

J. BOURGEOIS, A. DERREUMAUX, V. MANERA, P. ROBERT. **MeMo: Clinical interest in a web platform for cognitive and motivation training.** *Gerontechnology* 2016;15(suppl):7s; doi:10.4017/gt.2016.15.s.782.00 **Purpose** Cognitive impairments such as memory loss or attentional disorders, are frequently observed in normal aging, and are clinical symptoms in age-related diseases, such as Alzheimer's. These cognitive disorders are known to interfere with capacity for independence in everyday activities, thus negatively impacting patients' autonomy. Numerous non pharmacological treatments exist to address these issues. In recent reviews^{1,2}, cognitive training is described as a promising method to improve cognition in Alzheimer Disease (AD) patients, or at least to reduce the cognitive decline, as well as enhancing functional connectivity between brain structures³. However, only little evidence exists concerning an improvement in activities of daily living following computer-based cognitive training exercises, primarily to a lack of sensitive assessment tools. In this context, the Innovation Alzheimer association has designed and developed MeMo, which aims at proposing cognitive training exercises, as well as information and advices about prevention and care of cognitive impairments. This web platform is freely available on the internet⁴, and can be accessed on any computer or tablet. Its purpose is to provide materials for both professional use in institutions and personal use at home as a complement of therapeutic care. Particular care is taken in designing MeMo to allow its use by cognitively impaired patients as well as healthy users willing to preventively train their cognitive functions. Each exercise was conceived to train a specific cognitive function, to allow a personalized training based on the observed impairments. MeMo also allows keeping track of the evolution of performance overtime, in order to boost motivation and valorize the user's efforts. The Innovation Alzheimer association conducted a randomized controlled trial to assess the effectiveness of using MeMo exercises at activities of daily living and cognitive functioning. **Method** 80 patients with mild and major neurocognitive disorder due to Alzheimer's Disease will be randomized in two groups: in the control group, the patients will keep their usual functioning; in the experimental group, the patients will have to practice MeMo exercises for 12 consecutive weeks, with four 30 minutes-sessions of training per week. The effectiveness of MeMo exercises will be assessed through neuropsychological testing and with a standardized ecological functional assessment of activities of daily living. **Results & Discussion** If the effectiveness of MeMo exercises is validated, this RCT will provide strong evidence for the interest of computer-based cognitive training in reducing dementia-related symptoms and in maintaining patients' autonomy.

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Address: Association Innovation Alzheimer, CMRR, Nice, France;

E: jeremy.bourgeois@unice.fr