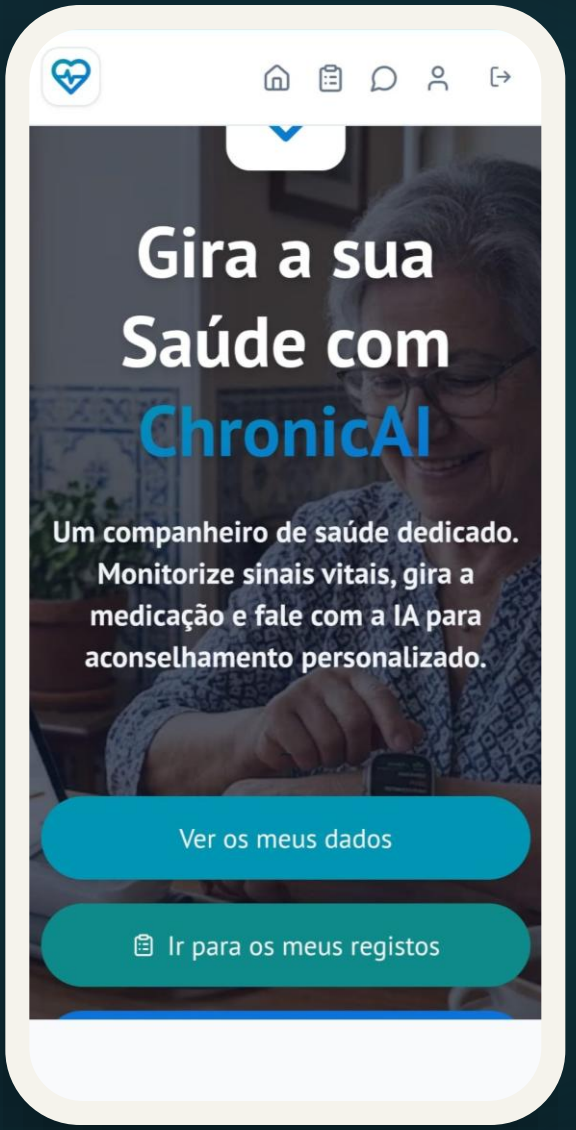
UMINHO OPEN SCIENCE FESTIVAL · SHOW & TELL

ChronicAI

Self-care and artificial intelligence for chronic disease management in older adults

Filipa Ferraz[1,2], Liliana Avidos[1], Anna Quialheiro[1,2]

[1] CESPU · [2] University of Minho · 20 October 2026



THE STARTING POINT

Between appointments, who supports self-care for older adults with chronic disease?

Adherence

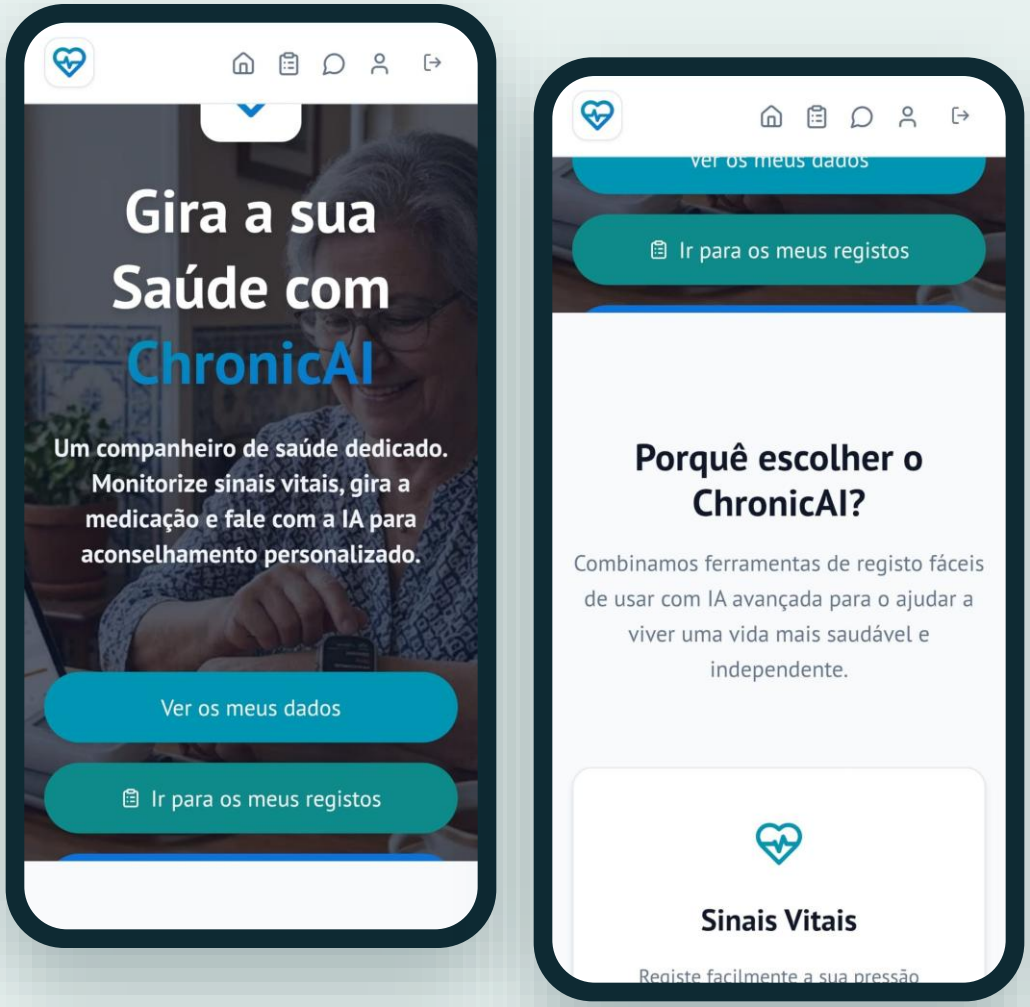
Improve adherence to non-pharmacological treatment

