysis was to compare the medical nutrition therapy (MNT) practices in Belgian ICUs to the overall EuroPN population and the 2019 ESPEN ICU guideline<sup>2</sup>.

**Methods:**

Clinical data of 149 patients from 9 Belgian ICUs were compared to 1,172 patients from 77 ICUs in 11 European countries. Macronutrient intake from enteral nutrition (EN), parenteral (PN) nutrition, and non-nutritional sources during 15 days after ICU admission were assessed and compared to the ESPEN targets of 20–25 kcal/kg/day and up to 1.3 g protein equivalents/kg/day, as well as to the results of the overall cohort.

**Results:**

Both median ICU (12 [7;22] vs. 10 [7;16] d) and hospital (25 [15;37] vs. 23 [15;36] d) length of stay were longer in Belgian patients vs. the overall population and 31% vs 15% of patients originated from the emergency room. Median time to start MNT was longer compared to overall (EN: day 2.5 [2.0;4.0] vs 2.0 [2.0;4.0]; PN: day 5.0 [3.0;7.0] vs 2.0 [2.0;4.0]) and patients received EN more often. Provision of calories and proteins increased progressively over the first 5 days after ICU admission and, on average, were in the range of daily 10-20 kcal/kg and <0.8 g protein/kg. Belgian patients met on average 71% of the ESPEN caloric and 53% of the protein targets over the study period, whereas overall this was 83% and 65%, respectively.

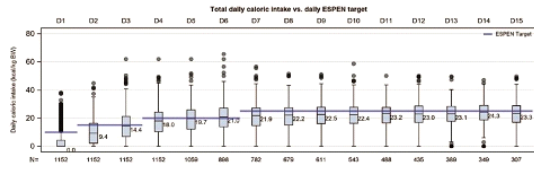
**Conclusion:**

This Belgian subgroup analysis of the EuroPN study showed that average calorie and protein intakes during the first 15 ICU days were below the ESPEN targets. In line with the results of the overall cohort, it was common practice in Belgian ICUs to progressively increase MNT during the first days to moderate energy targets while a moderate protein intake of >0.8 to <1.2 g/kg/d as in the overall population was not achieved.

**References:**

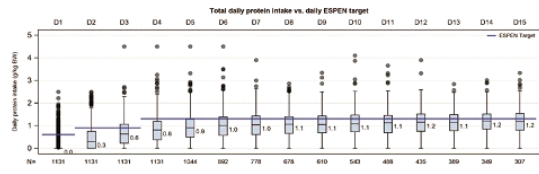
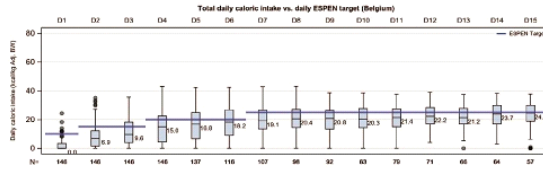
1. Matejovic, M et al Crit Care 26,143(2022)
2. Singer P et al Clin Nutr. 2019;38(1):48

**Image :**



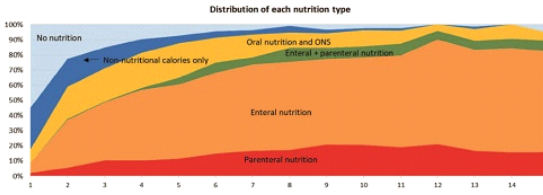
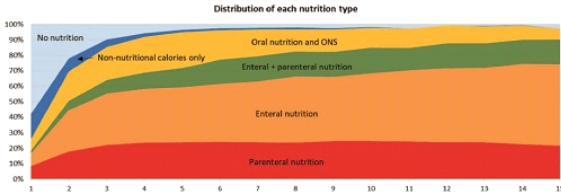
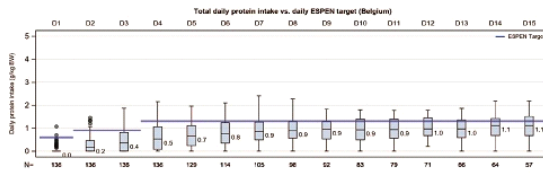
ESPEN targets: 30 kcal/kg on D1, 25 kcal/kg on D2-3, 20 kcal/kg on D4-6, 25 kcal/kg D7-15

Graph shows median, IQR, min and max with outliers



ESPEN targets: 0.6 g/kg on D1, 0.9 g/kg on D2-3, 1.3 g/kg on D4-15

Graph shows median, IQR, min and max with outliers



Daily caloric and protein intake and distribution of nutrition types (left: overall and right: Belgium). Intake is presented as median, IQR with outliers versus pre-defined targets (blue horizontal bars) based on the 2019 ESPEN Guideline on Clinical Nutrition in Critical Care, and with proportion of nutrition resources used on a respective day.