



Kinetisense Risk of Fall System Differentiator Outline

Kinetisense is a state-of-the-art markerless biomechanical assessment tool that incorporates AI and machine learning to prevent the risk of falling. The Kinetisense system detects deficiencies and compensatory movement patterns in a person's Gait, Balance, and Functional movement, allowing a clinician to assess and correct the physical movement dysfunction(s) before a fall occurs. The human body moves in 3 planes (frontal, sagittal, and transverse) and we are able to capture each one with a single-facing 3D sensor.

The system quickly provides advanced outputs in comparison to “normative data values” for each assessment and dysfunction. The patient/client and therapist immediately have an idea of the functional status as compared to others in that respective age and gender group. Kinetisense also provides “trend data” showing change over time. This information is invaluable when clinically triaging improvement or regression in movement function and making decisions on interventional therapies or assisted living.

Kinetisense is a Proactive Solution to Fall Prevention

Kinetisense provides 3D assessment of movements that are industry standard in senior living and fall prevention. These assessments are:

- a) Walking Gait, (gait)**
- b) Timed Up and Go, (gait)**
- c) 5x Sit to Stand (function)**
- d) mCTSIB (balance).**

In addition to these assessments, Kinetisense provides four modules that can benefit a resident's muscular-skeletal health. These include:

- e) Posture** helps to diagnose and manage pain by showing “joint stacking”.

- f) **Joint Range of Motion (ROM)** is a great tool for detecting pain points as well as assisting with a restorative program. Assessment can be completed in passive ROM as well as with resistance. Our AI system compares the captured ROM data to AMA guidelines, establishes baseline joint ROM, and captures treatment outcomes in the reporting.
- g) **Functional Movement Screen** is a great tool for capturing motion/tasks and provides joint angles for any movement. It can assess most motions and show joint stacking positions throughout the motion. Assess day-to-day movements such as getting out of bed, tying shoes, etc.
- h) **Advanced Movement Screen (KAMS)** gives an overall physical assessment score for the more active independent living residents and provides a skeletal mapping tool of the top 3 upper body and top 3 lower body dysfunctions so a clinician can format a personalized plan of care to prevent injury and further deterioration. This module established a functional baseline to track the functional trends of the individual over time.

The Kinetisense Advantage

Kinetisense is considered the world leader in markerless 3D motion assessment. The following are some additional advantages of the Kinetisense system:

1. **Custom Skeletal Tracking System** - Kinetisense has incorporated a proprietary movement tracking system that allows for accurate assessment with an iPad Pro tablet. With Kinetisense on iPad, the versatility, scalability, and efficiency are unmatched.
2. **Kinetisense MOCAP Engine** - Kinetisense has a proprietary “data smoothing layer” that removes outlier data that can sporadically come from the 3D sensor. This “smoothing” of data in real-time increases Kinetisense's accuracy over its competitors by approximately 30%.
3. **University Validated** - Kinetisense has been validated for accuracy against the gold standard Vicon Research system. Our motion capture system shows similar accuracy to the 9-camera marker-based Vicon, making Kinetisense the most accurate markerless motion capture system on the market.
4. **Advanced-Data Dashboarding** - Kinetisense allows organizations to view population-based data of their group through the advanced Kinetisense Dashboard. Organizations can now track and present the changes that their protocols make to the patient population and use this high-level data to modify interventional strategies.
5. **60 FPS Analysis**- Kinetisense uses the lidar sensor from the iPad PRO that captures at a frame rate of 60 FPS, this is twice more frames per second than our competitors which adds even more accuracy to the assessment.