

Category : **Nutritional support**

A164 - “an automated electronic medical tool to recall nutritional intake and present feeding adequacy in the critically ill : it all starts with an excel file”

L Buyle¹ ; L de Hart² ; Z Rosseel³ ; BG Jimenez Garcia⁴ ; L Leemans⁵ ; E De Waele⁴

¹UZ Brussel , Department Clinical Nutrition, Jette, Belgium, ²UZ Brussel , Universitair Ziekenhuis Brussel (UZ Brussel), Department Clinical Nutrition, Jette, Belgium, ³UZ Brussel , Universitair Ziekenhuis Brussel (UZ Brussel), Department of Pharmacy, Jette, Belgium, ⁴UZ Brussel , Vrije Universiteit Brussel (VUB), Universitair Ziekenhuis Brussel (UZ Brussel), Department Clinical Nutrition, Research cluster Development - Ageing and Pathology, Jette, Belgium, ⁵UZ Brussel , Vrije Universiteit Brussel (VUB), Rehabilitation Research (RERE), Jette, Belgium

Introduction:

Feeding adequacy in the Intensive Care Unit (ICU) remains an issue. Both under- and overfeeding are present and are harmful to ICU patients [1]. Daily calculations can help optimize clinical practice by giving a quick and clear overview of intentional and non-intentional nutritional intake. A structured, systematic approach is often lacking. In this study, the development and implementation of an electronic feeding adequacy tool was investigated.

Methods:

Intensivists and medical nutrition experts designed the content of the tool, facilitated the implementation plan and introduced a quality control system. The Information Technologists (IT) integrated the tool in the hospitals' medical system. This tool allowed ICU healthcare practitioners to chart feeding adequacy daily.

Results:

Automated 24 hour-recall of energy and protein content, electrolytes, vitamins and trace elements of artificial nutrition (i.e. parenteral and enteral nutrition) and non-intentional calories (e.g., propofol, glucose) was launched. In 2021, the tool was used 5278 times for 8832 possible treatment days (60%). In 2022, the tool was used 4440 times and in 2023, the tool was already used for 4244 times.

Conclusion:

Designing, implementation and use by cooperation between medical doctors, dieticians and IT of an automated electronic medical tool proved to be feasible in clinical practice.

References:

1. Zusman, O., et al., *Resting energy expenditure, calorie and protein consumption in critically ill patients: a retrospective cohort study*. Crit Care, 2016. **20**(1): p. 367.

Image :

The image shows a screenshot of a medical software interface. On the left, there is a navigation menu with categories like 'CONSULTATIENOTAS', 'SPROEDGEVALLEN', 'VERPLEEGDOKSIEK', and 'NOTAS EN ADVIEZEN PARAFARMACIE, REFERENTIE-VPK, PSYCH...'. The main area displays patient information for 'Dagnota voeding ICU (I2) : 24/11/2023'. It includes vital signs (Lengte: 180.0 cm, Gewicht: 84 kg, BMI: 25.93), screening dates, and intake details. A red box highlights the 'BLAN' section, which shows: 'Aantal calorieën: 1974,9 kcal - 97,0 %' and 'Aantal eiwittem: 100,75 g - 102,0 %'. Below this, there is a section for 'VOLGENDE VOEDING' with details for 'Sondevoeding' and 'Eiwitsupplement'.

Fig.1 Example of the automated electronic medical where nutritional adequacy was

calculated and nutritional prescription is noted by the ICU dietician.