QuaLife+: Screening of malnutrition in the elderly population in a university-central hospital in the North of Portugal

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Rationale

Nowadays, 20% of the portuguese population are 65 or more years old, and this number tends to increase. The prevalence of malnutrition in elderly is 1-5% in community and 20-50% in the hospitalized, being associated with an increase in hospitalization duration, costs and mortality.
The QuaLife+ Project, financed by Norway, Iceland and Liechtenstein through EEA Grants, allows the assessment and monitoring of the nutritional risk in the elderly hospitalized in CHSJ.

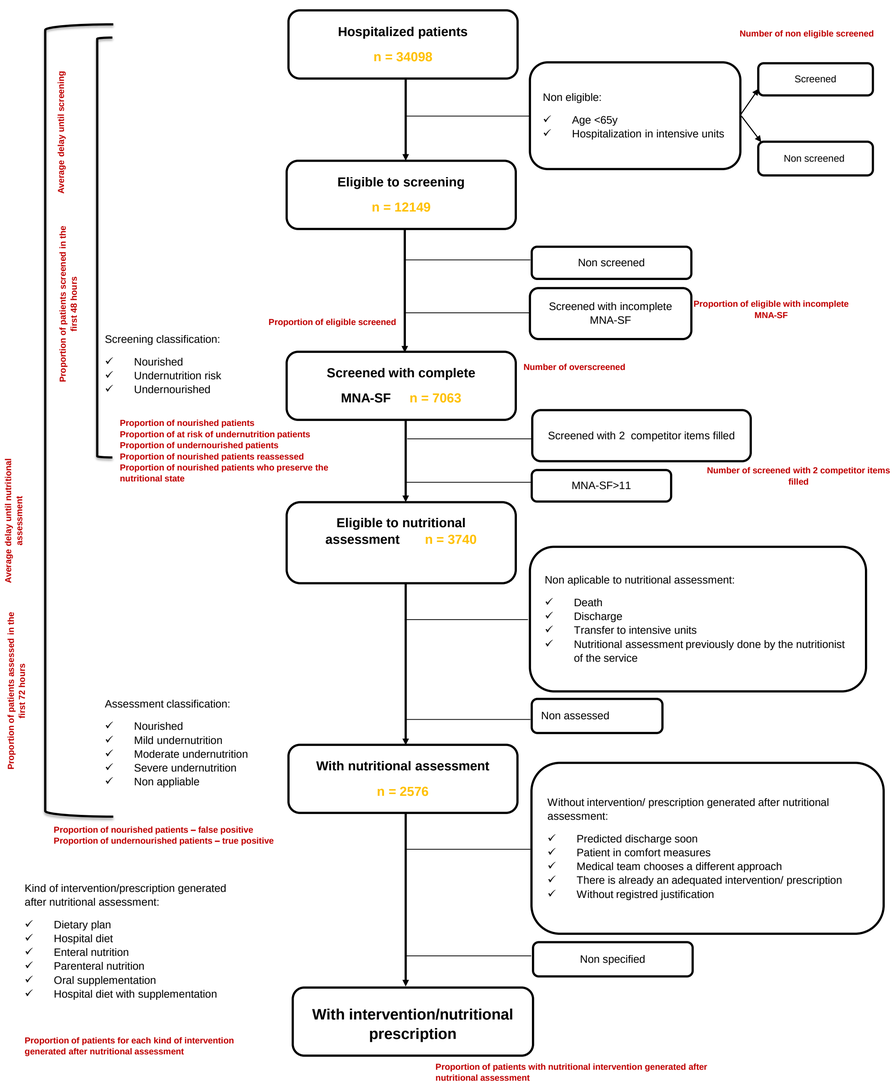
Objective

To monitor the nutritional status of the elderly in CHSJ and to define the type of nutritional intervention.

