Prototype May Allow Individuals With Dementia to Dress Themselves

A “smart home” prototype may help individuals with dementia dress themselves through automated assistance, according to a study published in JMIR Medical Informatics. Using input from caregiver focus groups, researchers developed an intelligent dressing system named DRESS, which integrates automated tracking and recognition with guided assistance with the goal of helping an individual with dementia dress without a caregiver in the room.

The DRESS prototype uses a combination of sensors and image recognition to track progress during the dressing process. Barcodes on clothing identify the type, location, and orientation of a piece of clothing. A five-drawer dresser—topped with a tablet, camera, and motion sensor—is organized with one piece of clothing per drawer in an order that follows an individual’s dressing preferences. A skin conductance sensor worn as a bracelet monitors the individual’s stress levels and related frustration.

The individual with dementia receives an audio prompt recorded in the caregiver’s voice to open the top drawer, which simultaneously lights up. The clothing in the drawer contains barcodes that are detected by the camera. If an item of clothing is put on correctly, the DRESS system prompts the individual to move to the next step; if it detects ongoing issues or an increase in stress levels, the system can alert a caregiver that help is needed.

Using 11 healthy participants to simulate common scenarios for getting dressed, the study showed that the DRESS prototype could detect clothing orientation and position, accurately detecting participants’ clothing 384 of 388 times. However, the prototype was unable to consistently identify when one completed putting on an item of clothing, missing these final cues in 10 of 22 cases for shirts and five of 22 cases for pants.

U.S. Food and Drug Administration Approves First Non-Opioid Drug to Treat Opioid Drug Withdrawal Symptoms

The U.S. Food and Drug Administration (FDA) approved LucemyraTM for mitigation of opioid drug withdrawal symptoms to facilitate abrupt opioid drug discontinuation in adults. Lucemyra suppresses the neurochemical surge that produces the acute and painful symptoms of opioid drug withdrawal. Lucemyra is typically administered in three 0.18-mg tablets taken orally four times daily at 5- to 6-hour intervals during the period of peak withdrawal symptoms. It is the first and only non-opioid drug treatment for mitigation of withdrawal symptoms.

The FDA’s approval of Lucemyra is supported by two randomized, double-blind, placebo-controlled clinical trials; an open-label study; and clinical pharmacology studies with concomitant administration of either methadone, buprenorphine, or naltrexone drugs. Data show that compared to placebo, participants treated with Lucemyra experienced less severe withdrawal symptoms and were significantly more likely to complete a 7-day opioid drug discontinuation treatment.


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