

**Review of potential of telecare systems to support neuro - rehabilitation**

**Presenter:** Nigel Harris

**Summary**

This session will review current state of the art available and examine the potential opportunities to apply next generation technology to support neuro-rehabilitation.

**Aims and Objectives**

- Participants will understand the differences between current technology and third generation telecare / ambient assisted living
- Participants will be given an overview of neuro-rehabilitation outcome measures
- We will consider how third generation telecare systems might be used to support neuro-rehabilitation
- Participants will have an understanding of the challenges around the design of such systems and potential barriers to introduction of the technology

**Abstract**

Stand alone assistive technology, which can give visual or audio prompts, and telecare systems, providing a remotely monitored alarm, are now widely deployed in the community to enable vulnerable individuals with physical or mild cognitive impairment to live independently in their own homes. To date, this technology has largely been designed to provide short term support for frail elderly clients. However, this is changing with the introduction of 'smart homes' fitted with integrated home automation technology that supports and assists its users. Alongside this, new mobile phone and computer games based motion tracking systems offer the opportunity to monitor motor skills and physical performance. Such integrated systems could support both the physical rehabilitation and assisted living requirements of individuals with neurological impairment. We describe the requirements for such a system, review what technology is available, and consider challenges of designing and implementing such technology.

**Correspondence details**

Dr Nigel Harris  
Director  
Bath Institute of Medical Engineering (BIME)  
The Wolfson Centre  
Royal United Hospital  
BATH  
BA1 3NG

**Email:** n.harris@bath.ac.uk