

Personal KinetiGraph Movement Recording System for remote clinical management of Parkinson's disease (provisional title)

Parkinson's disease is a condition that affects the brain, resulting in a progressive loss of coordination and movement problems. The 3 main symptoms of Parkinson's disease are: tremor, stiffness and slowness of movement (bradykinesia).

The Personal KinetiGraph (PKG) Movement Recording System (Global Kinetics) is a device worn on the wrist that continuously measures movement. The PKG can also prompt the user to take their medication at prescribed times and users can register that they have taken their medication. Data are processed using validated proprietary algorithms to generate a report based on movement over a 6-day period. This report is automatically sent to a clinician and shows scores on bradykinesia, dyskinesia (involuntary movements), tremors and immobility. It also reports on medication adherence, motor fluctuations and periods when the watch is not worn.

People with Parkinson's disease should have regular clinical monitoring and medicines adjustment. Motor functions are currently assessed using questionnaires and symptom rating scales. Treatment of motor symptoms is influenced by a person's symptoms, comorbidities and other medications. Individual lifestyle circumstances, preferences, needs and goals, as well as the potential benefits and harms of the different drug classes are also considered.

The PKG could improve management of Parkinson's, and coordination of care or services, as well as increasing adherence to medication.

The NICE diagnostics assessment programme will assess the clinical and cost-effectiveness of PKG (and any other alternative technologies identified during scoping) to make recommendations on their use in the NHS.