Developing a digital COPD companion for Improving Lifestyle (DACIL) - Listening to the Users

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COPD

COPD is a prevalent, progressive lung disease, affecting 3% of Dutch people. It can be caused by **long-term exposure** to noxious particles or gases, commonly cigarette smoke.

Physiologically, it leads to chronic inflammation, airway narrowing, excessive mucus production, and **emphysema**, resulting in airflow limitation and a decrease in oxygen saturation.

Clinically, this manifests as chronic cough, sputum production, dyspnea, and can sometimes lead to **exacerbations**, which can be **deadly**.

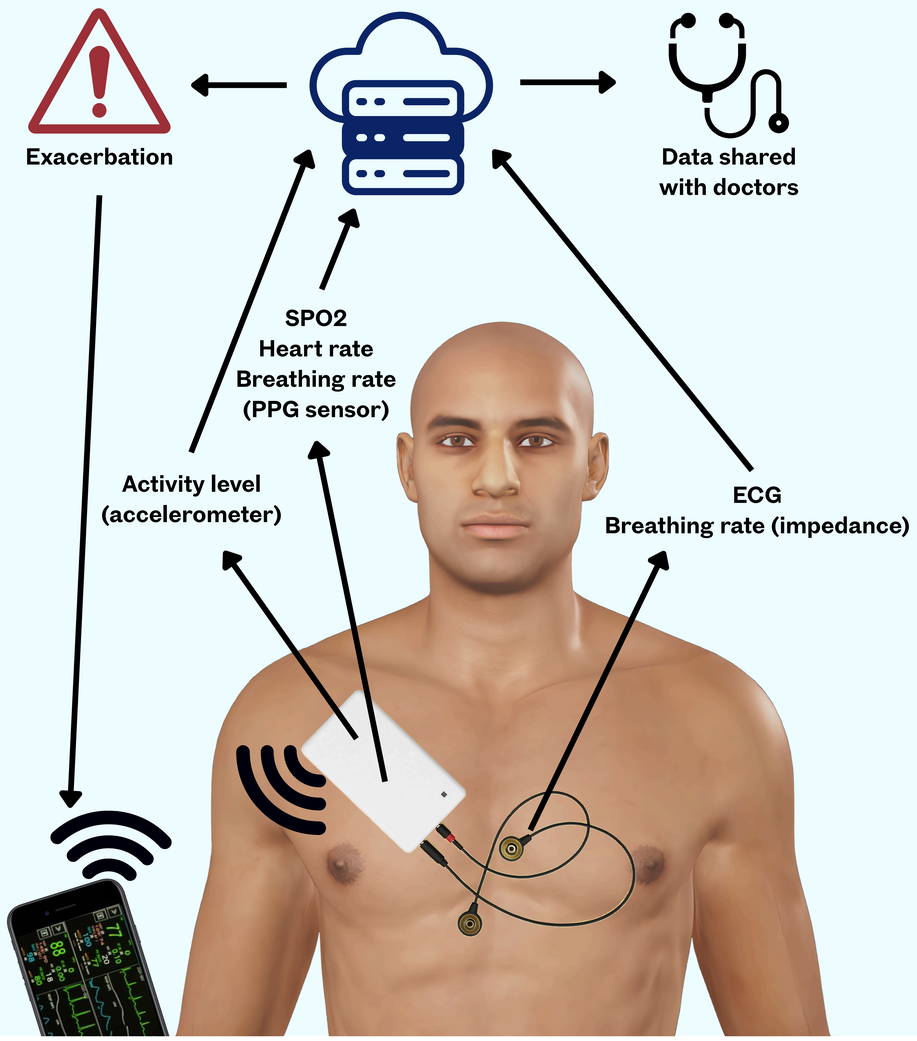
Patients and methods

We will split interviews between a **focus group** (6) and individual **interviews** (6), with patients who have already been recruited as part of the **DACIL** sensor **clinical trial**.

In order to understand the **fears and experiences** of the patients, a **grounded theory qualitative research** will be performed.
The patients will be asked questions about their **day-to-day** life, and how it could **interact with the sensor**; the **fears** that they may have around the sensor; **features or characteristics** that they would like to see built into the device and app. Afterwards, the patients will be **shown the device**, and asked for their opinion regarding it, and how it could be improved.

During the interview, **one researcher** will be present, and the interview will be recorded. The recordings will be **transcribed** and coded for topics. A **summary of the codes** will be sent back to the patient, to make sure nothing was **missed** during the analysis. Lastly, common codes will be **analysed**, and the results will be **interpreted**.

The COPD companion



Research Question

What are the **perspectives** of the COPD patients on the **continuous monitoring wearable sensors**, during their **daily** interactions with the sensors?

Expected results and conclusions

By conducting interviews, we hope to understand the **opinions**, **concerns** and other **comments** that the patients may have regarding the device. They will have the opportunity to **provide input** on, for example, the **placement** of the sensor, the **comfortability** while wearing the sensor and the **usability** of the app.

We also aim to **assess** the sensor's **capabilities and limitations** to know which patient-recommended **adjustments** are possible. Ultimately, the findings may be presented to healthcare providers to inform **optimal use** of the device for patient benefit.

Future prospects

We hope to also conduct interviews **after the clinical trial** of the sensor, to get **updated** views on the sensor and app, and understand how it went. This will allow us to make any **further adjustments** to the device to increase the patient satisfaction, which will increase patient use. It can also improve the monitoring capacity for the health care providers, with the aim of **tracking signs of exacerbations** before they occur.

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