

## Rapid Review

### Collaborative goal setting with families and children undergoing intensive rehabilitation

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#### Introduction

This document contains a brief overview of information regarding the application of collaborative goal setting with children and families in the rehabilitation context. It was intended to provide clinicians with relevant background information during the process of developing a formalized goal setting approach within this setting.

#### How was the literature review completed?

An electronic search was performed on November 17, 2013 of the following databases: MEDLINE & EMBASE. In addition, references lists were skimmed to identify further articles. Keywords in the search included: goal\*, goal setting, goal attainment, rehab\*, functional training, brain injury, stroke, cerebral palsy, with child limits (0-18 years) set for all searches.

Studies were included if they:

- were published or translated to English
- evaluated the use of goal setting with children with a disability undergoing rehabilitation
- included specific diagnoses, such as cerebral palsy, acquired brain injury, developmental disabilities
- presented models for applying goal setting within a pediatric rehabilitation and/or inter-disciplinary context.

**Population:** children with brain injury, cerebral palsy, acquired brain injury, and/or developmental disabilities undergoing rehabilitation

**Intervention:** multidisciplinary rehabilitation, collaborative goal setting

**Comparison:** none

**Outcome:** collaboration; motor, cognitive, functional outcomes

Of 54 articles originally retrieved, 18 studies met the inclusion criteria. In addition, a [Rapid Response](#) was completed by the Canadian Agency for Drugs and Technologies and Health (CADTH)<sup>1</sup>, identifying two systematic reviews, two randomized controlled trials and six non-randomized studies. These findings have been integrated into this evidence summary. The evidence is largely descriptive in nature with few high level studies available (i.e. systematic reviews, randomized control trials, or cohort studies). In addition, no study examined goal setting within an interdisciplinary context for children recovering from acquired brain injury or undergoing intensive rehabilitation. Rather, studies evaluated goal setting approaches in outpatient populations, mixed inpatient/outpatient contexts, and largely with children with CP. Due to the short time frame for this review, levels of evidence and quality of evidence were not assessed. As such, this limitation should be considered when interpreting the information presented.

#### The objectives of this review are to:

- Summarize the literature related to goal setting in pediatric rehabilitation
- Communicate information about current tools to support goal setting in pediatric rehabilitation
- Communicate information about current models and processes that can support goal setting in an interdisciplinary context

## What is goal setting?

Goal setting, here, refers to the identification of, and agreement on a target which the client, therapist or team will work towards over a specified period of time for the purpose of rehabilitation<sup>2</sup>.

Goal setting and goals are an effective means of both understanding and changing human behavior. Clear and functional goals enhance motivation, leading to improved outcomes<sup>3,4</sup>.

Implementing a family centered approach within a goal setting framework emphasizes parental involvement in decision-making, collaboration, and partnership, acceptance of the family's choices, and empowerment<sup>3,5,6</sup>.

## What is goal directed training?

Goal directed training is an activity based approach to therapy. The primary aim is to increase clients' abilities to engage in meaningful activities<sup>4</sup>. It is based on dynamic systems motor control theory and occupational therapy models, which suggest that movement patterns emerge from the interaction between a person's abilities, environment and the goal<sup>4</sup>. Motor learning principles are used to guide treatment by providing structure and scheduling.

### Goal directed training involves 4 components:

1. Selection of meaningful goal(s)
2. Analysis of baseline performance
3. Intervention/practice regime
4. Evaluation of outcome(s)

Findings from a systematic review reveal that goal directed training with children with cerebral palsy improves function at the activity level of the ICF<sup>8</sup>.

See Table 1 for traffic lighting evidence of the effectiveness of goal setting interventions.
















