



**Increasing the use of group interventions in a pediatric rehabilitation program: Perceptions of administrators, therapists and parents**

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3 Increasing the use of group interventions in a pediatric rehabilitation program: Perceptions of  
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5 administrators, therapists and parents  
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10 **Abstract:**

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12 *Objectives.* To explore perceptions related to increased utilization of group interventions as part  
13 of a service reorganization within a pediatric rehabilitation program. *Methods.* Individual  
14 interviews with program administrators (n=13) and focus groups with therapists (n=19) and  
15 parents of children with disabilities (n=5) were conducted. Data were analysed using a coding  
16 grid inspired by the organized action systems theory. *Results.* Administrators and therapists  
17 identified several issues including the need to improve the referral process for groups and the  
18 coordination across services. Groups considerably modified practice and required substantial  
19 efforts from therapists. Administrators felt groups contributed to increased service accessibility.  
20  
21 Although therapists had some doubts about service quality in groups, especially in regards to the  
22 reduced attention to individual needs, they reported positive benefits on children's social  
23 participation. Generally, parents were satisfied with group interventions. *Conclusion.* Groups  
24 appear to be a promising method of service delivery, but organizational-related issues should be  
25 considered.  
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48 **Key words**

49 Rehabilitation, children, disabilities, group intervention, service delivery  
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## BACKGROUND

Group interventions are increasingly used in clinical settings and are sometimes presented as a strategy to decrease waiting times (Bell, Corfield, Davies, & Richardson, 2010; Miller et al., 2008). Group interventions are defined as sessions where two or more clients interact to achieve common goals (Graham & Avent, 2004; Schwartzberg, Howe, & Barnes, 2008). Generally, groups are reported to enhance psychological support, to have motivational effects, to ease the pressure related to the intensity of one-to-one interactions, to provide opportunities for practice and to alleviate feelings of isolation and hopelessness experienced by persons with disabilities (Coulter, Weber, & Scarvell, 2009; Graham & Avent, 2004; Hong & Howard, 2002). For various pediatric populations, groups have been reported to be as effective as individual interventions with respect to families' satisfaction and improvements of children's skills (Davies & Gavin, 1993; Hung & Pang, 2010; Kayihan, 2001). Groups are also presumed to be more cost-effective than individual interventions (Coulter, et al., 2009; Hung & Pang, 2010; LaForme Fiss & Effgen, 2007; LaForme Fiss, et al., 2009; Trahey, 1990), although few cost-effective studies exist.

The decision of whether to treat a child individually or in a group is complex. Depending on the rehabilitation goals, individual interventions, or small or large group interventions can be offered to families (Palisano & Murr, 2009). Although about 50% of occupational and physical therapists (LaForme Fiss & Effgen, 2007, Lawlor & Henderson, 1989) reported using group interventions at least occasionally, mostly in combination with one-on-one interventions, many question the effectiveness of groups. Indeed, 48% of the physical therapists felt groups were 'not' or only 'somewhat' effective, and 39% believed they were not as effective as individual interventions (LaForme Fiss & Effgen, 2007). Moreover, to integrate groups efficiently into service delivery models, programs must address group-related issues associated with patient transportation,

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3 scheduling, offering home-based services, integrating dissimilar children, down time when taking  
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5 turns among children, and lack of space and staffing (Coulter, et al., 2009; Graham & Avent,  
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7 2004; LaForme Fiss & Effgen, 2007; Schwartzberg, et al., 2008).

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10 More research on how to maximize the effectiveness of groups is needed (LaForme Fiss &  
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12 Effgen, 2007). Literature regarding how clinical settings deal with the various group-related  
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14 issues is lacking. For instance, Odman, Richt & Oberg reported families' perceptions about the  
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16 outcomes of an intensive group for children with cerebral palsy in Sweden (2009), but  
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18 organizational issues were not explored. Little is known about the perceptions of pediatric  
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20 rehabilitation administrators, therapists and families of children with other diagnoses. These  
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22 perceptions could be useful in incorporating groups effectively into service delivery models.

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27 This study was part of a larger research project documenting a service reorganization process  
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29 aimed at increasing accessibility in a pediatric rehabilitation program. Therapists were involved  
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31 in the development of the new service delivery model (Camden, Swaine, Tétreault, & Bergeron,  
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33 2009) and increased utilization of groups was one of the proposed changes. Despite some  
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35 challenges (Camden, Swaine, Tétreault, & Carrière, in press), the service reorganization seems to  
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37 have increased accessibility while maintaining service quality (Camden, Swaine, Tétreault, &  
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39 Brodeur, 2010). The larger study did not focus specifically on groups, but comments about  
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41 groups continuously came up during interviews and discussions. This paper thus aims to present  
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43 the perceptions of different actors within the program about group interventions.

