MediVest

In Portugal...

- **People who remain hospitalized after clinical discharge** represent almost **12% of total hospitalizations** in the public healthcare system
- Patients **over the age of 65** make up **74%** of the people with **prolonged hospital stays after clinical discharge** in public healthcare
- There's a **9.9% chance** of a patient **contracting healthcare associated infections** during their hospital stay
- **Extended** hospital **stays** could **cost the State 300 million euros** in a single **year**

MediVest Aims to...

- **Improve quality of care** offered by **public and private hospitals** by **reducing strain** put on **medical staff**, while **increasing bed turnout**
- **Guarantee continuous monitoring** of **lower-risk and elderly patients** in the **comfort of their home**, while mantaining **contact with** their **medical professionals**

Our Solution!

Set up your account and input your thresholds → Check you vitals any time → Check your report history → Write any important notes

Hardware

MediVest is equipped with a **heart rate monitor**, **thermometer** and **Inertial Measurement Unit** to assess the patient's **vitals and fall risk**, as well as an **oximeter**, placed in an external dock, to measure **oxygen saturation**

A **SOS button** is available in case of emergency, with an imediate call placed to emergency services

All data is then sent via **Wi-Fi** resorting to two ESP32 units

The vest and dock are both powered by long-lasting batteries

Software

Data is updated with new assessements **in real time**

Firebase Google Cloud service stores all data received from the vest

All **data** is then **received on the app** and on the patient's **healthcare provider's central**, and treated according to each patient's **personal thresholds**

App and medical central are equipped with **notification alerts in case of emergency**
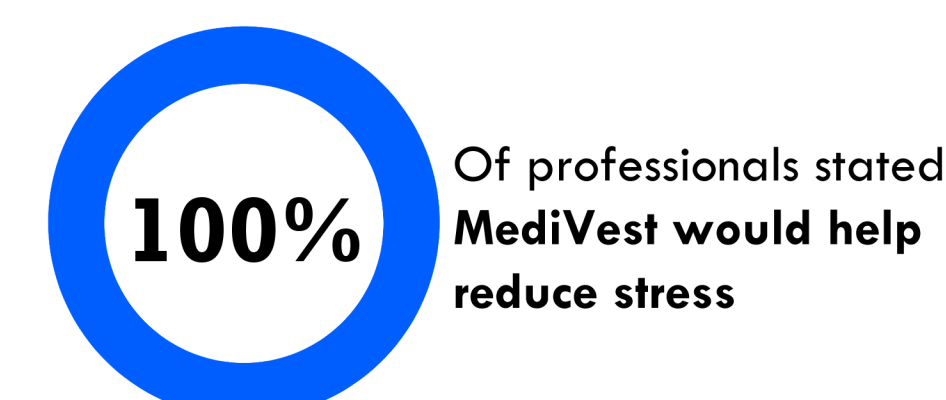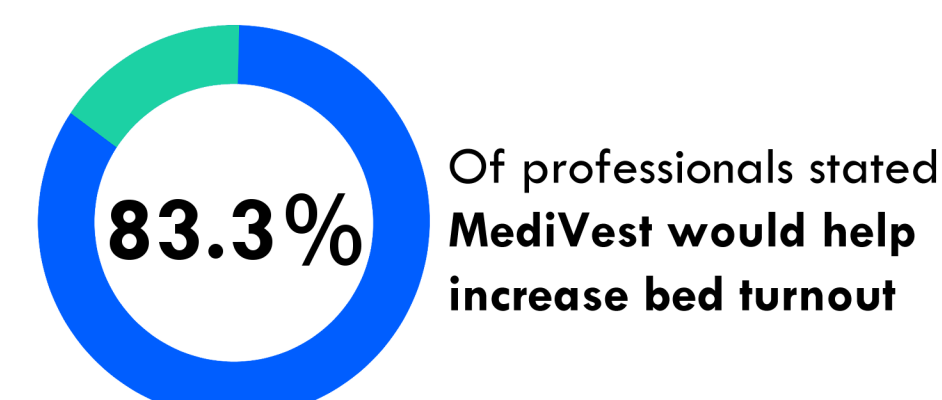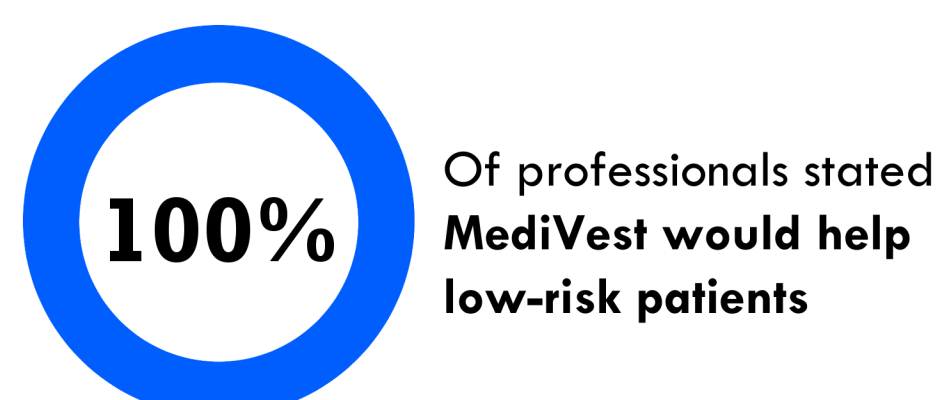
Your healthcare provider is able to **monitor** and **interpret** any of your **data**, as well as **check** your **daily reports** through their own **central**

