

Practices and views of occupational therapists in Nova Scotia regarding wheelchair-skills training for clients and their caregivers: an online survey

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ABSTRACT

Objective: To determine the extent to which occupational therapists (OTs) in NS conduct wheelchair skills training for their clients and caregivers, how much training is provided and the OTs' views on training.

Methods: We developed an online questionnaire with the help of a focus group and distributed it primarily through the College of OT of NS, NSHA Managers and Facebook.

Results: We received 125 responses (23%). Ninety-two (92) responded that they helped clients obtain manual wheelchairs in their direct patient care. In answer to the question "*When you assist a client in obtaining a manual wheelchair, do you typically provide wheelchair-skills training?*", 40 (43.5%) answered "*Yes, usually*", 45 (48.9%) "*Sometimes*" and 7 (7.6%) "*No, usually not*". A median of 2 training sessions were provided, each lasting 30 minutes. Sixty-five (73.9%) considered such training "*Very important*" and 22 (25%) "*Somewhat important*". Only 30 (34.1%) felt adequately prepared for client training. In answer to the question "*When you assist a client in obtaining a manual wheelchair, do you typically provide wheelchair-skills training to one or more of the client's informal caregivers?*", 40 (46%) answered "*Yes, usually*", 40 (46%) "*Sometimes*" and 7 (8.1%) "*No, usually not*". A median of 1 training session was provided, each lasting 20 minutes. In answer to the question "*How important do you feel that wheelchair-skills training is for caregivers?*", 55 (64%) answered "*Very important*" and 29 (33.7%) "*Somewhat important*". Only 31 (36.1%) felt adequately prepared for caregiver training.

Conclusions: Only a minority of NS OTs usually provide wheelchair-skills training for clients or their caregivers and the training provided is minimal, despite a majority who consider such training to be important. Only about one-third of OTs feel prepared for the training role. Further research as well as knowledge-translation initiatives are needed.

INTRODUCTION

One aspect of the wheelchair-provision process that can enhance the benefits and minimize the problems of wheelchair use is the training of wheelchair skills.[1] The value of wheelchair skills training with respect to increased capacity has been well documented for wheelchair users [2] and there is growing evidence of an association between wheelchair skills capacity and participation.[3,4] There is also growing evidence for a correlation between wheelchair-skills capacity and such economically important benefits as return to work [5] and avoidance of placement in long-term-care facilities.[6]

Caregivers can play an important role in the lives of wheelchair users but caregivers of individuals who are wheelchair users are at risk of injury.[7] Yet, the caregivers of wheelchair

users have received little attention. Roberts et al.[8] found that 62% of 195 caregivers who pushed wheelchairs reported that their needs were not considered during wheelchair assessment. Piccenna et al.[9] reported that comprehensive training programs of community-based caregivers in transfers and manual handling tasks are effective. In a recent cross-sectional multi-centered study of powered wheelchair users and their caregivers,[10] the extent of caregivers' assistance was quantified (improvements of 21.0-22.9% above WST-Q values for wheelchair users alone).

However, very little is known about wheelchair skills training for caregivers. Roberts et al.[8] reported that 77% of 195 caregivers who pushed wheelchairs had received no wheelchair training but the caregivers who did receive training reported less shoulder, back, wrist and elbow pain. In an uncontrolled pilot study looking at the effectiveness of the WSTP in improving the manual wheelchair skills of untrained caregivers, we found an increase from a pre-training total WST score of 77.8% to a post-training score of 94.7% ($p < 0.001$), a 22% relative increase that was retained at 6 months follow-up.[11] However, although caregiver training is considered "best practice", in a subsequent cross-sectional study, Kirby et al.[12] found that only 55% of 42 wheelchair users at discharge reported having received wheelchair skills training and only 22% of them reported that a caregiver was present during training. Clearly, more convincing evidence of the benefits of caregiver training is needed in support of knowledge translation.

The objectives of this study were to determine the extent to which OTs in NS conduct wheelchair skills training for their clients, the extent to which OTs in NS conduct wheelchair skills training for their caregivers, how much training is provided, the OTs' views on the importance of training and the OTs' views on their preparedness.

METHODS

We developed an online questionnaire with the help of a focus group and distributed it primarily through the College of OT of NS, NSHA Managers and Facebook.

