

Use of Multimedia to Increase Functional Mobility and Knowledge in Individuals with Spinal Cord Injury

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INTRODUCTION

- Individuals with a spinal cord injury must learn how to complete various activities of daily living as well as how to increase their functional mobility while using a wheelchair.
- It is often difficult for therapists to fully demonstrate how to complete tasks and use adaptive skills when in a wheelchair.
- "How To" videos were created to decrease gaps in occupational and physical therapy resources for modeling activities of daily living and community re-integration skills for individuals with spinal cord injury (SCI).

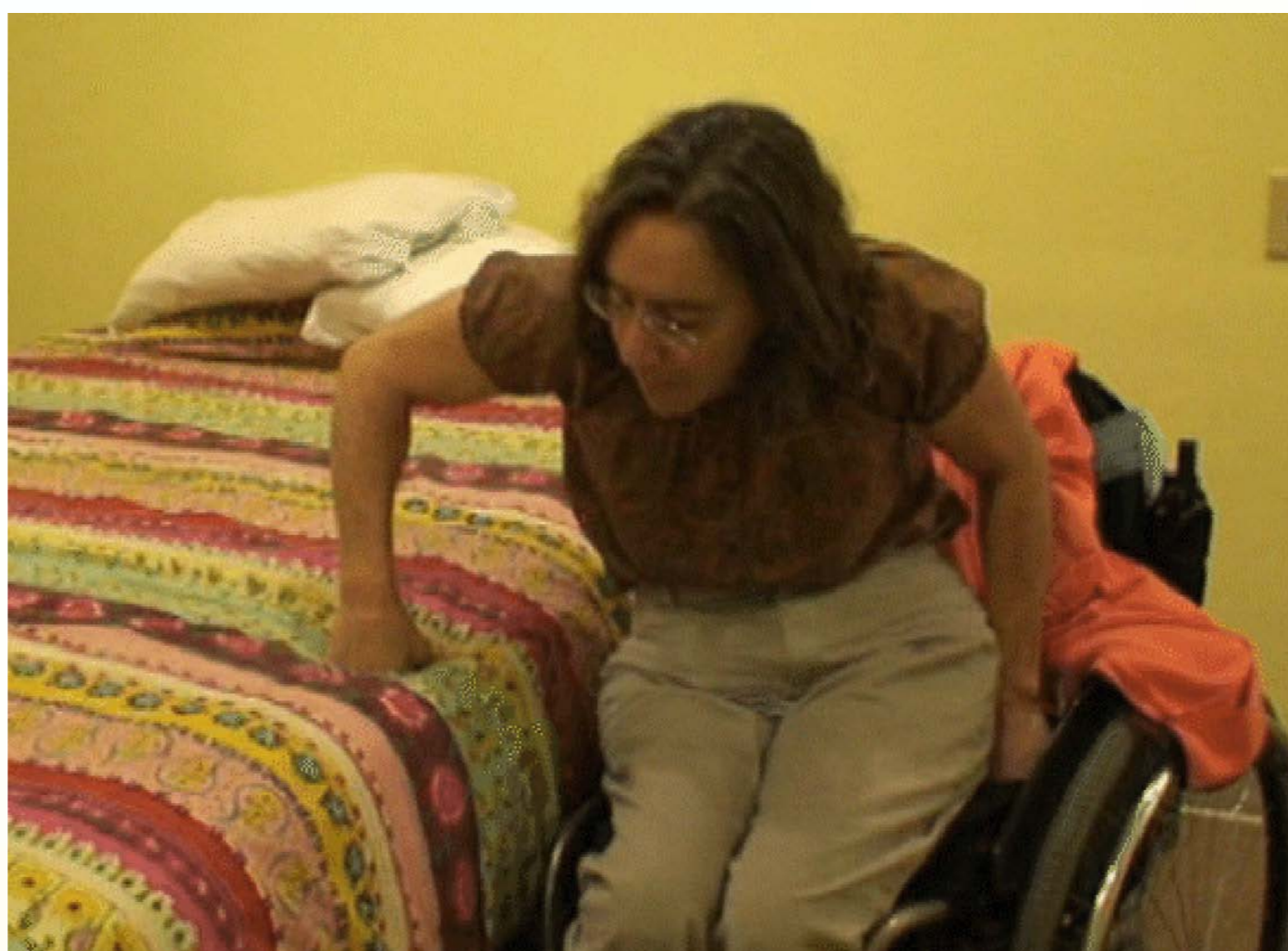
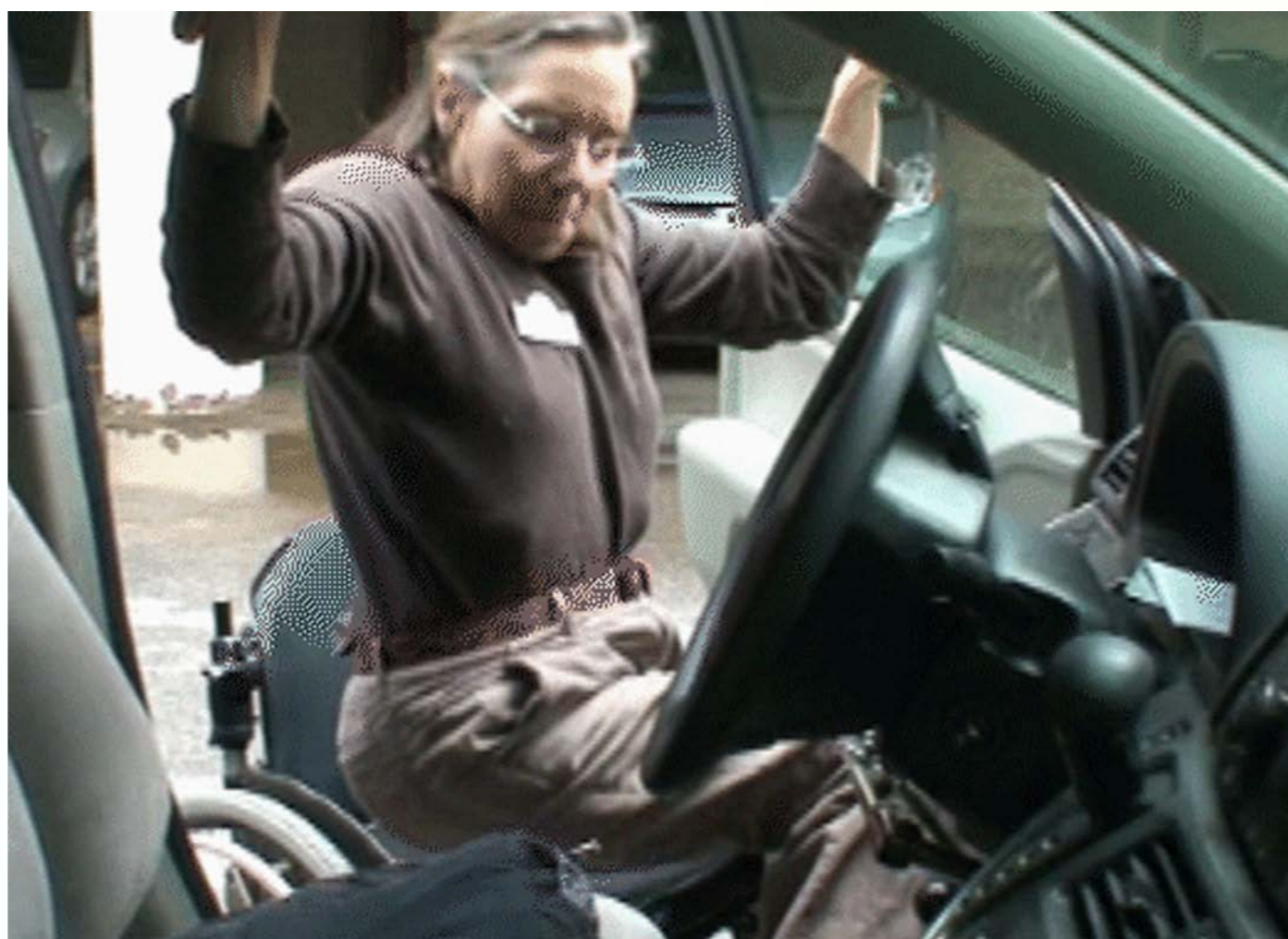
METHODS

