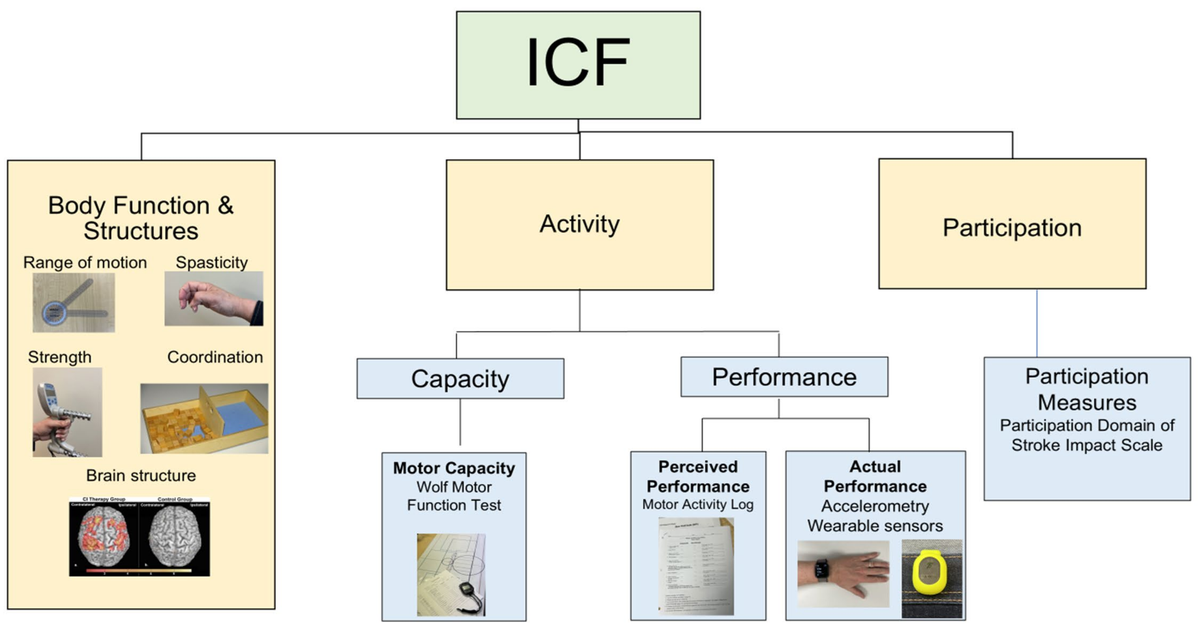
Exploring the Benefits of the Behavioral Transfer Package Within Constraint-Induced Therapy and Its Potential Application with New Advances in Rehabilitation

Mary Bowman OTR/L, LSVT-BIG[1], David Morris PhD, PT[1], Sarah dos Anjos PhD, OTD, OTR/L[1]

1. Department of Occupational Therapy, UAB, 2. UAB Department of Physical Therapy, UAB

Introduction

- The International Classification of Functioning, Disability and Health (ICF) defines "capacity" and "performance" as two distinct concepts:
  - Capacity is "an individual's ability to execute a task or an action"; what the individual can do.
  - Performance is "an individual does in his or her current environment" in the context of the "lived experience" or what does the individual actually does in daily life. (World Health Organization, 2001)
- Evidence from neurorehabilitation research demonstrates the divergence between upper extremity (UE) capacity and performance for stroke survivors. However, few interventions offer evidence-based solutions to bridge the gap between capacity to performance. (Lang et al., 2023)
- The behavioral Transfer Package (TP), featured as the most important component in Constraint-Induced Movement Therapy (CIMT), provides a solution for bridging the ICF capacity to performance with triangulated data from capacity and performance outcome measures including accelerometry, and neuroimagery (Figure 1) (Morris et al., 2006; Taub et al., 2013).
- The TP is comprised of a group of behavior change techniques that can be readily implemented in the clinical setting in interventions even beyond CIMT.



Purpose: Explore the behavioral components of the CIMT TP and how each spans the gap between UE capacity gained in the clinical setting and performance in daily life situation.

Considerations

- The TP of the UE CIMT protocol serves as a model for using behavior change strategies to promote UE performance in the home and community setting (Table 1).
- Previous studies reported strong evidence of the effects of the TP on enhancing more-affected UE performance following stroke (Gauthier et al., 2008; Taub et al., 2013).
- Each component of the TP is a behavior change technique that, when combined, reinforces adherence to the CIMT protocol and promotes the transfer of capacity gains into use of the UE in everyday performance (Figure 2).
- During treatment, the TP promotes self-efficacy, education, adherence, problem-solving, and autonomy. After discharge, therapists provide four weekly follow-up interactions with clients to reinforce these strategies.

Figure 2: The TP bridges the gap between capacity and performance in UE CIMT.

