

CASE SCENARIO

Impairment and Activity/Participation Goals

Max's goal, as identified through the PEGS video in the DCD PT module (available at www.canchild.ca) is to be able to **skip 17 times in a row**. The decision to use an impairment- or participation-focused framework would result in different treatment goals and interventions. In addition your frequency of intervention may differ, as would your decision to work only with Max or with others who support him. Using Goal Attainment Scaling (GAS), examples of how these goals and interventions might differ are seen below.

Scenario 1. Impairment Focus

Max demonstrates poor bilateral motor coordination and balance, has decreased strength in his lower extremities and poor fitness overall. You identify the following GAS goals to help Max with his skipping goal:

Skipping GAS Goals - Impairment Focus			
	Goal 1:	Goal 2:	Goal 3:
	Increase bilateral quadriceps strength	Improve static standing balance	Improve jumping ability
Time Line	Once a week for one month	Once a week for one month	Once a week for one month
ICF-CY Component	Impairment	Impairment	Impairment
Level of Attainment	Assume and maintain full squat position for 3 seconds. <i>(full squat: with hips and knees bent to 90 degrees)</i>	Maintain single-leg stance for at least 3 seconds on each leg.	Jump a few inches off the ground, landing on either one or both feet.
Much less -2 than expected			
Somewhat less -1 than expected	Maintain squat position for 5 seconds.	Maintain single-leg stance for at least 5 seconds on each leg.	Jump a few inches off the ground, landing on both feet simultaneously.
Expected level 0 of outcome	Maintain squat position for 10 seconds.	Maintain single-leg stance for at least 10 seconds on each leg.	Jump over a stick 5 inches above the ground, landing on both feet simultaneously.
Somewhat more +1 than expected	Maintain squat position for 15 seconds.	Maintain single-leg stance for at least 15 seconds on each leg.	Jump over a stick 10 inches above the ground, landing on both feet simultaneously.
Much more +2 than expected	Maintain squat position for 20 seconds.	Maintain single-leg stance for at least 20 seconds on each leg.	Jump over a stick 2 inches above the ground, landing with both feet simultaneously, 5 times in a row.
Comments:			Encourage Max to practice skipping at home.

With the above goals in mind, you develop a treatment plan that includes strengthening exercises (e.g. squats, treadmill walking), balance exercises (e.g. walking on a line, maintaining a single- or double-leg stance) & coordination exercises (jumping jacks, jumping).

After a month, you evaluate progress and note improvement in overall strength, balance, and jumping height, with scores of 2+ for all 3 therapy goals - great results! But what about Max's ability to skip rope? He has been practicing and may be able to skip two or three times in a row, but what about his participation in recess? And playing with peers? Have these improved as well?

Scenario 2. Activity/Participation Focus

Although you observe poor bilateral motor coordination, poor balance, and decreased strength, you decide instead to focus on analyzing Max's task performance as he does this skipping activity. You want to determine why Max is having difficulty skipping and to see what might be hindering his successful performance. Although Max's lower extremity strength is limited, you decide to break down the skipping activity and encourage Max to practice different steps that will help him learn to skip and increase his muscle strength at the same time. It is likely that Max may have difficulties planning, remembering, and coordinating the movements that are required to skip. Therefore, your intervention will focus on these aspects as well. You will probe with Max his understanding of the movements required, and/or where his body needs to be in relation to the skipping rope. Your GAS goals would now be quite different.

Skipping GAS Goals – Participation Focus			
	Goal 1:	Goal 2:	Goal 3:
	Skip with others turning the ropes	Self-skip	Participate in skipping practices and the school-wide skipping fundraiser
Time Line	One visit during the week + recommendations to practice	One follow-up visit 2 weeks later + recommendations to practice	One visit at school + Recommendations
ICF-CY Component	Activity	Activity	Participation
Level of Attainment	Not able to skip	Not able to self-skip	Max doesn't participate in any skipping activity
Much less -2 than expected			
Somewhat less -1 than expected	Skips once	Self-skips once	Max participates in skipping practice, but doesn't skip with peers during free play on the playground
Expected level 0 of outcome	Skips 5 times in a row	Self-skips 5 times in a row	Max participates in all skipping practice, including in settings with peers present
Somewhat more	Skips 10 times in a row	Self-skips 10 times in a row	Max skips with peers during free

+1 than expected			play and a school-wide skipping event
Much more +2 than expected	Skips 20 times in a row	Self-skips 20 times	Max has decided to join a skipping group in the community for recreation
Comments:	Start with small jumps 'on the spot' and move to jumping over a moving stick, to practicing the full sequence	Work on arms doing small movement first, then practice self-skipping	Raise awareness and provide information to the school about DCD, and about ways to transfer the strategies Max has learned to other motor activities he finds challenging.

During the first visit, you incorporate aspects of Task-Oriented, Motor Learning, and Cognitive approaches (see Evidence-Based Practice section from the DCD PT module at www.canchild.ca). At the end of your first visit, Max is now able to skip 3 times in a row when someone turns the rope for him. You encourage Max and his family to practice what he has learned (small jumps, jumping "in place") with his mom and his older sister turning the rope for him. When you return to see how Max has progressed, Max is able to skip more than 5-10 times in a row! During this visit, you start working on self-skipping, guiding Max to see how small arm movements can be helpful. By the end of your second visit, Max has made great improvements but still has a hard time self-skipping. You leave him with strategies and recommendations to keep practicing. You also talk with Max's mother and agree to go to the school to meet with teachers to explore opportunities to increase Max's participation in school activities.

When you see Max the following month, he is now able to self-skip. At school, Max practices skipping during recess and he is making new friends who also enjoy skipping. He is also preparing to participate in the school-wide skipping fund-raiser.

How are these two case scenarios the same and how do they differ?

- Both approaches have the Max's long-term goal (skipping) in mind. However, the activity/participation case scenario works more directly on Max's goal.
- Case scenario 1 focuses on impairment and moves toward function, or activity. Case scenario 2 starts directly at the activity level and moves toward participation.
- The impairment case scenario uses direct interventions with Max with minimal involvement of Max's family and others. The activity/participation case scenario involves Max and his family in all stages of motor learning including planning of the interventions and the activities. Direct intervention is provided, but also collaborative consultation, transferring knowledge about task-oriented, motor learning, and cognitive approaches to his family so they can support him.
- Case scenario 1 documents successes at the body and function level. Case scenario 2 documents successes at the activity/participation level and is more likely to capture meaningful outcomes for Max and his family.