



Supporting safer aging in place of choice through ambient monitoring

TOPICS: Fall prevention & safety | Home & community | Senior living & long-term care | Passive/ambient monitoring | Connected devices & wearables | Privacy & trust | Caregiver & family engagement | Usability & inclusive design



About Livindi



Livindi is an in-home connected health platform designed to help older adults live safely and independently. The platform combines a tablet with on-device AI, ambient activity sensors, optional wearable and bed sensors, caregiver tools, communication features, biometric monitoring, and virtual health services.

Through a MassAITEC pilot, Livindi expanded the platform to detect distress-related events, primarily falls, using on-device recognition of the phrase “Help Me” alongside activity patterns captured through ambient sensors. The pilot included 20 adults aged 65 and older living independently or in assisted living across multiple U.S. states. Technology developed through the pilot has since been incorporated into a platform serving more than 4,000 customers.



The opportunity

- Detect distress-related events without relying exclusively on pendants or buttons that older adults may forget or be unable to activate.
- Preserve privacy by processing audio within the home rather than continuously transmitting it to the cloud.
- Build a monitoring solution that fits existing family-caregiver workflows.
- Provide meaningful everyday value so the platform remains used, powered, and trusted between emergencies.



The challenge

- Traditional emergency devices only work when older adults consistently wear and activate them.
- Always-listening cloud-based audio was unacceptable to many older adults and family members.
- Family caregivers were essential to enrollment, onboarding, and emergency response, but could not be treated merely as downstream notification contacts.
- Traditional smart device wake words are difficult for older adults, particularly those with cognitive impairment, to remember.*

**This is supported by published research (see link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC7840274/>) demonstrating that older adults using smart speakers like Alexa for the first time have a hard time understanding and using wake words. With Alzheimer's disease or general cognitive impairment, there is a real risk that they would not remember the “wake word” after experiencing a fall and therefore be unable to call for help. The idea behind using “help me” in succession, i.e. “help me, help me” is that it would be easier to remember since you are likely to call out for help.*





The approach

- Combined voice-trigger detection with ambient activity data to create a multimodal distress-detection system.
- Processed audio on the device to address privacy concerns.
- Confirmed potential events verbally and escalated alerts sequentially through a pre-registered family-care team until someone responded.
- Shipped pre-configured, plug-and-play kits and provided personalized live onboarding to reduce setup burden.
- Supported continued use through video calling, real-time captioning, shared photos, medication reminders, and access to virtual care.
- Refined the trigger logic during the pilot by requiring “Help Me” twice within a 30-second window and incorporating activity context.



The impact

- ✓ More than half of the 20 pilot participants reported greater confidence and less fear of falling across most measured activities of daily living.
- ✓ Mean Falls Efficacy Scale improvements ranged from **1.54% to 21.43%**, with the largest gains reported for dressing, reaching into cabinets, getting in and out of bed, using stairs, and cleaning.
- ✓ Revised trigger logic eliminated false activations caused by ordinary background sounds, although television audio containing the trigger phrase could still generate alerts.
- ✓ A documented alert enabled family intervention during a serious health event that the participant’s family credited with saving his life.
- ✓ The pilot generated promising real-world evidence while highlighting the need for larger, longer, and comparative studies measuring detection performance and healthcare utilization.