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Purpose According to World Health Organization (WHO) predictions, the global elderly population grows particularly in developed countries. In France, people aged 65 years+ were 21% in 2002 and will be 25% in 2030 and 29% in 2050[1]. This growth of the elderly population is associated with increased morbidity, falls, cognitive decline, social isolation and depression. Preserving autonomy with prevention strategies that will allow old people to stay at home as long as possible is the great challenge of the next 50 years. Recent progress in home technologies and medical care requires research on how to apply these tools to reduce and prevent physical or social dependence. In this context, the local council of Correze decided to support an experiment in home automation and telecare. The aim was to test the efficiency and cost-effectiveness of simple and cheap technological solutions. **Method** In this one year prospective cohort study, 96 elderly were equipped with 24/7 telecare, led pathways, remote alarm devices (bracelet, shower pull cord), smoke and carbon monoxide detectors, and smart detectors capable of alerting if a patient stayed too long in a particular place defined by the users' family (e.g. in the bathroom, outside …). This group of people were compared to 96 controls who of comparable age and GIR level (French autonomy assessment)[2] and geographically associated. Our principal criterion was the number of days without any hospitalization, but we also compared them on other criteria such as malnutrition, the stress-related vascular risk factors, rate of MMSE decline for the demented, number of falls and their consequences and SMAF testing[3] at baseline, 6 and 12 months as well as on a global geriatric assessment. **Results & Discussion** Mean age of the sample is 84.5 years±6.5 years, mean GIR level is 5±1,75% are women, 19% had a previously diagnosed Dementia and 10% presented with cognitive impairments. Mean GDS (Geriatric Depression Scale) is 14±7.37; patients showed moderate malnutrition and 5 severe nutrition problems. Proneness to falls was measured by the timed "up and go test" and 77% of our sample failed the testing. With these results we can see that we are have a frail cohort and potentially high risk dependence population. An ancillary social and environmental study will describe the ideas about technology described by users and caregivers and will also focus on technology acceptance.

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Keywords: telecare, elderly, home automation, prevention, dependence

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