# User experience of a medical device for falls risk assessment in older adults

The one where I helped a company deliver a better user experience to clinicians

A company wanted to understand why their medical device for falls risk assessment was **not selling as expected**. They wanted to investigate the following questions:

*"How are physical therapists (PTs) currently using the product with their geriatric patients? What are the barriers to adoption, from an user experience perspective?"*

## Scenario

- The product provided an objective measure of falls risk and proved to be more accurate than standard assessment methods.
- Despite this, a common feedback from PTs was that it didn't add significant value to current practice: *"It doesn't tell me anything I don't already know based on my years of experience."*

## Task

I engaged with existing customers to:

1) assess the user experience and gather requirements for product improvements;
2) validate value proposition hypotheses.

*First, I spent time with the client understanding the **product, business model, business goals** and previous **customer feedback***

*Then, I **interviewed** and **observed** current customers to test hypotheses and understand how the product fitted with their workflows*

### Outcomes

- A list of prioritized customer and product hypotheses to be tested through user research.
- A set of guiding principles for prioritizing recommendations.

### Methods

- In-depth interviews to understand current workflows, priorities and motivations;
- Think aloud testing to assess UI and UX of different product features;
- Contextual inquiry  to evaluate how the product was used with existing patients.

I compiled an **user experience insights** document summarizing customer feedback and **recommendations** for product improvements

**Key recommendations include:**

1. To replace the default time limit setting by a prompt for clinicians to confirm the validity of unusually long tests.
2. To improve the falls risk assessment user experience, by redesigning the straps (and making them easier to put on and take off) and reducing the number of clicks necessary to complete the test.
3. To display clinically relevant metrics in a simplified manner, making it easier for clinicians to interpret the test results.
4. To create a simple patient report displaying progress over time.

**Recommendation 1:** to replace the default time limit setting by a prompt for clinicians to confirm the validity of unusually long tests.

**Insight**: the default time limit setting automatically invalidated tests lasting longer than 1 minute, assuming these were errors. However, frail patients (a target population for this product) often take longer to complete these types of test, which meant their **valid scores were not being recorded**. This caused great frustration to both patients and clinicians.

- Effort required: low.
- Value to customer: high.
- Value to business: high.

**Recommendation 2:** To improve the falls risk assessment user experience, by redesigning the straps (and making them easier to put on and take off) and reducing the number of clicks necessary to complete a test.

**Insight**: the **time taken to complete a test** added friction to an already time-constrained workflow; the **straps** used to secure the device to the patient were perceived as particularly burdensome, in line with previous feedback obtained by the company.

- Effort required: medium-high.
- Value to customer: high.
- Value to business: high (features that reduced friction and increased the repeated use of the product were in line with the company's fee-for-service business model).

**Recommendation 3:** To redesign the dashboard in order to display clinically relevant metrics in a simplified manner, making it easier for clinicians to interpret the test results.

**Insight**: several PTs expressed **confusion and frustration when interpreting the dashboard**. Many of the metrics displayed were not typically measured by them, so they didn't know how to incorporate these metrics in the patient's treatment plan.

- Effort required: high.
- Value to customer: high.
- Value to business: high (features that helped clinicians make meaningful use of the data were in line with the product vision and value proposition).

## **Recommendation 4:** To create a simple patient report displaying progress over time.

**Insight**: Despite the dashboard being considered “clunky”, several PTs were using it to discuss treatment outcomes with patients. They felt that a **visual representation of “progress over time”** helped them motivate patients to continue following the treatment plan. This was an unintended use of the product.

- Effort required: medium.
- Value to customer: high.
- Value to business: high.

## Empathizing with founders helped me prioritize recommendations and provide actionable feedback

- Taking time to understand the client's priorities, goals and motivations at the start of the project was essential to helped me **prioritize** relevant recommendations and provide actionable feedback.

## Storytelling supported by user research data helped me communicate UX issues and recommendations effectively

- Using **vignettes** and **storyboards** helped the founders understand how customers were effectively using the product, what was working and what was not. This helped them assess the impact of different recommendations and prioritize features on their product roadmap.