

FallSkip: biomechanical application to evaluate older adults' fall risk

DESCRIPTION OF THE INVENTION

FallSkip is a new **biomechanical application**, which allows clinicians to evaluate older adults' fall risk, attributed to their functional state. The system uses an Inertial Measurement Unit integrated in a portable device, which is responsible to analyse the **biomechanical response** when performing a modified protocol of the Timed up Go Test (TGU).

The FallSkip application assesses the overall risk of falling by combining the result of the biomechanical test with the main risk factors, age, gender and patient history of falls. The fall risk result is available immediately after the test, which is accompanied by a comprehensive evaluation of the main biomechanical parameters related to falls; By this way, **clinicians are assisted** during the diagnosis phase, making easier the decision making process.

APPLICATION BUSINESS SECTORS

- Business sectors:
 - Elderly care (nursing homes, day-care centers, thermal resorts)
 - Occupational health
- Health sector in the following specialties:
 - Rehabilitation
 - Sports medicine
 - Neurology
 - Geriatrics
 - Physiotherapy
- Research centers and universities related to the activities of rehabilitation, physical activity and sport, geriatrics and gerontology, neurology, etc.

TECHNICAL ADVANTAGES AND BUSINESS BENEFITS

The assessment lasts, including the instrumentation of the patient and the performance of the test, approximately two minute. This device has been designed to be used by healthcare personnel in the clinical setting, where **objectivity** and time-saving provide a **great added value** in clinical protocols. In addition, its usability allows it to be used by **non-specialized personnel**. Therefore, it is a **low-cost system** that allows an analysis of the functional status of an elderly person without the need for a high financial outlay.

STATUS DEVELOPED OF THE TECHNOLOGY

TRL greater than 9: FallSkip has been commercially launched on the market and has been accepted by a group of customers.

INTELLECTUAL PROPERTY RIGHTS

Intellectual property rights of Instituto de Biomecánica de Valencia.

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COLLABORATION SOUGHT

Qualified distributors of medical devices with a special focus on the fields of rehabilitation, neurology and geriatrics.

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