

Digital tool for remote monitoring and management of patients with Multiple Sclerosis (dreaMS)



Resumen:

Multiple sclerosis affects over 1MN people in EU and 2.5MN worldwide. It is a chronic, progressive illness which results in significant physical and cognitive disabilities. Neurologists use clinical, biological and imaging biomarkers to establish a diagnosis and well-established treatments to temper symptoms or reduce disease progression. However, chronic shortage of neurologists means patient do not see their treatment team often enough to assess disease progression. In the absence of a cure for the illness, doctor rely on existing biomarkers and clinical assessments to make clinical and treatment decision. This approach, while standard of care, is viewed as imprecise and calls for improve patient information in between appointments.

Objetivos:

1. Validating the relapse protocol provided via mobile app and the capacity to capture relevant data about the patient symptoms and daily routine activities in order to measure progression of the disease (50-100 patients). Outcome: Demonstrate that dreaMS app based assessment are as-good-as in-person clinical assessment.
2. Cloud-based clinical dashboard to summarise patient information and appbased assessment results to support neurologist's clinical decision. Outcome: Requirements of software based medical device class I.
3. Integrate telehealth capabilities into the clinical dashboard to enable remote patient monitoring and cut the cost of hospital' patient visit. Outcome: Neurologists confirm that telehealth capabilities are helping them treat patients remotely and optimise patient visits to the clinic.

Objetivos contribución:

The University of Córdoba is in charge of the following Work Programmes:

- WP 1. Project management: Consortium Agreement completed, formal sign-off pending internal review.
- WP 2 + 3. Consumer application: Sensor data capture and data transfer testing with support Prof. S. Ventura and team.
- WP 4. Production of full treatment platform: Development and integration of the algorithm, neurologists dashboard and data visualization and production of full platform ready for clinical trial.
- WP 6. Validation: Fine tuning of algorithm and integration into treatment platform.
- WP7. Dissemination and communication.

Entregables:

- Project management: Experiment design.
- Validation of consumer application: App beta release versión.
- Production of full treatment platform: Platform release version.
- Validation: EMA filling application process.
- Communication report: Report of the communication activities.

Impacto:

dreaMS would be the 1st such solution in neurological care. The ability of remotely tracking patient activity is not new, the technical feasibility has been demonstrated in a number of studies. However, doing so through the use of consumer device, reliably and precisely and making the information available to treatment team to direct clinical decision is a major innovation.

Presupuesto: 174,687.50

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Enlace: <https://diatomic.eu/index.php/pull-experiments/dreams/>

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