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
Candidate for copyright

Notable Mentions
- Pittsburgh Innovation Challenge (PInCh): $25,000
- Pitt Ventures 1st Gear: $3,000
- Pitt Ventures 1st Gear Pitch Winner: $20k
Innovators

Eunice Yang, PhD
Associate Professor
Mechanical Engineering
University of Pittsburgh, Johnstown

Dr. Yang is well versed in sensor technologies and teaches various courses in engineering measurements. She adds to the team's strength with her industrial and entrepreneurial experience, most notably at Boeing. Dr. Yang has over 10 years of experience in owning and operating folding carton manufacturing and software businesses grossing close to a total of $1 million annually.

Education
PhD Penn State
MSME California State University at Long Beach
BSME University of Hawaii

Yelena Nelson
Graduate Research Assistant
Mechanical Engineering
Carnegie Mellon University

Ms. Nelson will be a graduate student in the Mechanical Engineering Department at CMU with a specialty in fluid mechanics. She has industrial experience in manufacturing as well as research experience conducting orthostatic tests using various sensors for the OK2StandUP project.

Education
BSMETN University of Pittsburgh, Johnstown

Jinal Minstry
Msc Student
Bioengineering
University of Pittsburgh

Ms. Ministry will be graduating with an M.S. in Bioengineering with a focus in Medical Product Engineering in December 2018. She has translated three medical research products to commercialization, served as the Project Lead for Purrrr a start-up that uses heart health data to lower stress, and currently serves as Vice President of the student-led program Biomedical Innovation & Commercialization Program at Pitt.

Education
BS & MS BioEng University of Pittsburgh