Designing an asthma inhaler

During this thesis a digital asthma inhaler was designed to encourage correct usage while providing the patient with personalized data about their asthma and its potential triggers - all packaged into a consumer friendly and emotional design.

One out of ten people in Sweden are suffering from asthma. While at the same time, an alarming 32 percent are using their asthma inhaler incorrectly. This substantially affects the dose delivered to their lungs. Through playing with light and sensors the inhaler provides feedback and encourages the patient to use their inhaler correctly throughout all stages of the inhalation procedure, because the way the medicine is delivered to a patient’s lungs is as important as the medicine itself.

To increase the patient's awareness of their disease, allowing them to avoid things that triggers their asthma and to take their medication proactively the inhaler is connected to a smartphone. Because by register when and where a dose has been inhaled coupled with public data from potential asthma triggers such as weather and pollen, patterns can be visualised and the patient can gain valuable insights into their asthma.

During the user studies many asthmatics said that their turbulhaler was ugly (one of the most used inhalers on the market), although, this is not the entire truth. Because the inhaler is, apart from something that opens up a person’s airways and giving them the freedom to do many things, also is the object which binds them together with the disease. With this in mind, the aim was to design a more consumer friendly and emotional product, while trying to keep the dignity and respect a medical product should have.

Master’s thesis by Kent Ngo & Erika Axhed