- Nine "How To" videos were developed at National Rehabilitation Hospital (NRH) by an occupational therapist (OT) in collaboration with a senior peer mentor/ educator to model adaptive skills that are better demonstrated by a wheelchair dependent individual. Videos depicted techniques a person with SCI might use to increase independence in driving, floor transfers, using public transportation, getting dressed in a wheelchair, etc.
- 31 SCI PTs and OTs from 14 SCI model system centers viewed three "How To" videos on driving, floor transfers and riding an escalator and completed a survey evaluation using a 3-point Likert scale (where 3 was high and 1 was low) to rank the videos in terms of 1) utility of the skills demonstrated, 2) helpfulness in fostering self-efficacy, and 3) usefulness in demonstrating skills that otherwise could not be demonstrated.

RESULTS

Kendall's W Test demonstrated that the floor transfer video was associated with self-efficacy (mean= 2.30, p=0.037), and showed a corresponding trend with skills concepts (mean= 2.42, p=0.057), while the escalator video was associated with adaptation to the environment, though non –significantly (mean= 2.23, p=0.33). Clinicians considered the videos to be an important addition to patient education.

Images from "How To" Videos



DISCUSSION & CONCLUSION

- With reduced length of stay in inpatient rehabilitation, mobility and function videos can play an important role to increase independence in individuals with SCI.
- While our videos currently are limited to how one person is completing daily tasks, our goal is to continually increase the "How To" library with both different activities and different styles how to complete tasks by level of injury.
- Multimedia, in conjunction with regular therapy appointments, may broaden access to, and enhance knowledge of different ways of performing daily tasks. Additionally, multimedia learning can often be done from home.

"HOW TO" ON THE INTERNET

Our "How To" videos are available on YouTube under the search term 'HealthyTomorrow' (<http://www.youtube.com/healthytomorrow>). As of April 1, 2010, we had nine "How To" videos uploaded and more than 43, 000 views.

Our current topics include:

- How to cook from a wheelchair
- How to do pressure reliefs in the wheelchair
- How to take off the boots
- How to transfer from wheelchair to bed
- How to transfer from wheelchair to floor
- How to travel in a metro and go down the escalator
- How to transfer from a wheelchair to a car
- How to drive a car and transfer to a wheelchair
- How to go up the escalator.

SUPPORT

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