Proven Effective

## What are the benefits of goal setting?

- Goals enhance competence, awareness and partnership of both parents & clinicians<sup>9</sup>
- Goals direct attention by encouraging collaboration and shared understanding<sup>3,9</sup>
- Goals potentially enhance inter-disciplinary team work<sup>9</sup>
- Goals enter everyday life and encourage practice at the right moment rather than only while the child is in therapy<sup>3</sup>
- Clients' active involvement in goal-setting increases their motivation, participation and satisfaction regarding the therapy and positively correlates with treatment outcome<sup>3</sup>
- Goal setting is associated to some extent with positive outcomes<sup>3</sup>



**Table 1: Traffic Lighting Goal Setting Interventions for Children with Disabilities**

Diagnosis	ICF Dimension	Outcome	GDT	Lycra Arm Splints + GDT	CIMT + Bimanual+ GDT	Goal oriented group
Cerebral Palsy	Body Structure & Function	Supination/ Pronation		 Proven Effective <sup>17</sup>		
		Shoulder Flexion & Abduction		 Proven Effective <sup>17</sup>		
		Functional Elbow Extension		 Insufficient <sup>17</sup>		
		Thorax Flexion & Extension		 Proven Effective <sup>17</sup>		
	Activity & Participation	Gross Motor Skills	 Proven Effective <sup>8,16</sup>			 Insufficient <sup>19</sup>
		Functional Abilities	 Proven Effective <sup>8,16</sup>		 Proven Effective <sup>18</sup>	 Insufficient <sup>19</sup>
		Self-Care	 Proven Effective <sup>8,16</sup>			 Insufficient <sup>19</sup>
Developmental Coordination Disorder	Body Structure & Function	Visual Motor Integration				 Insufficient <sup>19</sup>
		Dynamic balance				 Insufficient <sup>19</sup>

\*Goal directed training (GDT)

## What factors make goal setting most effective?

- Shared processes
- 'Parents as drivers', which communicates parent's ownership to the goals and their taking the lead in the goal- setting process.

Parents in one study appreciated the idea that goals should be based on their needs and preferences, yet underscored the importance of professional competence and supervision. If they were left on their own to define concrete and measurable goals and scale the goals, it made parents question their own competence<sup>3</sup>. As such, service provider involvement is critical.

- Clients benefit from assistance to transform their wishes into intervention goals that are broken down into small and achievable steps.
- Maintaining an underlying premise that transactions are mutual, complementary, united and reciprocal, and include joint actions and considerations.
- Include a relational component:
  - Practice associated with active listening, compassion, empathy, and respect
  - Individualized, flexible, and responsive to family concerns and priorities
  - Practice based on informed choices and family involvement in achieving desired goals and outcomes.
- Standardized processes are important:
  - Standardized processes ensure that principles and values of philosophical concepts such as family-centred service and family participation are visible and measurable. Standardized processes within a programme provide an opportunity to systematically evaluate the extent to which the processes are actually carried out and the impact the processes have on family satisfaction<sup>10</sup>
  - The success of any standardized process depends on guideline acceptance by service providers, the presence of a mechanism to ensure that staff members are mentored on the use of the guidelines and ongoing evaluation to identify gaps and implement strategies to reduce gaps between the documented processes and actual practice<sup>10</sup>

### What does a useful goal look like?

- Concrete
- Observable
- Contextualized
- Written
- Visible for everybody involved with the child

