ASSESSMENT OF NUTRITIONAL RISK AND INTAKE IN DANISH HOSPITALIZED PATIENTS

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Rationale

Finding patients at nutritional-risk and securing sufficient nutritional intake, is vital to decrease risk of adverse outcomes and all-cause mortality[1]. The aims of this study were therefore to investigate the prevalence of patients being nutritional screened and to determine nutritional coverage in at-risk patients.

Methods

A one-day cross-sectional study was performed at Herlev Hospital in June 2019. Patients > 18 y and hospitalized for ≥ 4 days were enrolled. Exclusion criteria were; admitted to the intensive, palliative or maternal ward. If a patient was not screened by the ward a clinical dietician screened the patient. Patients found to be at nutritional-risk underwent a 24-h dietary recall. The following were collected; data from the NRS-2002, energy- and protein intake within 24-h, length of stay, readmissions and mortality within 30 days.

Results

In total 197 (F:52%) patients were included. Median (IQR) age 74y (65-81), BMI 24 (21-28), length of stay at audit day 8d (6-14) and total length of stay 13d (7-20).
An NRS-score ≥ 3 was found in 63% (n=111) of patients.
At the audit-day 38% (n=75) were nutritional screened, of these 21% (n=42) were screened within 24-hours.
At-risk patients had lower BMI (23 vs. 26, p<0.001), were more likely to be readmitted within 30 days (45 vs. 27%, p=0.024), and had a higher mortality rate during admission or within 30 days after discharge (23 vs. 10%., p=0.029).
In patients at nutritional-risk 27% covered ≥ 75% of their energy- and protein requirement.
More patients covered their energy- and protein-need if they were supplemented with tube- or parenteral-feeding fully or partly, compared with only oral intake (63 vs. 15%, p<0.001).

Conclusions

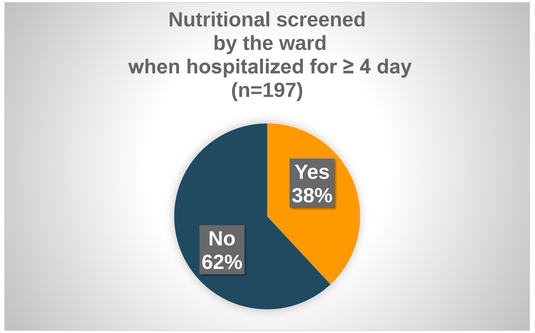
Our results demonstrate that the current nutritional care process is inadequate. Further research is needed on the awareness of screening patients and how to fulfill their requirements during hospitalization.

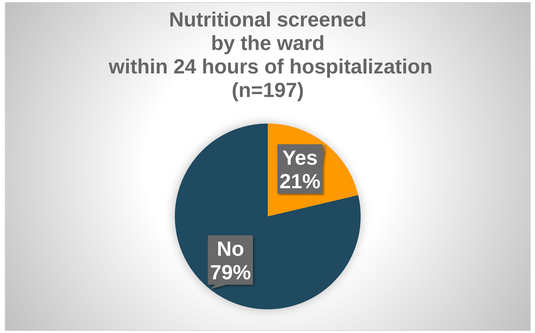
Table 1. *Description of included patients* *Presented as: median (IQR)*	**All** n=197	**At-risk (≥3)** n=111	**Not at-risk (<3)** n=61
Age, years	74 (65-81)	75 (67-81)	70 (63-82)
BMI	24 (21-28)	23 (20-26)	26 (23-29)**
LOS in hospital at inclusion, day	8 (6-14)	10 (6-15)	8 (6-12)
Total LOS at current admission, day	13 (7-20)	14 (8-23)	12 (7-17)

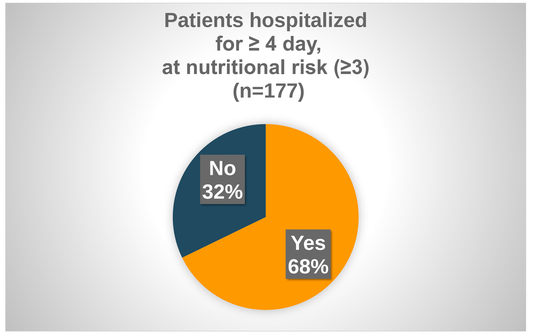
*Mann-Whitney test for patients at-risk vs. not at-risk *p<0.05, **p<0.01*

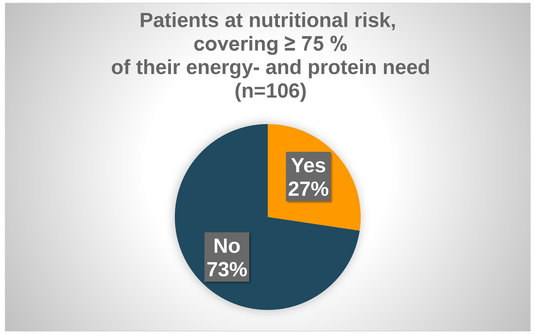
Table 2 *Description of included patients* *Presented as: n (%)*	**All** n=197	**At-risk (≥3)** n=111	**Not at-risk (<3)** n=61
Sex, female	103 (52%)	56 (50%)	32 (52%)
Mortality at hospital of within 30 days after discharge	37 (19%)	26 (23%)	6 (10%)*
Readmissions within 30 days after discharge	65 (38%)	43 (45%)	15 (27%)*

*Chi² or Fishers-test for patients at-risk vs. not at-risk *p<0.05, **p<0.01*









[1] Schuetz, P. *et al.* Individualised nutritional support in medical inpatients at nutritional risk: a randomised clinical trial. *Lancet* **393**, 2312–2321 (2019).

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