HELP
Project Introduction

Date: October 2009

Spirit of PROGRESS
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The objective of the HELP project is to develop a comprehensive system able to administer drug therapy in a controlled and either continuous or on-demand basis, to manage disease progression and to mitigate Parkinson’s disease (PD).

Such a system will improve the quality of life of elderly people suffering from PD and reduce co-morbidity.
Introduction

Facts

- 3 years project (2009 – 2012)
- Official starting date → June 15th
- Involved partners:
  - Italy
  - Israel
  - Germany
  - Spain
02 System components

- A non-invasive intra-oral continuous anti-PD drug delivery device
- A subcutaneous pump to deliver rescue medication in order to prevent PD blockade episodes based on the motor activity
- A PAN (Personal Area Network) to gather user’s environment information to detect blockades
- A telecommunication and services infrastructure to analyze and transfer information both from the user to an automated system (most of the times) or a point-of-care (for the regular follow-up and emergencies) and in the opposite direction
- A remote point-of-care unit to supervise the patients
New drug delivery device – Buccal Dose
Base Station for Feedback & Adjustment

For 24-hour use

Application Scenario

1. Patient selects *BuccalDose* for the day in the morning
2. Base station reads ID and transmits data
3. Sensor measures amount of delivered drug after use and transmits data
Wireless subcutaneous pump managed based on activity monitoring
02 System components
Motion sensors

Gait evaluation via motion sensors
Intraoral device for continuous “basal” infusion of ropinirole

Point of care

Medical Center

Mobile gateway

Web-based medical supervision

Belt wearing:
1. Motion Sensor
2. Pump for “on-demand” subcutaneous delivery of apomorphine

Blood pressure monitor
02 System components
The Frame

Intraoral system

Motion system

Quality of Life

Comprehensive Medical care system

Subcutaneous pump
Patient location
Hypotension control
On-demand opioidephrine

Intraoral device
Remote drug delivery supervision
Stable Ropinirole dosage

On-demand opioidephrine
Stable Ropinirole dosage
Medical control

Remote drug delivery supervision
Access to patient & medical information

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Project development

To solve a medical demand

NEVER try to force a medical use

Requirements obtained by technicians from clinicians

Mandatory: complete and exhaustive tests

PILOTING

Client oriented project
03 Project development

MANTRA

USERS (CLINICAL & PATIENTS) MUST BE INVOLVED DURING ALL THE PROJECT LIFETIME

USERS MUST PARTICIPATE IN THE IMPLEMENTATION OF THE TECHNICAL SOLUTIONS
04 Exploitation

All partners

Sales & Marketing

Self Care
medical Teleassistance

Medical care by means of a
Service Provider

On-the-Net Multimedia comms
Self Care users

On-the-Net Multimedia comms
connected with the Service Center

On-the-Net Teleassistance Platform

Self Care utilities

Service provider utilities

Remote care specific
equipment

Standard equipments adapted
for Remote care

Network Generic Services and other Platforms (Domotics)

New Generation Network (IMS)

Service provision, Installation and Support