## What are some challenges of goal setting in clinical practice?

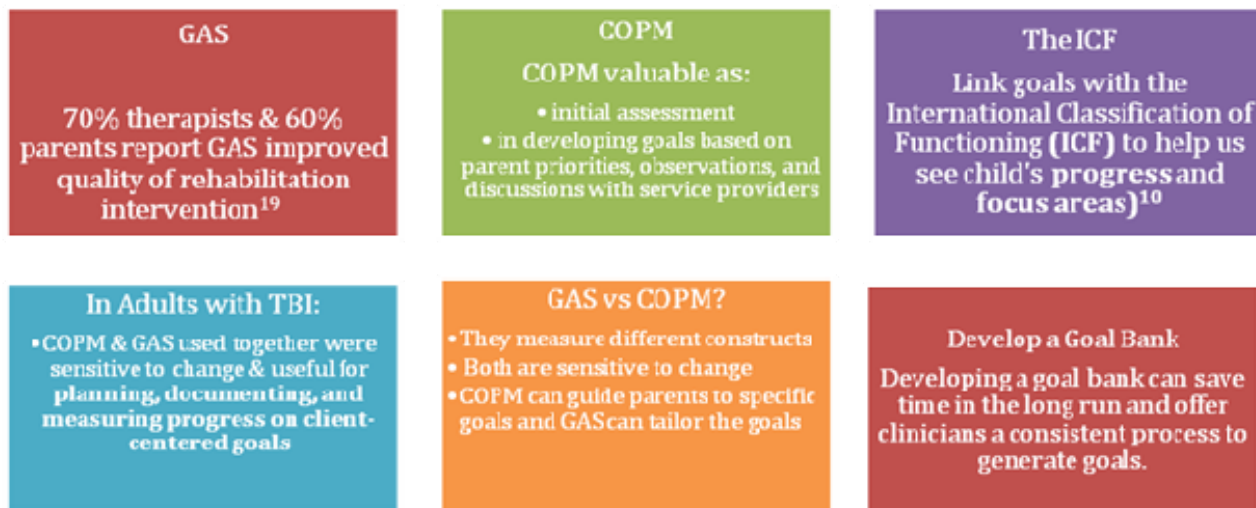
Though beneficial, a growing body of research suggests that goal setting may be more complex than it is often portrayed<sup>3</sup>. Currently, family centred practice and goal setting<sup>10</sup> practices have been observed to lack formal and standardized processes.

- Studies indicate that although there is robust evidence to suggest the benefits of goal setting, clinicians across the world are not using them<sup>11</sup>.
- Perceptions that goal setting is time consuming and that there is a lack of time have been named as primary barriers<sup>11,12</sup>.
- Some parents prefer for therapists to take control of the goal setting process, while other families prefer to take the lead<sup>10</sup>.
- The balance between the input of patient and therapist in setting treatment goals and planning is still challenging because of interactional dilemmas and the process appears often to be therapist led<sup>13</sup>.



- Clinicians may perceive that clients are unable to effectively engage in goal setting because of cognitive & expertise limitations<sup>14</sup>.
- The link between routine goal setting (i.e. administering the COPM) to functional outcomes is variable. For example, on a geriatric unit, the COPM showed no link to functional scores on the Functional Independence Measure (FIM)<sup>11</sup>. However, in other contexts, positive correlations between goal setting measures and functional outcomes have been observed, such as in children with cerebral palsy<sup>15,16</sup> and adults with acquired brain injury<sup>16</sup>.
- It is important to define what specific objectives can be achieved with routine goal setting in different settings and study those hypotheses<sup>11</sup>.

### What tools can support goal setting?



\*Please see [Appendix 1, 2, and 3](#) for an overview of the COPM, GAS, and PEG

No single good instrument is available for recommendation, specifically, for all the phases of goal-setting. The studied instruments were feasible because of their usefulness in goal-setting and for their client-centred approach, despite the amount of time spent and some difficulties in scoring.

Ultimately, the strengths of instruments can be combined into one instrument or method, which can be tailored to each patient. Further research is needed to examine how client-specific instruments can support this process and to explore the feasibility of implementing such instruments and approaches<sup>13</sup>.

### Take Home Messages:

- Clear, contextualized, functional goals can enhance motivation and lead to positive outcomes
- Integrating family centered principles with goal setting can enhance outcomes
- Make goals concrete and visible for everybody involved with the child
- Update goals on a regular basis.
- No single instrument is available for recommendation. Tailor the strengths of instruments to your patient population.

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A copy of this document is available at: [www.childdevelopment.ca](http://www.childdevelopment.ca)



Health Centre for Children

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### Appendix 4: Goal Setting Models of Care

