

## POSTER SESSION 3

### Use of a device to relieve urinary incontinence in vulnerable elders of a geriatric hospital

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**Purpose** Urinary incontinence (UI) is a symptom characterized by the loss of involuntary urine leakage in an inappropriate place or moment. UI is highly prevalent among elderly people, especially women and hospitalized elderly people (Bardsley, 2016). Functional UI (FUI), which is not related to bladder or urinary sphincters disease, is a common type of UI in elderly people, especially those with cognitive disorders. The usual management of FUI is the wearing of palliative diapers with potential negative effects such as skin complications, altered self-esteem and costs (Wagg et al., 2015). We aimed to assess the feasibility of an innovative device to alleviate FUI. **Method** The DFree© is a non-invasive ultrasound device that continuously estimates bladder volume and alerts caregivers when a bladder volume is reached on the basis of a configurable threshold. The aim of the study was to assess the acceptance of the technology by patients and by the nursing aids in a geriatric hospital. For this feasibility study, six participants were recruited in a cardiogeriatric unit in Charles Foix Geriatric Hospital (France). The participants were three patients with FUI and three nursing aids. Additional selection criteria for patients were the ability to report the number of UI episodes and to give consent. The DFree© device is composed of two parts connected by a cable: a sensor and a main unit. The sensor was placed on the suprapubic region with an adhesive patch and the main unit worked as a transmitter and sent data on the bladder volume to a bridge. This bridge communicated data to an application on the caregivers' iPad via the measure device and a secured cloud. The device was worn on daytime and removed at night. Two patients wore the device for 9 days and the other for 7 days. Participants filled out a questionnaire after the use. **Results and discussion** DFree© has been welcomed by nursing aids and was well accepted by the patients. They find it is useful, easy to use and declared that it brings a new solution to UI. We concluded that the feasibility was good. This study offers new perspectives on UI care and allows for a larger study to be carried out on improving participant's quality of life and self-esteem.

#### References

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Figure 1. DFree© device: sensor (A) and main unit (B).