Methods

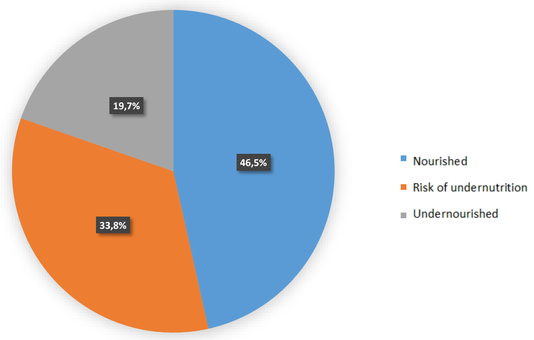
It was evaluated the nutritional risk of the hospitalized patients in CHSJ who are 65 or more years old, between November 2015 and July 2016. The nutritional risk screening is performed by nurses on admission (first 48h) through *Mini Nutritional Assessment – Short Form* (MNA-SF^{R}), generating an automatic alert to the nutrition team when risk is detected. Then, nutritional assessment and intervention take place.
To become the screening practices more uniform, staff formation occured in the implementation period.
The sample methodology is described in graphic 1.
It was used descriptive statistics to the definition of the sample, and Chi-square to find out if there are differences on the proportion of men and women in each nutritional state, and if there are differences on the proportion of patients classified in each nutritional state between screened and assessed. Mann-Whitney test was used to verify if there are differences on the median of age.

Preliminary results



Graphic 1 – Sample methodology, process and result indicators

Screening results on admission may be observed in graphic 2.



Graphic 2 – Nutritional risk on admission (CHSJ)

The association of MNA-SF with sex and age is described in table 1.

Table 1. Characterization of the patients according nutritional screening results (MNA-SF)

		Normal nutritional status	Undernutrition risk	Undernutrition	p
Sex n (%)*	Female	1368 (41.5 %)	1245 (37.8%)	680 (20.7%)	<0.001
	Male	1917 (50.9%)	1144 (30.3%)	709 (18.8%)	
Age(median P25-P75)#		75 (69-80)	79 (72-85)	80 (74-86)	<0.001

*Chi-square, #Mann-Whitney
Table 1 – Proportion by sex and differences of age for each nutritional state

The probability of being at risk of undernutrition ou undernourished is higher in women comparing to men.
Regarding age, older patients have higher risk of undernutrition or undernutrition.

31,7% of the at undernutrition risk patients on screening and 46,8% of the undernourished were actually undernourished after assessment (considering patients from which was possible to obtain this classification).

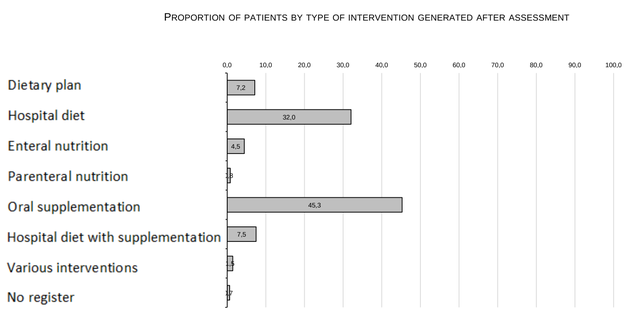
Table 2. Agreement between MNA-SF and nutritional assessment results

	Nutritional assessment result n (%)				
MNA-SF result	Nourished	Undernourished[1]	Without classification	Non appliable	Non evaluated
Undernutrition risk	702 (29,9)	745 (31,7)	54 (2,3)	438 (18,6)	412 (17,5)
Undernourished	209 (15,1)	650 (46,8)	83 (6,0)	218 (15,7)	229 (26,5)
Undernutrition risk/undernourished	911 (24,4)	1395 (37,3)	137 (3,7)	656 (17,5)	641 (17,1)

[1]Includes mild, moderate and severe undernutrition

Table 2. Agreement between MNA-SF and nutritional assessment results

The data concerning the nutritional intervention refers to March until July 2016.



Graphic 3. Type of nutritional intervention after assessment (between march and july only)

Conclusion

Screening results point to more than 1/3 of admitted patients at undernutrition risk and about 1/5 undernourished; after nutritional assessment, most of them were undernourished.
We assessed a hospital malnutrition prevalence that matches the one described in the literature. Older elderly, in particular women, have higher risk of malnutrition.

Acknowledgment To all the nurses who cooperated in this malnutrition screening in CHSJ.

References XV census of the portuguese population – 2011 (Statistics National Institute)