



Innovation Technology for Mobility Evaluation in Older Persons

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Background

Worldwide population is ageing and older persons exhibits a significant heterogeneity in terms of function, prognosis and quality of life. Movement has been shown as an interesting functional proxy of “biological” age, able to seize the complexity of ageing population. New technologies might allow to gain a deeper understanding and more detailed information about mobility features among older people.

Objectives

- To gather information about mobility (and particularly gait) in older persons employing wearable devices
- To inspect modification in mobility in patients experiencing delirium

Methodologies

Older individuals admitted to a geriatric ward and at increased risk of developing delirium will be enrolled. A wearable device will be employed to gather information about mobility during the hospitalization. Data will be inspected to assess modification in mobility patterns among patients experiencing delirium. Variability in mobility pattern prior to clinical diagnosis of delirium will be exploited to aid early diagnosis of delirium.

Wearable devices will be also used to assess the variability of spatio-temporal features in instrumental evaluation of gait among older persons.

Expected Results and Impact

To find common parameters for instrumental evaluation of gait in older patients might help to standardize many of the tests currently used in geriatric assessment. To gain better understanding of the temporal evolution of delirium and to help the standardization of instrumental evaluation of mobility among older persons. Future studies might focus on the impact of drug prescription on mobility patterns in patients affected by delirium.