Can a home based virtual reality system improve the opportunity for rehabilitation of the upper limb following stroke?

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ABSTRACT

Many stroke survivors fail to regain functional use of their impaired upper limb yet access to the rehabilitation required is limited. One route through which this may be achieved is through the adoption of virtual reality and interactive video gaming. We have been developing a home based system that employs infra red capture to translate the position of the hand, fingers and thumb into game play but do the patients actually use it to the recommended level and if not, why not? Performance data collected by the software from three participants allocated to the intervention group in a feasibility RCT indicate that the pattern of play is variable and can fall far short of the recommendations participants were given. Interviews with participants at the end of the intervention and observations by the research team indicate the barriers to recommended use but also some of the characteristics of the intervention that demonstrate its potential for improving the opportunity for rehabilitation of the upper limb following stroke.

Full papers will be published in the Conference Proceeding s and will be available to delegates at the conference on Sept. 10.

Full papers will be released on-line in the ICDVRAT archive on March 15.