Interrater reliability of Algo used by non-occupational therapists, members of homecare interdisciplinary teams

Marilyn Gagnon[1], Sophie-Andrée Marois[1], Marilou Trempe[1], Andréanne Lecours[1], Virginie Beaudin[1], Annick Bourget, erg., Ph.D.[1], Manon Guay, erg., Ph.D.[1,2]*

1. School of Rehabilitation, Faculty of Medicine and Health Sciences, University of Sherbrooke 2. Research Center on Aging, Sherbrooke, Quebec, Canada

*Corresponding author: manon.guay@usherbrooke.ca

INTRODUCTION

- Numerous older adults with bathing difficulties[1] wait up to 3-6 months for homecare occupational therapy in Health and Social Services Centers (HSSC) in Quebec[2].
- To support cross-skilling within interdisciplinary teams regarding recommendations for bathing equipment in straightforward situations[3], the clinical algorithm Algo (Figure 1) was recently developed[3] and validated[4].
- Interrater reliability of Algo has not yet been estimated.

OBJECTIVE

- To estimate Algo's interrater reliability to verify if non-occupational therapists (non-OTs) with different job titles made similar recommendations when assessing the same clients.

METHODS

Participants

- Eight non-OTs with different job titles.
- All non-OTs received the same training.

Instruments and Procedure

- Algo was used for selection of bathing equipment.
- Six clinical scenarios developed by an OT (pretested) were simulated by standardized patients[5] in their homes.
- To preserve nondisclosure, discussions within research team and between non-OTs were not allowed.

Data collection

- Recommendations (Figure 2) formulated by non-OTs were compared to the most suitable and acceptable recommendations according to OT judgment.

Data analysis

- Degree of agreement was calculated using Fleiss adapted kappa for many raters[6].
- Error rate was calculated comparing non-OTs recommendations and acceptable recommendations.

RESULTS

Table 1. Estimated Fleiss adapted Kappa

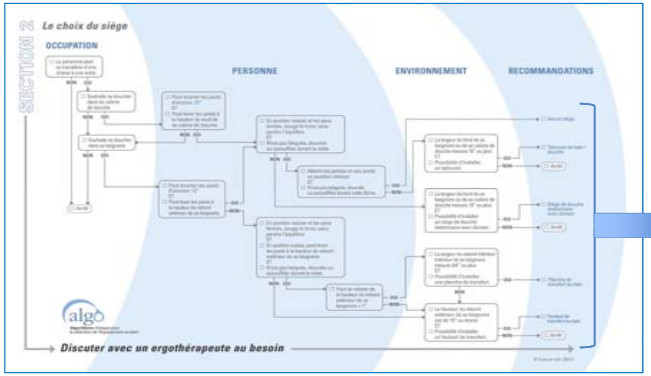
Estimated Kappa	95% confidence interval
0.43	[0.36 ; 0.49]

- Estimated kappa is moderate according to Landis and Koch[7] (Table 1).
- Confidence interval (95%) indicates that the kappa varies from fair to moderate.
- Except for one clinical scenario, non-OTs selected a maximum of two different recommendations out of the possible nine.
- Error rate is 0 since non-OTs made acceptable recommendations for all simulated clinical scenarios.
- On 4 occasions (8%), non-OTs refrained from making a recommendation, judging the situation complex, and referred the patient to an OT.

WHAT IS ALGO?

A clinical algorithm design by OTs for non-OTs to recommend bathroom modifications for community-dwelling elders in "straightforward" situations.

Figure 1. Algo section 2: Selection of bathing equipment



http://www.ergotherapie-outil-algo.ca/fr/accueil/

Figure 2. Algo's recommandations

Algo (straightforward situations)		Complex case
Shower	Bathtub	
No seat	No seat	
Tabouret de bain / douche	Tabouret de bain / douche	Stop
Siège de douche stationnaire avec dossier	Planche de transfert au bain	OT

DISCUSSION

- Non-OTs using Algo recommend **similar** bathing equipment for the same simulated clinical scenarios.
- **Acceptable** bathroom adaptations are made in 100% of situations.

Study Limits

- Non-OTs in our study may not be representative of practices outside the single interdisciplinary team concerned.
- Nondisclosure between evaluators may have breached despite the short two-day time frame for data collection and the precautions taken.

Study Strengths

- Pretests and presence of standardized patients bring stability to the clinical scenarios.
- Random clinical scenarios decrease sequence bias.

ANTICIPATED BENEFITS

- Data on Algo's metrological qualities will support decision-making concerning work organization in HSSC based on available human resources.
- In response of their needs, older adults may receive safe and adapted equipment.

CONCLUSION

- Algo allows non-OTs to select bathing equipment for older adults living at home and experiencing bathing difficulties in straightforward situations.

FUTURE RESEARCH

- Do transcultural validation to allow Algo to be used in other provinces and countries.
- Explore the clinical reasoning of non-OTs when using Algo in order to improve the tool, the guides and the training.

REFERENCES

(1) Guay, M., Dubois, M. F., Corrada, M., Garant, M. P. and Kawas, C. H. (2014). Exponential increases in the prevalence of disability in the oldest old: A Canadian national survey. *Gerontology*, *60*(5), 395-401. doi: 10.1159/000358059

(2) Raymond, M. H., Feldman, D., Prud'homme, M. P. and Demers, L. (2013). Who's next? Referral prioritization criteria for occupational therapy in home care. *International Journal of Therapy and Rehabilitation*, *20*(12), 580–589.

(3) Guay, M., Dubois, M. F., Robitaille, J. et Desrosiers, J. (2014). Development of Algo, a Clinical Algorithm for Non-Occupational-Therapists Selecting Bathing Equipment. *Canadian Journal of Occupational Therapy*, *81*(4), 237-246. doi: 10.1177/0008417414539643

(4) Guay, M., Dubois, M. F. et Desrosiers, J. (2013). Can home health aids using the clinical algorithm Algo choose the right bath seat for clients having a straightforward problem? *Clinical Rehabilitation*, *28*(2), 172-182. doi:10.1177/0269215513494027

(5) May, W., Park, J. H. and Lee, J. P. (2009). A ten-year review of the literature on the use of standardized patients in teaching and learning: 1996–2005. *Medical Teacher*, *31*, 487-492.

(6) Fleiss, J. L. (1971). Measuring nominal scale agreement among many raters. *Psychological Bulletin*, *76*(5), 378-382.

(7) Landis, J. R. and Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, *33*(1), 159-174.

Centre de recherche sur le vieillissement
PUPSR
UNIVERSITÉ DE SHERBROOKE
Faculté de médecine et des sciences de la santé