

NUTRITIONAL PROFILE AND COST EVALUATION OF ELDERLY PATIENTS IN HOME CARE WITHIN THE BRAZILIAN PRIVATE HEALTH SECTOR: A RETROSPECTIVE STUDY

- **Authors:** Sarah R. RODRIGUES, Bsc, Msc¹, Keila R. Amaral, Bsc², Martha Oliveira, MD², ERICA CAMARGO, Bsc¹, MATHEUS LUIZ, Bsc¹.
- 1.Danone Brazil, São Paulo, Brazil; 2.Laços em Saúde, Rio de Janeiro, Brazil

Background and aims

Context: Brazil’s aging population presents growing challenges for private health systems, especially regarding nutritional management and the prevention of frailty.¹ Home care has emerged as a strategic alternative, enabling continuous, individualized healthcare outside the hospital setting.² Nutrition plays a central role in maintaining health status and reducing clinical risks among older adults^{3 4 5}, as malnutrition is associated with a higher number of hospitalizations^{6 7} and low weight is considered a marker of frailty, representing higher clinical vulnerability^{8 9}. **Objective:** To describe the nutritional profile of elderly patients enrolled in a home nutritional care program and to identify relationships between nutritional status, clinical risk factors, and healthcare costs within the Brazilian private health sector.

Results

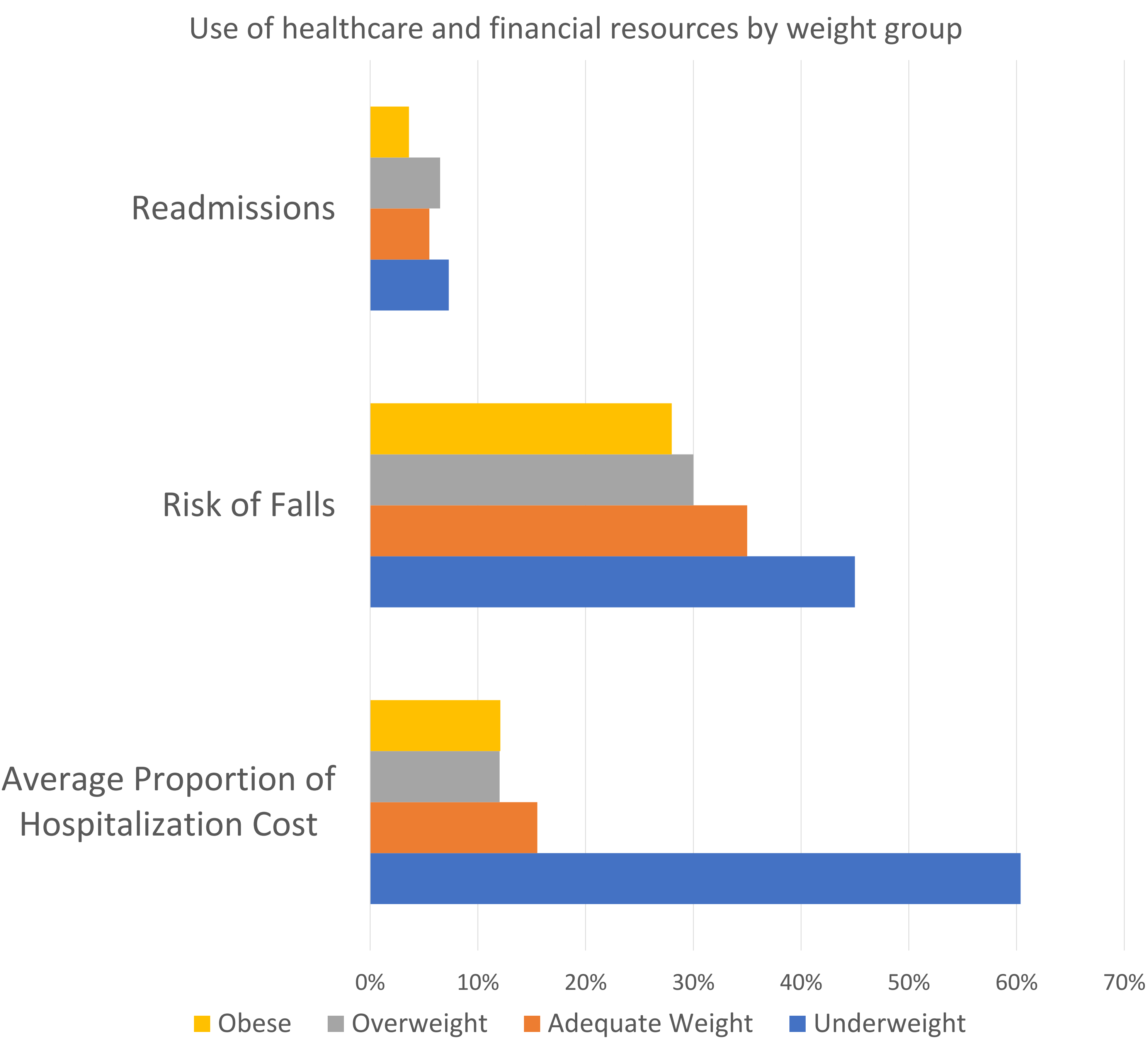
General profile: Mean BMI was 27.06 kg/m²; nutritional distribution was approximately 20% underweight, 44% healthy weight, 12% overweight, and 24% obesity. The mean calf circumference was 33.13 cm. **Clinical risk:** Underweight patients were older (mean age ≈82 years), predominantly female, and showed higher clinical vulnerability, with higher percentage of risk of falls within the group (45% vs. 35 AW, 28% OB, and 30% OW) and greater prevalence of cancer (14%). **Resource use and costs:** The underweight group had the highest average hospitalization costs (EUR 1173.98 vs EUR 301,76 AW, EUR 233,68, and EUR 234,95 OW) and higher frequency of hospitalizations (0,55 visit per patient vs. 0,21 AW, 0,12 OB, and 0,21 OW), and ambulatory costs compared to other.

