



SENDoc



Smart sENsor Devices fOr rehabilitation and Connected health

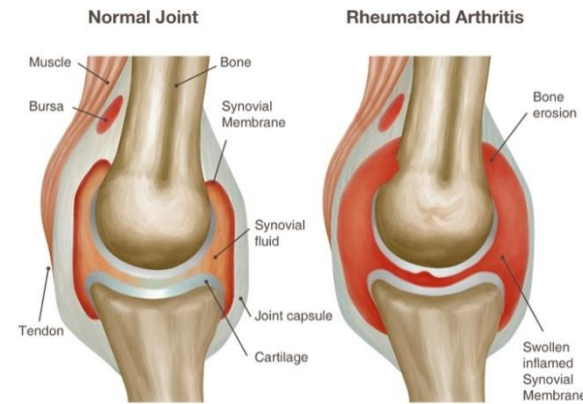
ERRIN Health Brokerage event
21-22 June 2016

Who we are

- Ulster University, Northern Ireland
 - Dr Joan Condell, Senior Lecturer
 - Dr James Connolly, Research Assistant
- Western Health and Social Care Trust, Northern Ireland
 - Dr Philip Gardiner, Rheumatologist
- National University Of Ireland, Cork
 - Dr John Barton, Wearable Sensor Networks Group
- Trinity College, Dublin
 - Dr Fiona Wilson, Physiotherapist

Rheumatoid Arthritis

- Auto immune disease that can attack any joint of the human skeleton
- Causes inflammation, resulting in pain, stiffness, swelling, deformity
- 500,000+ affected in UK; 20,000 cases diagnosed each year
- 4 out of 10 give up their job in 5 yrs; no cure
- Stiffness is subjective – difficult to quantify (affected by mood)



Problem – joint stiffness

- “person’s perception of the difficulty in moving a joint”
- Occurs first thing in the morning
- Difficult to measure – gone by the time patient gets to the clinic
- Our initial wearable prototype compared alongside standard gloves



“TeleRehab” Unique Patient Homecare Solution

- Current solution: goniometer
- Wearable glove device
 - reduces time demand
 - dynamic measurement
 - removes inter/intra-tester reliability
 - measurement at home
 - auto-calibrating



User completes
prescribed objectives
at set times

Clinician feedback
showing completed
objectives

Whom we are looking for

- Patient and/or clinical user groups
 - Rheumatologists
 - SME wearable manufacturer partners
 - SME electronics partners
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- SC1-PM-15-2017: Personalised coaching for well-being and care of people as they age
 - Theme of digitalisation of health systems.

