

A Digital Care Pathway for Parkinson's

A team at the **University of Edinburgh** and **Pogo Studios** [<https://www.pogo-studio.com/>] is creating a bespoke wearable device (e.g., a wrist-worn smartwatch) and an app to enable people to track symptoms and support self-management of Parkinson's outside of the clinic, e.g., within peoples' homes.

People with Parkinson's will be able to share data about their **motor and non-motor symptoms** via the app on their smartphone or tablet. They will also be able to track movement and symptoms of motor conditions via the wearable device. The combination of the app and the device will support self management of conditions outside of the clinic, and inform clinical decision making during appointments.

The development of the app and wearable device cannot be achieved without the **involvement** of a range of stakeholders. We will use a collaborative method, called co-creation, to involve stakeholders to work together on this project. We will involve people with Parkinsons and their carers, NHS clinicians, academic researchers, industry practitioners, and policy makers throughout the project. We will invite people to interact in groups or on an individual/one-to-one basis via in-person or online meetings or workshops. During these interactions, we will develop ideas, share stories and identify ways to address challenges and opportunities.

The involvement will span the whole project throughout the following stages:

1. **Define** the needs of people with Parkinsons and their carers, and clinicians.
2. **Develop** an app and wrist-worn device to address the defined needs.
3. **Refine** solutions through iteration with the project team.

Data privacy is a key attribute to this project and is of utmost importance. The data that people choose to share via the wearable device and the app will be collected via their own personal smartphone and sent to an NHS-approved, secure cloud data storage and analytics platform. The person who inputs data will have an option to share this information with their clinician, which could inform clinical decisions and overall treatment plans.

The refined solutions will proceed towards the **regulatory pathway** for the approval of medical devices, which will lead to **clinical validation, commercialisation** and **implementation** alongside the provision of health and care within the **NHS**. The wearable will be bespoke, but low cost, as the team develops the device to be commercially available for people to buy 'off-the-shelf'. The app will be available to download from the Apple App Store or Google Play.

We are at an early stage of this programme of work. We have raised a small amount of funding from the University of Edinburgh for some pilot studies. We are in the process of bidding to the UK Government to fund this 18-month project.