Using ICF Core Set of Cerebral Palsy in Clinical Practice

Environmental Intervention based on the International Classification of Functioning Disability and Health.

Patricio Barria A. PT. MSc.
Rehabilitation Center “Club de Leones Cruz del Sur”, Punta Arenas, Chile.

OBJECTIVES
The International Classification of Functioning, Disability and Health (ICF) provides a useful model to assess the goals and interventions in the Clinical Practice. ICF-based tools like the Rehab-Cycle (1) and the ICF-Core Set are useful to organize the rehabilitation process in complex health conditions as Cerebral Palsy (CP).

The aim of this study was:
- To demonstrate methods to use ICF core set of CP.
- To demonstrate how to incorporate the ICF framework in the interventions of CP, with particular focus on Environmental Factors, mainly Assistive Technologies (AT) to achieve optimal functioning.

METHODS

a. Case Study
A single case study was developed at the Rehabilitation Center “Club de Leones Cruz del Sur”, to implement the ICF in daily practice of pediatrie rehabilitation and special school professionals. The patient was a 10 year old girl with a Bilateral Spastic CP; Moderate Intellectual Impairment, GMFCS IV, MACS III, FTCFS IV, and EDACS III.

b. Procedures
The rehabilitation team (physician, nurse, physical and occupational therapist, speech therapist, teacher, psychologist and social worker) used the ICF-based tools to assess the child and to organize the rehabilitation process. The ICF tools were the Assessment Sheet, Categorical Profile, Assignment Table, Evaluation Display and the phases of Rehab-cycle (Figure 1). As a framework, the team used the ICF-Core-Set for children aged between six and fourteen years with CP (2) with focus on the Environmental Categories. After the assessment, the rehabilitation team in conjunction with the family established the intervention goals. The global goal was to increase day to day functioning and ultimately, improve the child and her family quality of life. The specific goals were to improve communication, mobility, transportation and the ability of daily life. To achieve these goals the team developed a comprehensive environmental intervention with AT, educational activities for family among others, according to the ICF (Table 1).

At the end of the intervention (10 months) the team measured the changes with ICF Qualifiers.

DISCUSSION
The child improved six ICF Environmental Categories after the intervention. Changes in personal activities for daily living, mobility and transportation indicate that specific mobility devices can offer alternative ways to develop the daily routine for children with CP and their caregivers, decreasing the physical effort. Improvements in education, communication, attitudes, recreation, sport and family support might be attributed to the caregiver training and counseling developed by the team, which helped caregivers to develop new skills.

CONCLUSIONS
This case study reviewed the importance of including ICF Framework and environmental factors in a pediatric rehabilitation setting. The introduction of the ICF-Based Tools in association with the “ICF Core Set” for children with CP allowed us to guide the assessment and intervention. The ICF Core Sets are useful tools for clinical practice, research and teaching. It contributes to facilitate comprehensive description of functioning, helping to organize activities and resources of rehabilitation centers.

RESULTS
At the end of the study, the team completed the ICF Evaluation Display to compare the initial assessment and the outcomes (Table 2). The results showed improvements in six ICF Environmental categories. The categories that attained the expected goal were AT for personal use in daily living, personal indoor-outdoor mobility, transportation, communication, education, culture, recreation, sport and immediate family. Figure 2 shows different interventions during the Rehab-Cycle (Figure 2)

Table 2: Evaluation Display of Environmental Interventions and ICF CoreSet for CP

<table>
<thead>
<tr>
<th>Category</th>
<th>Goal Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility</td>
<td>3+</td>
</tr>
<tr>
<td>Communication</td>
<td>2+</td>
</tr>
<tr>
<td>Daily Living</td>
<td>2+</td>
</tr>
</tbody>
</table>

Figure 2: Assistive Technologies Interventions in the Rehab-Cycle.