What do Professionals Think?

Throughout the development of this project we have been in **close contact with medical professionals, caregivers** and **healthcare students** to **ensure** our project meets all **requirements to safely monitor low-risk patients at home**

Out of **35** health professionals:

100% Of professionals stated **MediVest would help low-risk patients**

83.3% Of professionals stated **MediVest would help increase bed turnout**

100% Of professionals stated **MediVest would help reduce stress**

Why Choose MediVest?

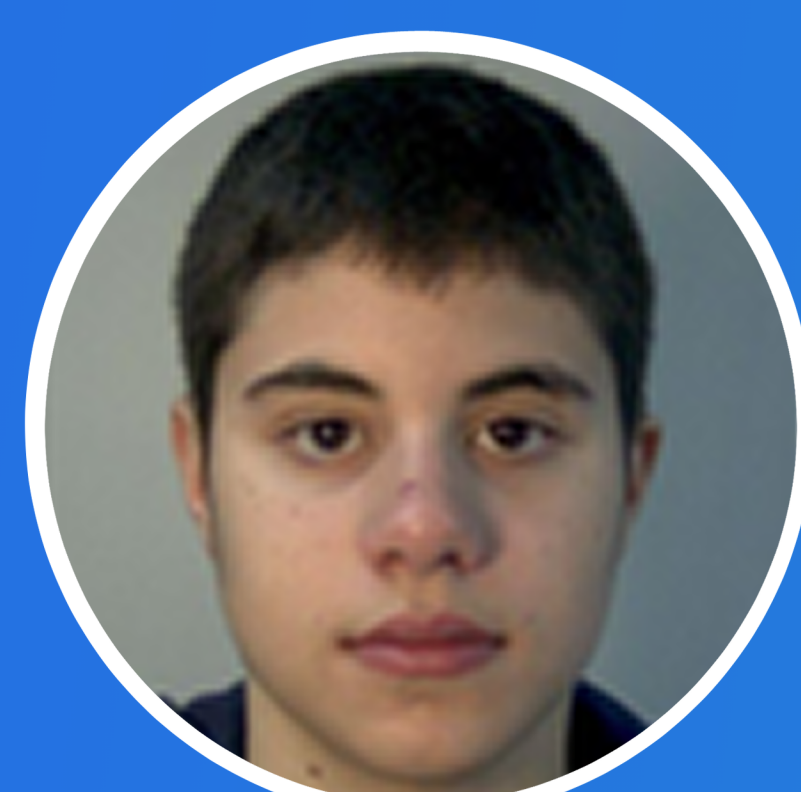|	V-SOS	Vital Connect	Fitness Bracelets
Heart rate	❌	✅	✅
Temperature	❌	✅	❌
Oxygen	❌	❌	❌
Emergency Button	✅	❌	❌
User Data	❌	❌	✅

MediVest is the **only** product that offers **constant** and **personalized patient-hospital connection** while assessing all vital criteria!

We Would Love to Hear from You!

Contact us at medivestproject@gmail.com
Or go to our website at:
https://web.tecnico.ulisboa.pt/ist1103289/

Diogo Pica — Database
Eduardo Larguinho — Medical Central
Francisco Pereira — API
João Rocha — Electronics
Madalena Cardoso — Website & Blog
Pedro Cardoso — Application

TÉCNICO LISBOA