RESULTS

We received 125 responses (23%). Ninety-two (92) responded that they helped clients obtain manual wheelchairs in their direct patient care. In answer to the question "*When you assist a client in obtaining a manual wheelchair, do you typically provide wheelchair-skills training?*", 40 (43.5%) answered "Yes, usually", 45 (48.9%) "Sometimes" and 7 (7.6%) "No, usually not". A median of 2 training sessions were provided, each lasting 30 minutes. Sixty-five (73.9%) considered such training "Very important" and 22 (25%) "Somewhat important". Only 30 (34.1%) felt adequately prepared for client training. In answer to the question "*When you assist a client in obtaining a manual wheelchair, do you typically provide wheelchair-skills training to one or more of the client's informal caregivers?*", 40 (46%) answered "Yes, usually", 40 (46%) "Sometimes" and 7 (8.1%) "No, usually not". A median of 1 training session was provided, each lasting 20 minutes. In answer to the question "*How important do you feel that wheelchair-skills training is for caregivers?*", 55 (64%) answered "Very important" and 29 (33.7%) "Somewhat important". Only 31 (36.1%) felt adequately prepared for caregiver training.

CONCLUSIONS

Only a minority of NS OTs usually provide wheelchair-skills training for clients or their caregivers and the training provided is minimal, despite a majority who consider such training to be important. Only about one-third of OTs feel prepared for the training role. Further research as well as knowledge-translation initiatives are needed.

REFERENCES

- [1] World Health Organization. Guidelines on the provision of wheelchairs in less resourced settings. 2008.
<http://www.who.int/disabilities/publications/technology/wheelchairguidelines/en/> Accessed February 11, 2019.
- [2] Keeler L, Kirby RL, Parker K, McLean KD, Hayden J. Effectiveness of the Wheelchair Skills Training Program: a systematic review and meta-analysis. *Disabil Rehabil Assist Technol*. 2018;https://doi.org/10.17483107.2018.1456566 (Epub ahead of print).
- [3] Hoenig H, Landerman LR, Shipp KM, Pieper C, Pieper C, Richardson M, Pahel N, George L. A clinical trial of rehabilitation expert clinician versus usual care for providing manual wheelchairs. *J Am Geriatr Soc*. 2005;53:1712-20.
- [4] Kilkens OJE, Post MWM, Dallmeijer AJ, van Asbeck FWA, van der Woude LHV. Relationship between manual wheelchair skill performance and participation of persons with spinal cord injuries 1 year after discharge from inpatient rehabilitation. *J Rehab Res Dev*. 2005;42:65-74.
- [5] van Zeltzen JM, de Groot S, Post MWM, Slootman JR, van Bennekom CAM, van der Woude LHV. Return to work after spinal cord injury. *Am J Phys Med Rehabil*. 2009;88:47-56.
- [6] Taylor DH, Hoenig H. The effect of equipment usage and residual task difficulty on use of personal assistance, days in bed, and nursing home placement. *J Am Geriatr Soc*. 2004;52:72-9.
- [7] Tong HC, Haig AJ, Nelson VS, Yamakawa KSJ, Kandala G, Shin KY. Low back pain in adult female caregivers of children with physical disabilities. *Arch Pediatr Adol Med*. 2003;157:1128-33.
- [8] Roberts J, Young H, Andrew K, McAlpine A, Hogg J. The needs of carers who push wheelchairs. *J Integrated Care* 2012;20:23-34.
- [9] Piccenna L, Lannin NA, Scott K, Bragge P, Gruen R. Guidance for community-based caregivers in assisting people with moderate to severe traumatic brain injury with transfers and manual handling: evidence and key stakeholder perspectives. *Health Soc Care Community* 2017;25:458-465.
- [10] Kirby RL, Rushton PW, Routhier F, Demers L, Titus L, Miller-Polgar J, Smith C, McAllister M, Theriault C, Matheson K, Parker K, Sawatzky B, Labbé D, Miller WC. Extent to which caregivers enhance the wheelchair skills capacity and confidence of power wheelchair users: a cross-sectional study. *Arch Phys Med Rehabil*. 2018;99:1295-302.
- [11] Kirby RL, Miffen NJ, Thibault DL, Smith C, Best KL, Thompson KJ, MacLeod DA. The wheelchair-handling skills of caregivers and the effect of training. *Arch Phys Med Rehabil*. 2004;85:2011-9.
- [12] Kirby RL, Keeler L, Wang S, Thompson K, Theriault C. Proportion of wheelchair users who receive wheelchair skills training during an admission to a Canadian rehabilitation center. *Top Geriatr Rehabil*. 2015;31:58-66.

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