

Session #: 1212

Topic Area: Speech Sound Disorders in Children

Day/Time: Thursday, November 12, 2015 from 6:30 PM to 7:30 PM

Title: PROMPT Overview of a Program of Research: Where Are We Now?

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Learning outcomes:

1. Describe current studies on PROMPT, including the ongoing RCT, the treatment effects and neurological mechanisms underlying these effects.
2. Critically evaluate these studies using a hierarchy of evidence quality framework and the 5-phase clinical-outcome model.
3. Discuss current outcome measures used in the PROMPT approach and those include outcomes from a broader social perspective.

To fully understand and implement the process of research-to-clinical practice, it is critical to understand (a) how and why a specific treatment works, (b) for what population it works, (c) the quality of evidence supporting the treatment approach, and (d) how it fits into the broader context of clinical-outcome testing. We will discuss this process based on data from several recent studies utilizing the Prompts for Restructuring Oral Muscular Phonetic Targets (PROMPT) approach on children with speech sound disorders (e.g., Dale & Hayden, 2013).

PROMPT is a multi-sensory motor speech treatment approach often recommended and applied in children with speech sound disorders (Square et al., 2014), autism (Rogers et al., 2006) and cerebral palsy (Ward, Strauss, & Leitão, 2013). During PROMPT intervention, motor speech goals or treatment priorities are based on the assumption of the hierarchical development of speech subsystems known as the Motor Speech Hierarchy (MSH; Hayden et al., 2010). Within this developmental MSH framework, speech production is thought to be the result of interactive development of seven key motor speech subsystems (i.e., Stage I: tone, Stage II: phonatory control, Stage III: mandibular control, Stage IV: labial-facial control, Stage V: lingual control, Stage VI: sequenced movements, and Stage VII: prosody). The PROMPT intervention facilitates the hierarchical establishment, refinement and integration of normalized movement patterns within these speech subsystems through the use of tactile-kinesthetic-proprioceptive inputs or prompts to the client's face. As PROMPT treatment systematically progresses from the lower- to higher-levels of the hierarchy – place, manner, movement transitions and timing of speech movements improve.

First, the treatment effects and the potential neurophysiological mechanisms underlying these effects will be discussed. Second, in order to integrate these studies into evidence-based practice, we will critically evaluate the quality of these studies using a hierarchy of evidence quality framework (Melnik & Fineout-Overholt, 2011) and then attempt to place them within the comprehensive 5-phase clinical-outcome research testing model (Robey & Schultz, 1998). This process will allow us to organize and structure the many published studies on clinical outcome research involving the PROMPT approach. Hence, this will facilitate decisions regarding the current status of PROMPT intervention within the scope of evidence-based practice.

Third, testing treatment efficacy using high quality designs (e.g., randomized controlled trials; RCT) requires the crucial step of process standardization. We will discuss current process

standardization attempts at the PROMPT Institute with regards to the standardization of treatment fidelity and the development of a criterion-based probe-word scoring system to evaluate treatment change. The probe-word scoring system is a substantial departure from earlier auditory-perceptual (or transcription-based) scoring procedures as it includes (a) visual observation, and (b) reporting of movement gesture approximations as well as sound distortions, and temporal and prosodic aspects of speech productions. This allows for on-going monitoring of “degrees of change” or approximations towards specific therapy targets that could potentially guide clinical decisions regarding therapy goals and optimize treatment effectiveness.

Finally, we will discuss current outcome measures used in conjunction with the PROMPT approach that go beyond impairment level factors (body structure and function) to include outcomes from a broader social perspective, i.e. in terms of changes in children’s activities and participation. Together, this review will allow clinicians and scientists to appreciate the processes involved in the integration of research into clinical practice.

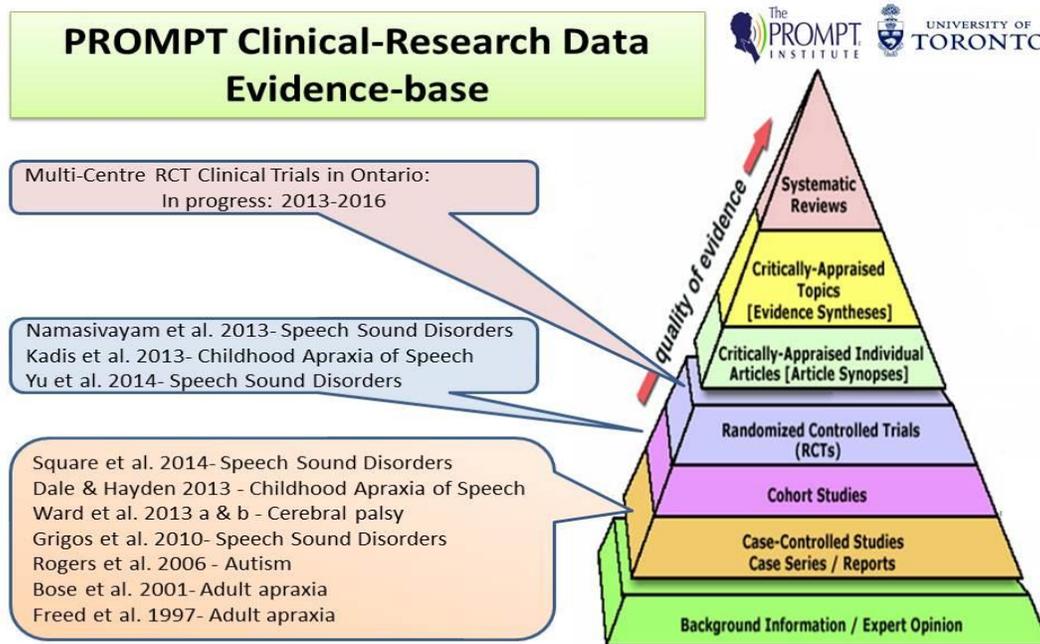


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Note: There is usually 1 pyramid constructed per disorder/per treatment approach

	<u>Process Standardization</u>	
Assessment	Probe word scoring system	Hayden, Namasivayam, Hard, & Van Lieshout (2014)
Intervention	Defining treatment outcomes	Kearney et al. (2015)
Treatment fidelity	Assessment of treatment fidelity in developmental motor speech disorders	Hayden, Namasivayam, & Ward (2015)
Consistency of oro-facial Prompting	Assessment of accuracy and consistency of oro-facial prompt placements	Namasivayam, Bali, Yan, Hayden, & Van Lieshout (2015, November)

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