## 44 45 46 47 48 **METHODOLOGY**

### 49 50 51 **CONTEXT**

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54 This qualitative study was part of a larger research endeavor grounded in participatory action  
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56 research principles (Tandon, 2002) and approved by the ethics board of the Center of  
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3 Interdisciplinary Rehabilitation Research of Montreal. The clinical program under study is part of  
4 a public regional rehabilitation centre with the mandate to foster social integration for persons  
5 with physical disabilities living in the Eastern Townships, a territory of about 300 000 habitants  
6 in southern Québec, Canada. About 50 therapists from six disciplines provide yearly outpatient  
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8 services to 1000 children aged 0-21 years. Children are treated within five sub programs, four are  
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10 diagnoses-based (developmental delay, dyspraxia, speech and language and motor - e.g. cerebral  
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12 palsy) and one is age-based (high school-aged with mixed diagnoses). The program's  
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14 interventions are based on ecosystem, partnership and human caring philosophies. Before 2006,  
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16 interdisciplinary rehabilitation teams mainly provided individual interventions, either at the main  
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18 rehabilitation centre, at one of seven regional sites or in the child's community (e.g. school,  
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20 home). In 2007, as part of the 3-year process of service reorganization, the program markedly  
21  
22 increased the number of groups provided from 20 in 2007 to 47 in 2009. Groups were defined as  
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24 activities targeting 2 or more children/families, but generally included about 7 or 8 children. Most  
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26 of the time, groups included children of similar age; for instance, some were designed for  
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28 preschoolers (4 years old) and others for teenagers. Parents were rarely included in the therapy  
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30 rooms, but were often invited to stay in an observation room, where a social worker could  
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32 sometimes provide information and answer questions. Most groups were activity-based, took  
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34 place within the centre, were interdisciplinary and included children with different diagnoses.  
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36 Duration and frequency of groups varied, but they were generally offered once a week for 6-12  
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38 week periods. The goals varied but principally aimed at improving children's function, their skills  
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40 and the ability to accomplish activities or life habits (e.g. writing skills). Other components of the  
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42 service reorganization included new admission procedures providing rapid support to families  
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44 and community interventions targeting the general community rather than specific families  
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46 (Camden, et al., 2010).  
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## PARTICIPANTS AND PROCEDURES

Three types of key informants participated: program administrators, therapists and families. Administrators included the four directors of the centre, the program heads, the research coordinator and the organizational development counselor. Therapists were those working in the program at the time of the study and included three subgroups: 1) those selected by their peers to represent their discipline on the planning committee overseeing the service reorganization, 2) clinical coordinators and 3) those who had participated in 2007, 2008 and 2009 in the program evaluation (Camden, et al., 2010). Families were among those receiving services who had participated, in 2007 and 2009, in previous research evaluating service quality.

Administrators were invited to participate in two individual telephone interviews in 2008 and 2009 to obtain data about the perceptions of several people holding varying positions. Interviews (30 m<sub>i</sub> to 3 hours) were conducted by a research agent with extensive knowledge in management. Therapists were invited to attend focus groups (conducted for each of the subgroups described above) as most of them had similar roles within the program. Families were also invited to attend focus groups. All focus groups lasted about 2 hours and were led by the third author.

Interview guides of similar content were used for the interviews and focus groups. Questions were open-ended covering general topics about the reorganization process (e.g. activities, actors' roles) and the perceived changes in service delivery and in the program's outcomes (e.g. impact of services). Further probing enabled participants to share their thoughts. Focus groups and interviews were taped and transcribed verbatim for analysis.

## DATA ANALYSIS

Data for this paper were analyzed with Nvivo 8 software using a similar coding system used throughout our larger research project. Two researchers coded the transcripts and validated their

coding by revising each other's codes. Coding disagreements were discussed until a consensus was reached. The majority of the coding categories were chosen based upon the organized action systems theory known to help in conceptualizing programs and in analyzing interactions among the five major components of a program as described by Contandriopoulos, Champagne, Denis & Avargues (2000). This theory allows one to examine how «actors» interact, within «structures» (e.g. resources and organizational structure) and «environmental contexts» to produce «services» and to achieve «goals». «Actors» is a central concept in the organized action systems theory since people's actions, such as those of the therapists, administrators and families, are considered key to understanding a program. Verbatim concerning groups were coded primarily within the «services» category but were also frequently associated with the other four coding categories. This multiple coding underscored the associations between groups (i.e. «services») and the other program components. The results are thus presented in relation to themes linked to the other 4 coding categories: 1) Environmental contexts; 2) Actors' practices; 3) Structural issues and 4) Outcomes. Results were shared with the program's actors to validate our interpretations of the findings. Quotations, translated from French, were selected to best illustrate the perceptions about group interventions as opposed to the frequency of the comments.