Model A: Family Professional Collaboration (An & Palisano, 2013)	
<b>STEP 1:</b>	<b>Mutually agreed-upon goals (SMART) (solution focused conversations)</b>
<b>STEP 2:</b>	<b>Shared planning- intervention plan tailored to the child and family needs</b> <ul style="list-style-type: none"> <li>Plan identifies how intervention will progress, and roles of therapists, and family members</li> <li>Family preferences, strengths and resources are identified</li> <li>Scaling questions (i.e. 1-10) to help family identify meaningful progress towards achievement of a goal and identify where or how to begin)</li> </ul>
<b>STEP 3:</b>	<b>Shared implementation</b> <ul style="list-style-type: none"> <li>Parent and therapist work together while implementing the intervention and modify the intervention plan as needed.</li> </ul>
<b>STEP 4:</b>	<b>Shared evaluation of child and family outcomes</b> <ul style="list-style-type: none"> <li>Self report and individualized outcome measures are recommended</li> <li>The <a href="#">“Family Empowerment Scale”</a> can be used to measure parents perceptions of empowerment</li> </ul>
Model B: Mutual Collaboration in Home Programming (Novak, 2012)	
<b>STEP 1:</b>	<b>Establish collaborative relationship between parents and clinicians</b>
<b>STEP 2:</b>	<b>Set mutually agreed upon goals</b>
<b>STEP 3:</b>	<b>Select activities that focus on achievement of the goals and are evidence informed</b>
<b>STEP 4:</b>	<b>Support Parents through the process + implementation</b> (via education, training, coaching) (arrange reviews, parent reviews performance, reinforce, communicate with visuals + writing)
<b>STEP 5:</b>	<b>Evaluate changes in function, parent satisfaction with functioning, quality of domain of interest</b> (e.g. upper extremity function, voicing, walking, etc. using COPM/GAS + robust clinical measures)
Model C: Overcoming Challenges of Collaborative Goal Setting (Brewer et al., 2013)	
<b>STEP 1:</b>	<b>Interview child &amp; family</b> <ul style="list-style-type: none"> <li>To understand context, values and motivation</li> </ul>
<b>STEP 2:</b>	<b>Set goals collaboratively</b> <ul style="list-style-type: none"> <li>Shared understanding of specific target behaviors</li> </ul>
<b>STEP 3:</b>	<b>Intervention</b> <ul style="list-style-type: none"> <li>Work together towards goal achievement</li> </ul>
<b>STEP 4:</b>	<b>Review goals</b> <ul style="list-style-type: none"> <li>Check progress, revise goals, set new goals</li> </ul>