Autonomy

Support autonomous day-to-day decision-making

Health system

Reduce the burden on health services



THE APP

A health companion on your phone

- **Blood pressure, weight, glucose**
- **Daily activity**
- **Emotional state**
- **Notes and questions**

AI layer: text and voice conversation, sentiment analysis and personalised, evidence-based recommendations

Web MVP, mobile-first · no installation

THE PILOT STUDY

From the community to the app — and back

49

Recruited

Older adults from Associação Gerações, an ESSVA-CESPU partner

26

Assessed and trained

MoCA Duo + digital proficiency, in-person sessions

6

Weeks of use

Jul–Aug 2026, with weekly challenges and WhatsApp support

14/10

Reassessment

Usability, experience and final assessment

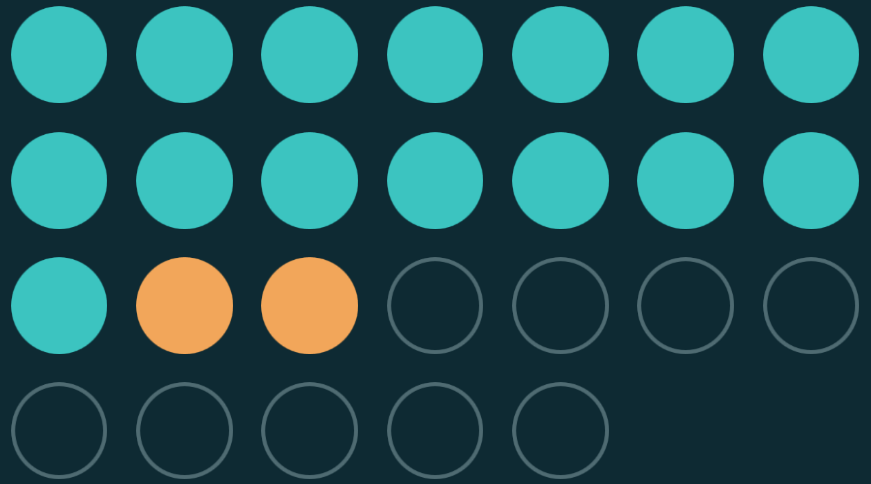
Researchers: Anna Quialheiro, Filipa Ferraz, Liliana Avidos · with 3 Physiotherapy students (CESPU) and 1 Biomedical Engineering MSc student (UMinho)

REAL ADHERENCE

65.4%

17 of 26 participants actually used the app

Health logs, activities and/or questionnaires — according to audit logs, excluding team accounts and tests

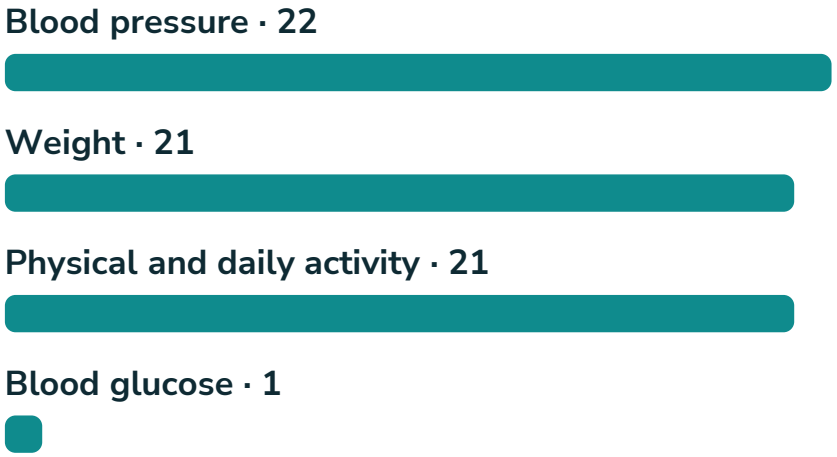


- **15** active, confirmed via WhatsApp
- **2** “hidden actives”: visible only in the logs
- **9** with no effective use

WHAT THEY LOGGED

101 interactions in 6 weeks

65 health self-logs



+ 36 health questionnaire completions or updates

How they felt

42 logs with an emotional state

😊 20 Happy	🤩 10 Excited
🤔 9 Thoughtful	😢 3 Sad

Source: platform audit log, 6 Jul – 15 Aug 2026, excluding team accounts and tests

THE SURPRISE

The notes field became a channel for questions

“How much water should I drink every day?”

