

## What's the Evidence?

# The 'Meditouch' rehabilitation systems for children with movement impairments

### Key findings

- The devices are said to work alongside specialist rehabilitation software to "allow patients with upper and/or lower extremity movement dysfunction to practice intensive virtual functional task training of single and multi joints".
- There is some interest in the HandTutor™ device provided by Meditouch, with the NHS giving it some consideration. However there is limited evidence of its effectiveness and further research appears to be necessary.

**PLEASE NOTE: This summary was produced more than 4 years ago. Information provided may be out of date. If you think it would be helpful to update this summary please contact us at [pencru@exeter.ac.uk](mailto:pencru@exeter.ac.uk)**

**Published September 2011**

#### What were we asked?

We were asked whether there was any evidence about the effectiveness of the 'Meditouch' rehabilitation systems. In particular, we were asked about the effectiveness of the HandTutor™.

#### What did we do?

We searched the TRIP database, the Cochrane Library, NHS Evidence and the NICE guidelines, as well as a broader Google search for literature relating to the Meditouch devices.

#### What did we find?

The [Meditouch website](#) describes their products as rehabilitation systems that consist of wearing a motion capture device and dedicated rehabilitation software. The devices available are a glove (the

HandTutor™), an elbow and shoulder brace, and a knee and hip brace. The devices are said to work alongside specialist rehabilitation software to "allow patients with upper and/or lower extremity movement dysfunction to practice intensive virtual functional task training of single and multi joints".

There appears to have been only one small controlled study which compared use of the HandTutor™ alongside standard treatment with standard therapy alone. The participants of the study were stroke patients which means that the HandTutor™ was being evaluated based on its effectiveness for stroke rehabilitation. The authors of this study conclude that the HandTutor™ combined with traditional

therapy may improve grasping in stroke patients. It is important to note that this study was funded by Meditouch, the manufacturers of the HandTutor™.<sup>1</sup>

In addition to this study, the National Horizon Scanning Centre has written a technology summary of the HandTutor™. The NHSC are funded by the National Institute for Health Research (NIHR) and aim to provide key policy makers with advance notice of selected new and emerging health technologies. They report on aspects of the technology such as whether it might require evaluation and consideration of clinical and cost impacts, and they aim to do this 2-3 years prior to the launch of the technology on the NHS. It is unclear whether the HandTutor™ is now available on the NHS

The NHSC state that the HandTutor™ glove is designed to be used by Occupational Therapists and Physiotherapists for intensive hand exercises. The glove can be used at home, but is intended to be used to supplement current therapy options, not to replace them. The NHSC estimate that the glove and associated software would cost approximately £1,335, with this cost potentially increasing for provision in patient homes. The full report can be [accessed here](#).<sup>2</sup>

### **What do we think?**

It appears that there is some interest in the HandTutor™ device provided by Meditouch, with the NHS giving it some consideration. However there is limited evidence of its effectiveness and further research appears to be necessary.

We would like to hear your feedback on this summary – please email us at [penclu@exeter.ac.uk](mailto:penclu@exeter.ac.uk) if you have any comments or questions.

### **References**

1 E. Carmeli et al. (2010) HandTutor™ Enhanced Hand Rehabilitation after Stroke- A Pilot Study. *Physiotherapy Research International*. 16(4): 191-200.

2 National Horizon Scanning Centre. (2009) HandTutor for hand rehabilitation. [Online] Available at: [http://www.penclu.org/media/universityofexeter/medicalschoo/subsites/penclu/Hand\\_Tutor\\_report.pdf](http://www.penclu.org/media/universityofexeter/medicalschoo/subsites/penclu/Hand_Tutor_report.pdf)

Note: the views expressed here are those of the Peninsula Cerebra Research Unit (PenCRU) at the University of Exeter Medical School and do not represent the views of the Cerebra charity, or any other parties mentioned. We strongly recommend seeking medical advice before undertaking any treatments/therapies not prescribed within the NHS.