DETECTING WALKING AIDS WITH SENSORS

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Technology description

A method to detect usage of walking aids with sensors in smartphones and wearable technology.
#biomedical #device #healthcare #sensor #researchtool

Falling is a common injury that results in hospitalization of older adults. The standard treatment is to prescribe a walker or a cane. However, many patients either improperly use the device or fail to use it at all. Furthermore, doctors rely on self reports to track progress. Developing a way to monitor proper use can help reduce healthcare costs and improve diagnostic capabilities. Northwestern inventors have created a method to detect walking aid usage with sensors in smartphones and wearables. The device provides data from the internal accelerometer. The data was used to develop algorithms to detect whether the patient was using their assistive device or not. This method can prevent falling from occurring and provide information directly to the doctor. Wider applications could be developed to be compatible with other assistive devices.

Application area

Research patterns of usage and adherence
Compliance verification for insurance companies
Expand smart wearable capabilities and functions

Advantages

Detection occurs before patient falls
Remote monitoring
Real time alerts to professionals and family members

Institution

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