Methods

Design: Retrospective, descriptive study including **3,417** patients aged 60 years or older, followed by a home nutritional care service in Brazil’s private health sector. **Variables:** Sex, age, BMI, calf circumference, comorbidities (hypertension, diabetes, cancer), risk and occurrence of falls, nutritional supplementation, type of nutritional therapy, medication use, hospitalizations, and associated costs. **Nutritional classification:** Patients were categorized as underweight (UW), adequate weight (AW), overweight (OW), or obese (OB) according to elderly-specific BMI cutoffs. **Analysis:** Descriptive statistics and comparisons between nutritional status groups and relevant clinical outcomes.

Conclusion

The study described the nutritional profile of elderly patients enrolled in a home nutritional care program and identified that Underweight status in elderly patients receiving home care is a consistent marker of frailty and higher resource utilization. Approximately 20% of patients were underweight, a condition associated with increased higher risk of falls, readmissions count, and hospitalization costs when compared to the other groups.



References

1. IBGE. Projeção da população do Brasil e Unidades da Federação. Brasília: IBGE; 2023.
2. Brasil. Ministério da Saúde. Caderno de Atenção Domiciliar. Brasília: MS; 2012.
- 3.Cheng AT, et al. Oral nutritional supplements in frail older adults: RCT. J Nutr Health Aging. 2023;27(2):123–131.
4. Muscaritoli M, et al. ESPEN practical guideline: Clinical Nutrition in cancer. Clin Nutr. 2021;40(5):2898–2913.
5. Waitzberg DL, et al. The cost of hospital malnutrition and nutrition therapy. Clin Nutr. 2021;40(1):4–10.
3. Morley JE, et al. Nutritional frailty: a novel concept. J Am Med Dir Assoc. 2010;11(7):452–456.
6. Clegg A, et al. Frailty in elderly people. Lancet. 2013;381(9868):752–762.
7. Morley JE, et al. Nutritional frailty: a novel concept. J Am Med Dir Assoc. 2010;11(7):452–456.
8. Dent E, et al. Management of frailty. Lancet. 2019;394(10206):1376–1386.
9. Handforth C, et al. Frailty in older cancer patients: a systematic review. Ann Oncol. 2015;26(6):1091–1101.