“I’d like to know what to do to do on very hot days.” days.”

“When my ankles feel very very hot, what should I do?”

Hydration, heat, swelling, emotional state: the app revealed **health needs** that weren’t in the script.
Quotes translated from Portuguese.

OPEN SCIENCE IN PRACTICE

Six practices we take from ChronicAI

Audit by default

Every interaction by participants, researchers and admins is logged and traceable

Responsible sharing

Results reported only in aggregated, anonymised form

With the community

Partnership with Associação Gerações; schedule set around participants

Learning by researching

4 CESPU and UMinho students; the data feeds 3 final-year projects

Accessible prototype

Web MVP that opens in any browser, no installation

Drop-out rate

Associated with late approvals; overlap with participants' holidays

WHAT DIDN'T GO TO PLAN

Three lessons to share

1 **July is no month for a pilot**

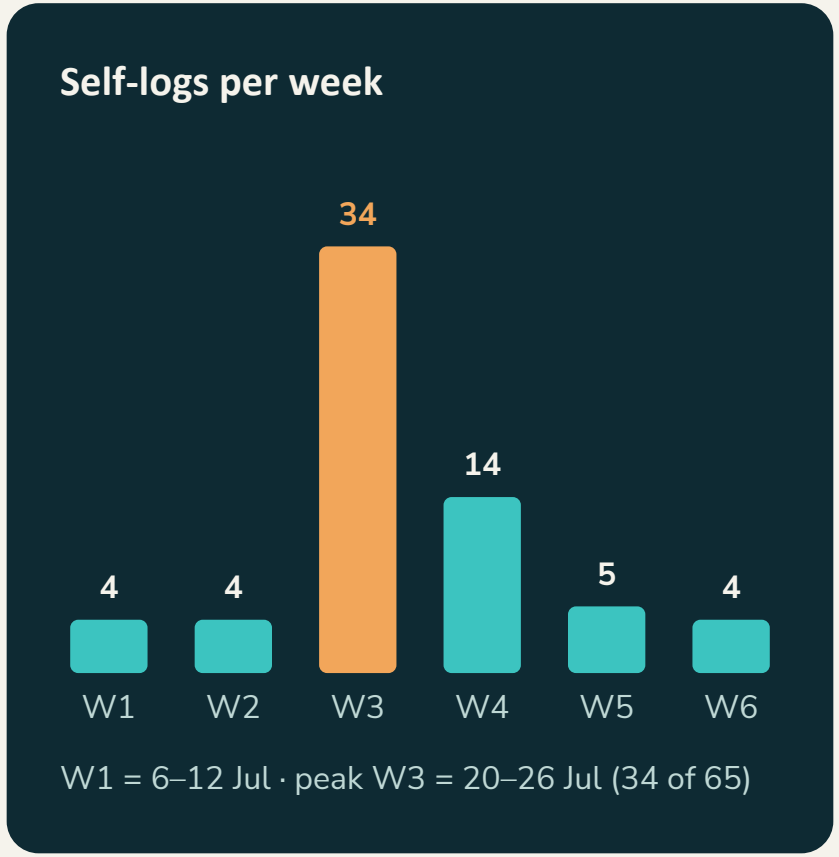
A delay in procuring the tools pushed the start back: 23 of 49 recruits could not attend (holidays, travel, grandchildren)

2 **Contact ≠ use**

WhatsApp misses silent users; filling in the profile is not autonomous use

3 **Enthusiasm fades**

Over half of all self-logs happened in a single week



WHAT NOW?

From pilot to next stage

14 OCT 2026

Reassessment

Usability and experience, combined with baseline data and logs

5–6 NOV 2026

Disclosure

Digital literacy as a physiotherapy outcome — 6th Europe Region Physiotherapy Congress

IN PROGRESS

Paper and thesis

Paper for an indexed journal and 3 undergraduate final projects

NEXT

Scale up

Wearables and AI in type 2 diabetes: proposal for improvement in preparation

Research line: digital technology · self-care · data science in chronic disease

LET'S TALK

Three questions for the group

? Can older adults' usage logs be **open data**? How do we anonymise without losing value?

? It is relevant if we turn participants into **co-creators** of a health app?

? Which components of an AI application should be made openly available: the **code,** the **prompts,** or the **protocols?**

Universidade do Minho

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