

# THE USE OF TOUCH SCREEN TECHNOLOGY FOR THE COLLECTION OF ROUTINE HEALTH SCORES IN THE RHEUMATOLOGY OUTPATIENT DEPARTMENT

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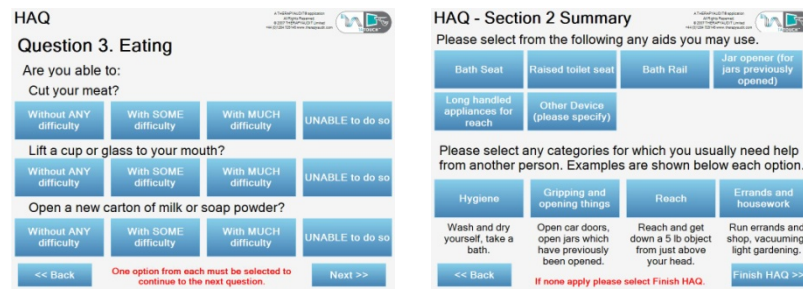
## Background

- The use of self-completed questionnaires to monitor the outcome of care for patients with Rheumatological conditions is widely advocated in clinical practice
- Traditionally such health scores have been completed on paper
- Data can be collected in electronic format using **Touch Screen Technology**. Advantages include:
- Saving both clinic and data entry time
- Easily accessible data for clinical decision making, governance and research purposes
- We assess the acceptability of using touch screen technology to collect routine health scores in a population of patients with inflammatory arthritis

## Methods

- The Stanford Health Assessment Questionnaire disability scale (HAQ) was adapted for touch screen by THERAPYAUDIT Limited using a 17" LCD monitor
- The costs of software development were funded by an educational grant from Wyeth
- A touch screen version of HAQ has previously been validated showing high level of consistency to the paper score<sup>1</sup>

### Examples of HAQ Questions in Touch Screen Format



- The monitor was positioned on a standard height desk with standard chair in the Rheumatology out-patient department
- Patients were recruited from outpatient Rheumatology follow up clinics
- After completing the HAQ in touch screen format, patients opinions were assessed using paper questionnaires
- They reported age, sex and upper limb joint involvement
- Questions were asked regarding ease of use, comfort of computer location, time taken to complete scores, preference and willingness to complete scores at future clinic visits

## Results

- The touch screen cost £761.99 and was fitted to a standard processor. Software development costs were £2500. Costs included development of HAQ and several other scores as part of a larger project
- 53 patients (70% female) with a median age of 58 years (25-82) participated in the study
- In all cases patients answered 100% of questions in the HAQ questionnaire
- 96% of patients self reported upper limb joint involvement
- 53% of patients had never or very rarely used a computer

Chart showing ease of following instructions for completing the touch screen HAQ

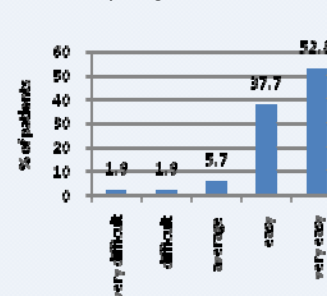
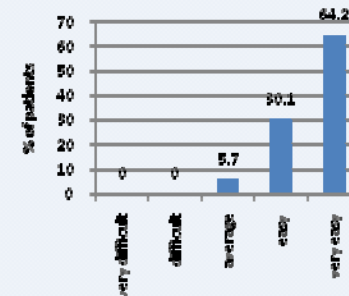


Chart showing ease of use of touch screen



- All patients reported the location of the touch screen to be 'average' or 'comfortable'.
- 23 out of 53 patients (43%) had previously completed HAQ scores on paper and of these :
- 100% found the touch screen method 'easier' or 'much easier'
- 96% reported that the touch screen method took 'less time' or 'much less time'
- Only 7 % of patients reported preferring the paper method
- All patients were willing to complete the touch screen scores again

## Conclusions

- Patients find the touch screen an acceptable option for completing health scores despite :
- Physical disabilities
- Lack of previous experience with computers
- The touch screen is practical to use in a routine outpatient setting and has the potential for improving patient care and reducing the length of the outpatient consultation

### References

1.Greenwood MC, Hakim AJ, Carson E, Doyle DV. Touch-screen computer systems in the rheumatology clinic offer a reliable and user-friendly means of collecting quality-of-life and outcome data from patients with rheumatoid arthritis. *Rheumatology (Oxford)*. 2006 Jan;45(1):66-71