



Digital literacy enables up-to-date sleep medicine in inclusive healthcare

eSleep_dHealth

Medical School, UoC, Heraklion

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The Problem

- **Obstructive Sleep Apnea (OSA)**
 - underdiagnosed and poorly managed disease - about 80% undetected
- **CPAP (Continuous positive airway pressure) therapy**
 - Low adherence (~30–60% USA)*



Untreated or poorly managed sleep apnea contributes to cardiovascular disease, daytime sleepiness, cognitive impairment, and decreased quality of life, and it increases healthcare costs.

→ There's a lack of real-time, personalized, and patient-centered digital solutions to support long-term adherence.



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Rotenberg, B. W., Murariu, D., & Pang, K. P. (2016). Trends in CPAP adherence over twenty years of data collection: a flattened curve. *Journal of otolaryngology - head & neck surgery = Le Journal d'oto-rhino-laryngologie et de chirurgie cervico-faciale*, 45(1), 43. <https://doi.org/10.1186/s40463-016-0156-0>

The Solution

Our Idea:

PAPi – a digital health companion app integrated with PAP devices, designed to enhance therapy adherence and personalize sleep care through data analytics, behavioral nudging, and telemonitoring

- Key Features:

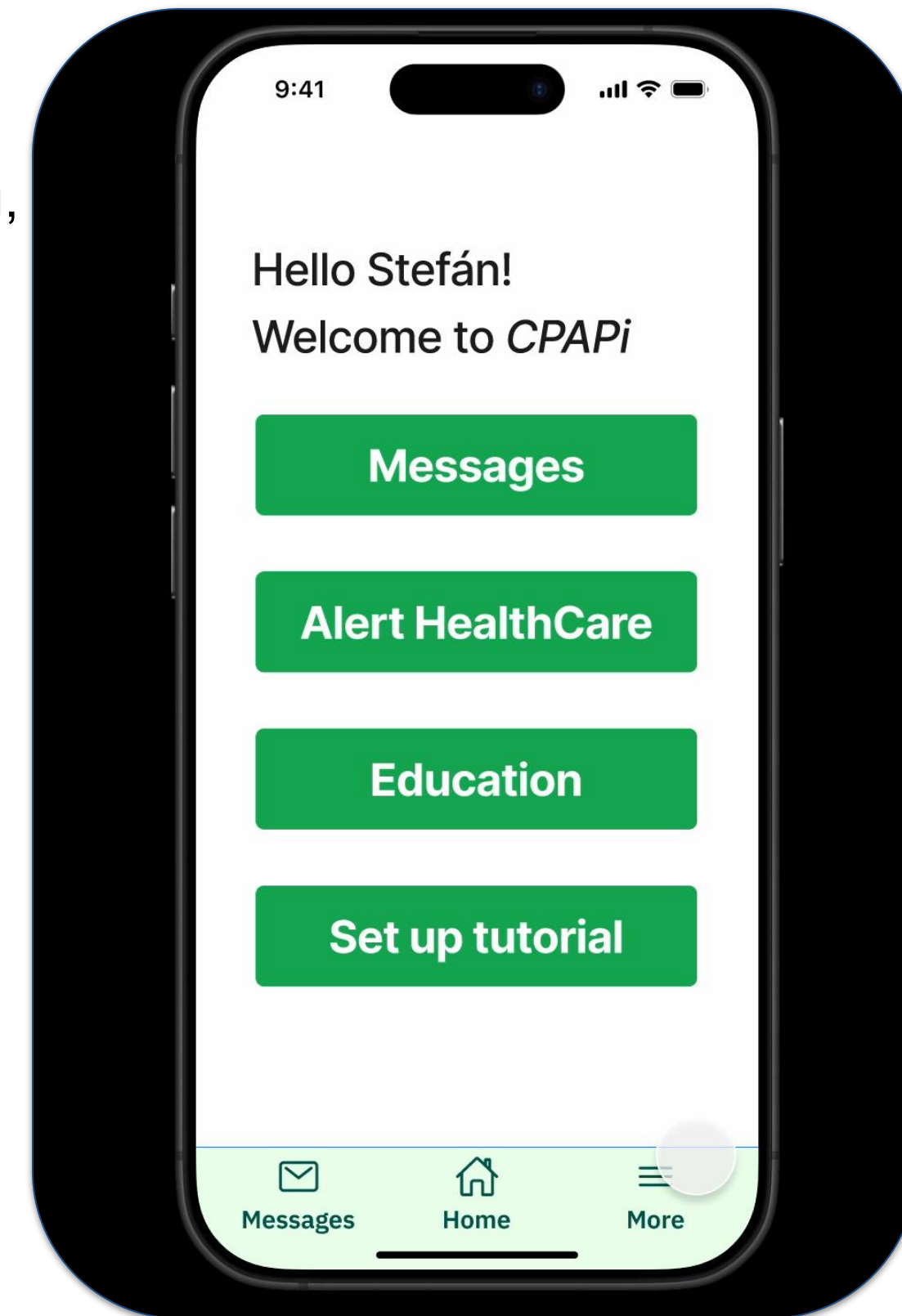
- Sends personalized nudges and reminders
- The Messages feature connects patients with clinicians and PAP community
- Uses AI to flag potential issues or drop-offs early



