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OK2StandUP: Preventing Falls Not Just Detecting Them

ID: 04251

Featured Innovators: Eunice Yang, PhD, Yelena Nelson, Jinal Minstral

Falls rank among the top 20 most expensive health conditions – with $34 billion in Medicare costs annually – and are the leading cause of injuries, disability, and accidental deaths in older adults. Twenty percent of these falls are attributed to dizziness, lightheadedness, and fainting. Clinically, this is called orthostatic hypotension (OH). OK2StandUP consists of a commercially available wearable health monitor, web/mobile app, and cloud-based predictive algorithm to predict when a patient is most at risk of OH. It provides timely actionable cues to community-dwellers and professionals so that falls can be mitigated.

Technology Description

OK2StandUP uses the latest artificial intelligence technology capable of analyzing big data. A mobile/web app receives and sends vital signs and physical position data from a wearable health monitor to the cloud. Our cloud-based predictive algorithm establishes unique precursor criteria to the onset of OH for each individual. When OH criteria are met, the user is provided actionable cues to prevent a fall through various means. In the laboratory, OK2StandUP™ reliably predicts OH 85 percent of the time.

Advantages

- Fall Prevention, not just fall detection
- Analyzes and provides individually unique criteria for fall detection
- Predicts and provides actionable cues to mitigate falls
- Empowers the user and their caretakers

Applications

- Home Use
- Physical Therapy
- Elder care communities
  - Independent Living
  - Personal Care
  - Skilled Nursing
  - Continuous Care Retirement community

Stage of Development

Algorithm proof-of-concept of this product has been completed.

IP Status

Copyright; Provisional Patent Application Filed

Notable Mentions

- 2017 Pitt Innovation Challenge (PInCh): $25,000
- 2017 Pitt Ventures 1st Gear: $3,000
- 2017 Pitt Ventures 1st Gear Pitch Winner: $20k
- 2018 Pitt Innovation Challenge (PInCh): $25,000

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