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## CONFERENCE ABSTRACT

# Co-creating towards next-generation frailty assessment in community dwelling

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***Introduction***

Elderly-associated conditions, like frailty and dependency, are a major challenge to the sustainability of healthcare systems. Frailty is a state of increased vulnerability, affecting the ability to respond to stressors that may lead to disability and death. We carried out a set of co-creation activities in the POSITIVE project funded by EIT-Health to jointly design an integrated system to assess frailty in community dwelling.

***Methods***

We followed a participatory design approach, combining co-creation activities such as pluralistic usability walkthroughs and design workshops. The participants in the activities were older people at risk of frailty; their carers; and care professionals, as special care professionals, and community dwelling professionals. We gathered in a report all the contributions of the participants in each session. In the sessions with professionals, we sent them the report to get their ok to the collected information. The technical team considered this report for the refinement of system design, creating a new prototype. These refined prototypes were the basis for subsequent co-creation activities.

***Results***

We conducted 13 sessions between February and September 2019, in Spain and Sweden. Participants include 20 older users (aged 70-96), 15 community care professionals (physicians, nurses, physiotherapists and occupational therapists), 5 geriatricians, 6 technological researchers and 2 UX (user experience) researchers.

The co-created system supports a community-dwelling assessment of frailty, with a pharmacological intervention using STOPP/START criteria, and non-pharmacological intervention such as nutritional and exercise tailored programs.

The patient system is based on a mobile device and a monitoring kit, with notifications for planned monitoring activities and the intervention prescribed (i.e. exercise). Informal caregivers have their specific mobile app to monitor the progression of their loved ones. Care professionals monitor and manage their patients through a tablet.

***Discussion***

There is a huge technological barrier for older adults at risk of frailty. Co-creation activities played a key role for the success of the resulting design, ensuring that the solution fits their context and expectations, no matter their technological skills.
Design workshops with professionals gave shape to a system-supported community dwelling intervention protocol, uncovering grey areas between care tiers.

***Conclusions***

Despite requiring extra resources, co-creation activities in the POSITIVE project resulted in a stronger new care model. They enhanced usability and UX of the resulting technological solution, which are key aspects to increase adherence and to ensure an effective integration into day-to-day clinical practice.

***Lessons learned***

We observed that previous assumptions about community care from specialized care professionals were wrong to a high extent. There is a lack of communication between both communities, not knowing how professionals in different settings carry out their work and manage older patients. Additionally, the Swedish public health system is quite different from the Spanish one. These differences call for the enactment of co-creation activities in different contexts when products are meant to be launched with a global perspective.

***Limitations***

Representativeness of the participants in the co-creation activities must be considered.

***Suggestions for future research***

To create specific guidelines for co-creation activities in the e-health domain that include older patients.