EE790

Cost-Effectiveness and Cost-Utility analysis of an eHealth Peer-Led Wheelchair Training Program Compared to the Existing Wheelchair Training Practice in Canadian Rehabilitation Centers

Pellichero A.[1], PhD; Faure C.[2], PhD; Best K.[2, 3], PhD; Routhier F.[2, 3], PhD; Giesbrecht E.[4], PhD; Miller W.C.[5]; PhD, Laberge M.[3, 6,7], PhD

[1] Institut Universitaire des Sciences de la Réadaptation, Université de Bordeaux, France; [2] Centre Interdisciplinaire de Recherche en Réadaptation et Intégration Sociale (CIRRIS), Québec City, Canada; [3] Faculty of Medicine, Université Laval; [4] College of Rehabilitation Sciences, University of Manitoba; [5] Occupational Science and Occupational Therapy, University of British Columbia, [6] Vitam, Centre de recherche en santé durable- Université Laval; [7]Centre de recherche du CHU de Québec-Université Laval

Introduction

- Mobility is a fundamental human right (1).
- For individuals who have trouble walking, a manual wheelchair (MWC) may improve mobility and quality of life (2).
- The WHO recommends training to ensure safe and effective use of wheelchairs (3).
- TEAM Wheels represents a novel *eHealth* home training program developed with the aim of enhancing function and independence for MWC users through peer support (4).

The aim of this study was to describe the cost-effectiveness and cost-utility of the TEAM Wheels training program.

Training to Enhance Adaptation and Management for Wheelchair Users
TEAM Wheels

Methods

An economic evaluation was conducted in parallel with the TEAM Wheels multisite randomized controlled trial.

Participants

MWC users 18 years of age and older.

Outcomes of the TEAM Wheels intervention

- Quality-Adjusted Life-Years (QALY) derived from SF-36 measures
- Satisfaction with performing life activities derived from the Wheelchair Outcome Measure (WhOM)

Costs estimation (in $CAD for 2023)

- Time spent by the peer-trainer and study staff
- Training materials (tablet, gloves, etc.)
- Delivery, return and maintenance of the material

Incremental Cost-Utility Ratio (ICUR) and Incremental Cost-Effectiveness Ratio (ICER)

- ICUR : marginal cost per QALY gained
- ICER : marginal cost per WhOM point gained

Results

August 2021 to December 2023

n=42 (n=19 in the intervention group)
Mean age 52 (15.8) years old — Spinal cord injury 42%
Female n=33 (66%) — MWC experience 7.8 (10.2) years

Mean (sd) cost outcomes for Team Wheels intervention

$541.44 (175.91)	Cost of intervention / participant
$238.33 (150.07)	Peer trainer time
$166.35 (121.53)	Study staff time
$94.84	Materials and delivery

Outcomes of the TEAM Wheels intervention

	TEAMWheels	Controls	
QALY	0.014	-0.0094	**ICUR = $23,138.29**
WhOM	0.723	0.323	**ICER = $1,353.59**

Discussion & Conclusion

To our knowledge, this is the first study that estimates the cost-effectiveness of a wheelchair training program (5). With an ICUR of $CAD 23,138, **TEAM Wheels appears like a cost-effective intervention** at the threshold usually accepted in the Canadian context of $CAD 50,000/QALY. This evidence supports exploring opportunities to integrate such a program into Canadian healthcare services delivery as a cost-effective intervention to improve quality of life of people using a MWC.

References

(1) Fasciglione M. (2021). *The United Nations Convention on the Rights of Persons with Disabilities*.
(2) Hosseini SM, et al. (2012). *Archives of Physical Medicine and Rehabilitation 93*(12), 2237-2243.
(3) World Health Organization. (2023). *Wheelchair Service Provision*.
(4) Giesbrecht E, et al. (2021). *PLoS ONE 16*(10):e0258509
(5) Ferretti EC, et al. (2023) Assistive Technology.