

## 2011 Knowledge Transfer Scheme

**Chief Investigator:** Prof. Suzanne McDonough (University of Ulster)

**Co-investigators:** Professor Christopher Nugent (UU), Dr Chris Bleakley (UU)

**Title of research project:** Transferring Knowledge in Musculoskeletal medicine – there's and App for that.

### **Abstract:**

A partnership between physiotherapy, software engineers and computer science academics, supported by a Project Steering Group to develop a medical application (App), which can be used by service users who are rehabilitating from musculoskeletal injury.

App software will be developed to incorporate knowledge on best clinical practice, in musculoskeletal rehabilitation, with the clinical content and detail (eg. Selection of exercises, dosage and progression) based on knowledge gained through previous research in musculoskeletal medicine.

The primary feature will be the ability to create a personalised rehabilitation program for service users, which can be followed through interactive therapeutic instruction and support information, based on explanatory text, illustrations and video clips. A key feature will be the use of a 'virtual coach' which will display relevant exercise on screen, in the form of a video clips.

The project will introduce new technology solutions into health and social care through an E-Health/Connected Health solution based on research expertise at the University of Ulster with service users more actively engaged in their own health.

The outcome should be improved rehabilitation of musculoskeletal injuries due to a robust and affordable support to a large number of service users who want to improve their outcomes after injury; more detailed rehabilitation information including immediate access to effective rehabilitative techniques, and evidence based information on exercise selection and progression; home based rehabilitation support, accessible 24hrs per day; and better service user satisfaction and improved adherence with rehabilitation advice

Successive future implementation could result in: improved case load management and reduced musculoskeletal burden on NHS; improved long term recovery after musculoskeletal injury with decreased risk of chronic sequelae. This project will also contribute towards establishing Northern Ireland as an outward focused and competitive region in the global knowledge economy.