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Target Market



- **Users:** People diagnosed with Obstructive sleep apnea (OSA) especially newly diagnosed patients who are starting treatment and often struggle with compliance in the first month.
- **Costumers:** CPAP machine brands to have the application connectable with their devices.



Market Opportunity



1. Global Sleep Apnea Devices Market: USD 7.1 billion in 2022

2. Expected CAGR: 6.2% (2023–2030)

3. Digital Health & Remote Monitoring Market: Rapidly expanding post-COVID, with high demand for connected health tools and the need for better support for users.



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Business Model



- **B2B SaaS Model** with subscription licensing to clinics and PAP device manufacturers
- **Optional Modules:** Premium analytics dashboards, patient insights reports, teleconsult integration, AI chatbot assistance
- **Pilot-to-scale model** with freemium trials in clinical environments



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Go-to-Market Strategy



Phase 1: Partner with PAP device manufacturers for integration pilots

Phase 2: Launch through sleep clinics and telemedicine networks

Phase 3: Expand via insurance providers looking to incentivize adherence and reduce long-term healthcare costs

- Targeting the leading and upcoming CPAP machine brands In the U.S.



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Competitor Analysis



- MyAir by ResMed
- DreamMapper by Philips
- Generic health trackers (e.g., Apple Health, Fitbit)

What makes our solution better/different?

- Open, vendor-neutral API for any PAP device
- Strong behavioral science foundation and personalization
- Focus on underserved patients (e.g., older adults with low digital literacy)
- Partnership-based model that includes clinical feedback loops



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Traction/Milestones



Empathy & User Research: 12 interviews with CPAP users, 4 sleep clinicians

Ideation & Prototyping: Clickable Figma prototype tested with early users

Pilot Discussions: Initiated with two local sleep clinics and one PAP vendor

Next Steps:

- Build MVP (Q4 2025)
- Begin pilot (Q1 2026)
- Regulatory pathway consultation and CE mark planning



Financials & Funding Ask



Projections:

- Year 1: €100K pilot revenue
- Year 2: €500K through B2B contracts and SaaS subscriptions

Funding Sought:

- **€700,000** in venture capital for:
 - Product development
 - Regulatory compliance
 - Pilot implementation and early sales



Call to Action/Closing



- ❑ We are seeking **venture capital funding** and **pilot partnerships** with PAP manufacturers and sleep clinics to bring **CPAPi** to life. Sleep apnea affects millions and disrupts lives silently. Our digital companion can turn therapy from a burden into a habit, supporting patients toward better sleep and health.

- ❑ **Join us in transforming how sleep medicine meets the digital era.**



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