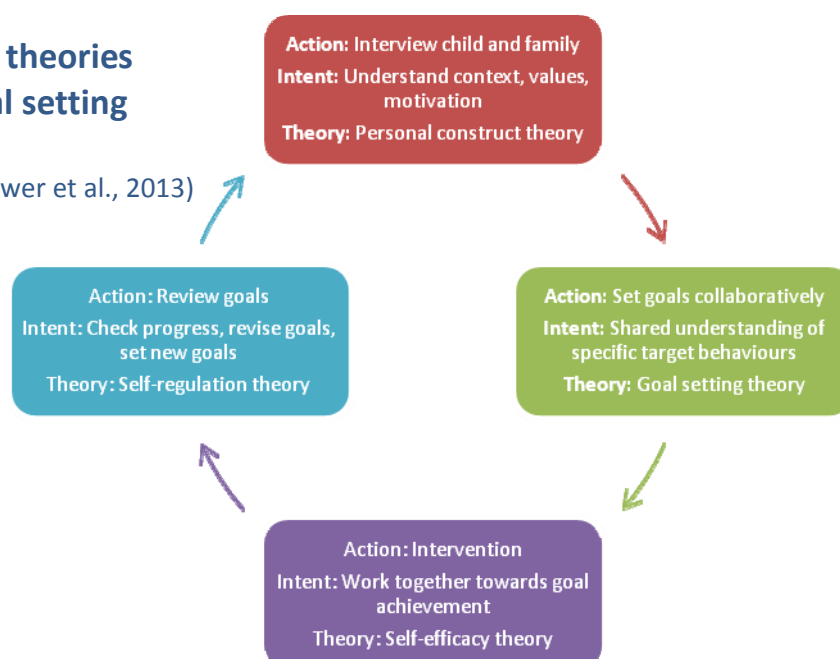
**Recommendations:**

1. Create a culture that values and supports collaborative goal setting
  - System and organization need to provide resources to be fully client-centred
  - Client and family-centred care may be listed as a value or placed within mission statement
  - Work environment should provide in-service training sessions and continuing education for clinicians in this area
  - Respect a client's wishes by giving them the choice of whether to be involved in collaborative goal setting and decision making. Their desire for input may vary over time with changing circumstances.
  - Are all therapy processes, including intake, assessment, team meetings, and intervention aligned and supportive of the central goals articulated by the family?
  - Is there a possibility of re-allocation of time to support the collaborative process.
2. Adopt an explicit goal setting process
  - Although it's often informal, formalized is important – **concrete, observable, visual and written, and contextualized within a specific time frame** (Brewer et al., 2013; Oien et al., 2009).
3. Consider the theories influencing the goal setting process
  - The interplay of theories, rather than simply one theory should be noted
4. Provide support and education for families, clients, and clinicians.
  - Goal setting involves skill, and effort and education and guidance through supervision and practice are necessary to develop this skill
5. Consider the use of a “key worker”
  - This method has been used in interdisciplinary goal setting process within adult neurological settings.
  - Key worker's main role was to coordinate the goal-setting process and liase between all the team members to ensure that communication was streamlined and effective.



## Application of theories within the goal setting process

(adapted from Brewer et al., 2013)



### Model D: Solution Focused Coaching (SFC-PEds) (Baldwin, 2013)

**STEP 1: Setting the stage**

**STEP 2: Forming the Client-Therapist relationship**

**STEP 3: Envisioning a preferred future**

**STEP 4: Goal discovery**

**STEP 5: Strategy creation**

**STEP 6: Plan confirmation**

**STEP 7: Action and Reflection cycle**

#### Strategies:

- Focus on strategic questions to illustrate clinician curiosity and work within the client's world view
- Clinician's listen for clients' ideas and priorities in ways that will enhance exploration and expansion of client knowledge and choices
- During goal discovery, clinicians maintain a process of inquiry of client ideas while respectfully sharing clinically relevant information
- A therapy plan is co-created that is aligned with client readiness, supports client choices, is responsive to their unique situation, and fits with their "real life" environment.

## Solution-Focused Coaching In Rehabilitation (Baldwin, 2013)

### Key Elements and Benefits of Solution-Focused Coaching in Pediatric Rehabilitation

#### A. Client Orientation: client-centered, strength-based, relational

- Use of client worldview and language
- Assumption of client expertise in strengths, resources, and capacity
- Explicit exploration of client strengths and resources
- Positive therapeutic alliance established
- Client strengths and resources form the foundation for therapy

#### B. Process Orientation: future/possibilities orientation, solution-focused, exploration of needs

- Focus on the client's present circumstances and preferred future
- Use of strategic questions to explore and enhance client creativity and readiness for change
- Use of positive language to explore "possibilities" and solutions
- Clarification of "what's wanted," priorities, and next steps
- Co-discovery of client expectations, priorities, and readiness supports alignment and customization of therapy with client needs, ideas, and priorities
- Helps clients to shift focus to solutions; further enhances client sense of hope, meaning, and self-determination
- Develops mutual trust and openness to the coaching process and roles

#### C. Goal Orientation: collaborative approach, mutual expectations, meaningful goals

- Co-construction of therapy goals and plans that build on existing strengths and resources of client
- Strategies for goal attainment are designed collaboratively using client and therapist expertise
- Coherence and manageability of goals and plans are addressed
- Goal-setting becomes meaningful as it links with client's larger hopes and dreams
- Client ownership of goals and specific action steps
- Co-creation of an optimal motivational context for the development of client knowledge and skills
- Enhanced client engagement with therapy plan

#### D. Ecological Orientation: real-world, client-driven, reflective, capacity building

- Plan implementation occurs in the client's natural environment
- Capacity building through client evaluation/reflection on progress and strategy success during subsequent sessions
- Enhanced client capacity for transfer of learning (new knowledge/skills) to other situations in the present or future
- Empowerment; enhanced client self-efficacy
- Streamlined intervention process