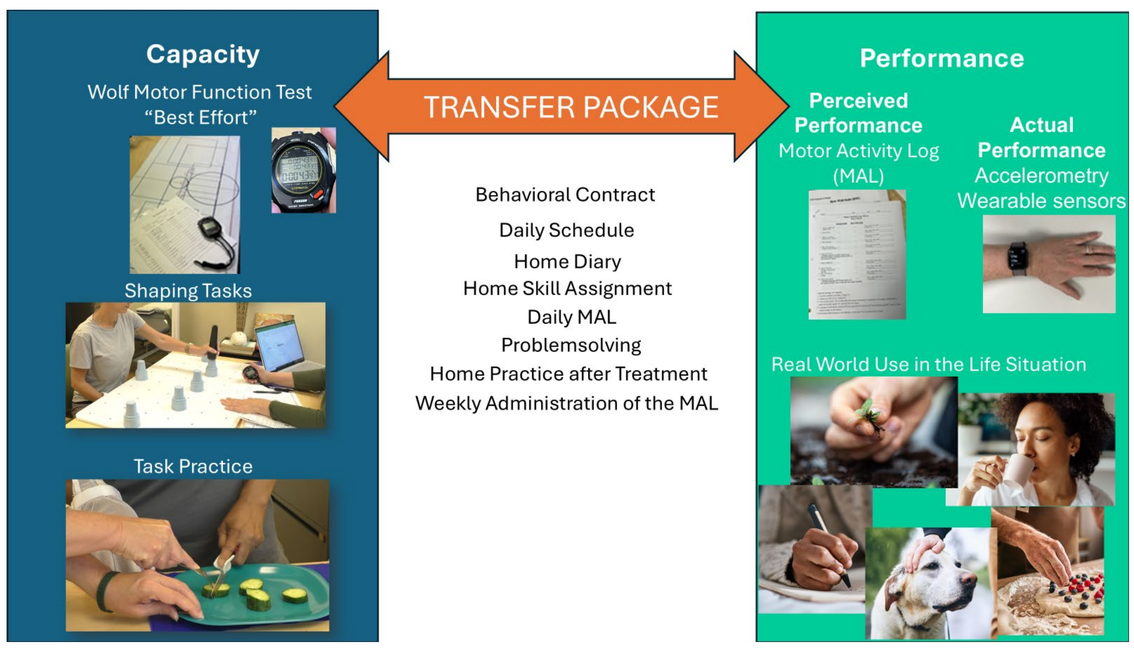


Table 1: Transfer Package components, description of each, and details for use in CIMT.

TP Component	Description	Details
Behavioral Contract	An agreement between the patient, caregiver, and therapist that addresses mitt use and more-affected UE use within the patient's current routine.	• Safety emphasized as first consideration. • Caregiver support defined • Adaptive equipment (AE) and adaptive strategies initiated for ADL performance • Increases accountability for use in ADL performance as part of therapeutic alliance
Daily Schedule	A document that serves as an account of daily activities in the clinic by the therapist.	• Details mitt use in the clinical setting • Mirrors the documentation of the mitt use outside of the clinic setting in the Home Diary • Fosters adherence and accountability
Home Diary	A daily diary kept by the patient or caregiver detailing mitt usage outside of the clinic setting.	• Safety emphasized with patient's account of mitt use and activities performance • Provides information about the number of waking hours the mitt is worn • Increases accountability for UE performance as part of therapeutic alliance • Reviewed daily with patient and caregiver if present
Home Skill Assignment	10 activities selected daily with the patient and therapist (and caregiver) and performed outside of the clinic with 5 easier and 5 more challenging activities selected.	• Emphasis on generalized use of the more-affected UE for ADL/ IADL performance for tasks that may not have performed since the stroke . • Safety is emphasized • AE and adaptive strategies used as needed
Daily administration of a portion of the MAL	Administration of MAL HW Scale daily to track progress through treatment.	• Fosters problem-solving for UE performance • Tracks progress of the more-affected UE performance through treatment • Safety emphasized • AE discussed and trialed as needed
Problem-solving	A process of finding better ways to use the more-affected UE in performance tasks the patient does currently and for new tasks the patient is exploring.	• Safety emphasized • Promotes effective carry over of more-affected UE capacity gains into daily performance • Discussion of the use of AE or adaptive strategy development as needed
Home Practice After Treatment	A document based on the Home Skill Assignment that outlines ongoing practice capacity and performance with 8 activities and 2 UE practice tasks and addresses safe continued progress.	• Safety emphasized • Effective carry over of more-affected UE capacity gains into daily performance • Adaptive equipment and adaptive strategies emphasized as needed
Weekly administration of the MAL	Administration of the MAL by telephone or video conference to monitor progress with the use of the more-affected UE.	• Fosters problem-solving • Tracks progress of the more-affected UE for the first 4 weeks after treatment • Safety emphasized

Conclusion

- Behavior change strategies have promise for improving performance-level outcomes in rehabilitation programs. One model for achieving these results comes from the TP of the UE CIMT protocol.
- With the TP of the UE CIMT protocol as a model, similar behavior management strategies can be developed to enhance other rehabilitation protocols and therapeutic technologies to bridge the gap from capacity to performance.

References

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Contact information

For more information, please contact Mary Bowman at mbowman@uab.edu

For more information on the transfer package:
UAB Training for CI Therapy – ONLINE
go.uab.edu/onlinecitraining

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