METTA: A Tablet-Based Platform for Monitored at Home Training as Demonstrated through the EPICWheelS Wheelchair Skills Training Program

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Introduction
• Structured education programs can produce significant improvements in skill capacity, but are often not available due to resource limitations
• Monitored home rehabilitation training programs can be an effective alternative
• The Monitored Education and Training Tablet App (METTA) is a platform for video-based training
  • Content is designed and structured by a training program provider
  • Program is delivered at home on an Android tablet
  • Progress is monitored asynchronously by trainers through a website
  • METTA software is content agnostic

Example Training Program
• Enhancing Participation In the Community by improving Wheelchair Skills (EPICWheelS)
  • Manual wheelchair skills training program
  • Informed by WSTP [1] but different
  • Designed through an iterative participatory action design process with users, caregivers and clinicians
  • Currently undergoing a randomized controlled trial [2]

Trainee Interaction
• Custom launcher starts app whenever tablet is on
• Trainees navigate through a hierarchy of content by touching large buttons on the tablet screen
• Feedback on which videos have been watched and number of minutes (total and per video)
• Voice / video mail to communicate with trainer
• Daily survey (extra practice minutes, any falls?)

Trainee Home Page
Trainee Submenu Page
Training Video Page
EPICWheelS Content

Build Your Own Training Program
• Content designer website for creation of new training program video collections
• METTA is open source software (contact authors)

Trainee Interaction
• Button press timestamps uploaded to server
• Trainer website displays summary and detailed statistics about trainee interaction
• Data can be downloaded to spreadsheet tables
• Trainer can enable / disable selected content

Trainer Interaction

References & Acknowledgements

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