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DEEPER INSIGHT FROM BIG DATA AND SMALL AREAS

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## Poster 09

### Strong Spatial Inequalities In The Nutrition Status Of Elderly (Portugal)

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**Introduction:** Within Nutrition UP 65 study nutritional health problems of the elderly Portuguese population were described, but it of major relevance to identify target vulnerable groups for public health interventions. This analysis aims to identify clusters of priority intervention in the improvement of the nutritional deficit in this population.

**Methods:** Data was provided by a cluster sampling of 1500 individuals with 65 or more years, representative of the elder people living in Portugal, according to the age, gender, education level and NUT2 regional area of the country. Using an interview as the inquiry procedure, information about lifestyle, health and nutritional status was individually collected. Serum vitamin D and 24-hour urine were also evaluated. A spatial scan statistic was obtained, using SaTScan software and the Gaussian model for quantitative variables and the Bernoulli model for dichotomous variables, to assess possible clustering of individual nutritional status such as frailty, obesity, sarcopenia, hydration, vitamin D status and salt consumption. A Log Likelihood Ratio (LLR) test was used to identify significant clusters of higher than expected (hotspot) or lower than expected (coldspot) nutritional status and p-value less than 0.05 was considered statistically significant.

**Results:** SaTScan analysis detected two hotspot of fragility on the northwest (LLR = 23.32; p-value<0.05) and center coast (LLR = 10.59; p-value<0.05); one hotspot of hipohydration on the northwest (LLR = 33.50; p-value<0.05); one hotspot of Vitamin D on the center (LLR = 14.67; p-value<0.05); two hotspot of salt consumption the northwest (LLR = 11.86; p-value<0.05) and center coast (LLR = 9.83; p-value<0.05), which means that the nutrition status of the elderly in these regions is more likely to be impaired. No clusters of better nutritional condition were detected (coldspot).

**Conclusion:** This analysis showed that northwest and center are priority regions for intervention to improve the nutrition status of the Portuguese older adults.