## **RESULTS**

Thirteen administrators participated in a telephone interview while all of the clinical coordinators (n=5) and therapist members of the planning committee (n=13) during the reorganization process attended focus groups. Only three of the 12 therapists from the program were available for the group discussion. All but one therapist was female with several years of experience in pediatric rehabilitation. Five parents from a potential nine families participated in the focus group. Table 1

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3 presents the participants' characteristics while Table 2 presents a summary of the group-related  
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6 perceptions corresponding to the four themes identified above.

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8 **[Insert Tables 1 & 2 here]**

### 9 10 **Environmental contexts (socio-historical contexts)**

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13 Administrators were convinced that waiting times needed to be addressed and that alternative  
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15 service delivery methods, such as groups, were required to increase equity and provide services  
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17 to all children. A director of the centre reported: *'Because of the lack of funds necessary to reach*  
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19 *all our clients and to decrease waiting lists, we decided to change our way of doing things, to*  
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21 *work less on individual interventions'*. Administrators also believed the new method of service  
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23 delivery would provide services of better quality.

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28 Therapists acknowledged that changes were required to increase accessibility. For several years,  
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30 the program had been asking fundamental questions about the legitimacy of the traditional  
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32 intervention model, the frequency of individual interventions and how to determine the most  
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34 appropriate services needed. However, as pointed out by a therapist, groups were not perceived as  
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36 a better service delivery method, but rather as a compromise to enable service provision for all  
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38 children needing care: *'We needed to stop using the traditional approach that was not working*  
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40 *anymore, only because of the number of children (...) It is easy to say we should have kept on*  
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42 *giving individual therapies, but we were no longer able to. The project was a way of trying to*  
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44 *maintain the quality despite the lack of resources'*. Still, the program's staff was willing to  
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46 experiment with groups, and the centre directors' support of pilot testing before 2007 contributed  
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48 to facilitating everyone's devotion to the reorganization project.

### 49 50 51 **Actors' practices**



Administrators mentioned groups significantly modified therapists' practices, representing a huge change in their day-to-day activities. Administrators thought the magnitude of the change varied according to therapists' past experiences with groups, the subprogram in which they worked and their personal characteristics. They felt the change from individual to group interventions might be more difficult for those with more experience and used to working one-on-one. Administrators also reported therapists were generally not adequately trained to use groups. Specific training, including how to lead a group activity, was planned, but was not provided because it was not seen as a priority once the service reorganization began. Likewise, administrators reported clinical coordinators had new roles to perform and they needed to be better supported. An administrator said: *'[Clinical coordinators] are not comfortable guiding therapists in their interventions (...). It is difficult to tell therapists they can't intervene on a one-on-one basis when we have all decided to provide groups [in a particular situation]'.*

Therapists' comments generally supported administrators' perceptions in regard to the modifications groups imposed on their practice. A therapist said: *'Because of the group treatments, daily practice is quite modified. I almost don't provide individual interventions as we used to do, leaving the centre with our bag of equipment to go to the child's home'.* Therapists also believed groups changed the way evaluations were done. A speech and language therapist mentioned: *'I won't do an evaluation the same way. Why would I if I don't see the child individually the next day? (...). I need to look for communicative needs I can address [in groups]. This requires another type of evaluation'.* Moreover, some therapists reported they almost did not evaluate individual children anymore, focusing more on providing treatment during group sessions. This caused problems for community partners who requested traditional evaluations (e.g. schools needing a diagnosis to obtain additional resources for children with special needs). Therapists also noted it was more difficult to include parents during groups. When the social

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3 worker was not available to meet with parents during group sessions and the children had not yet  
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5 been seen by a therapist, parents needed more information and counseling, resulting in extra  
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7 pressure on the therapists providing the groups.  
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10 Therapists felt challenged to get comfortable with groups and choosing the right objectives for  
11 this type of activity. Therapists felt they needed time to accept the simple yet important outcomes  
12 resulting from groups. They expressed being aware that parents generally liked groups, but still  
13 had doubts about service quality. One said: *‘Actually, we are saying yes, they are happy, but it’s*  
14 *because they do not know what they are missing’*. One of the therapists involved in groups for  
15 many years reported the following: *‘You get used doing groups and get a better understanding of*  
16 *what can be achieved with groups... Instead of saying to parents what [you are] unable to do in*  
17 *groups, [you become] able to tell them what [you can] do. We work more on self esteem, social*  
18 *abilities, being functional... We achieve different things’*. Still, most of the program’s staff felt  
19 somewhat unprepared, uncomfortable and stressed by the increase use of groups. Clinical  
20 coordinators also felt the program had not made sure therapists had the necessary skills to change  
21 their practice, creating feelings of discomfort and resistance to change. Clinical coordinators also  
22 commented on their difficulties as they lacked guidelines and computer-based tools to coordinate  
23 the different types of services children were to receive throughout their lifespan.  
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#### 44 **Structural issues**

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46 Administrators discussed very little about the structural issues, with only one mentioning  
47 additional resources, such as a computer-based tool to help select the most appropriate services,  
48 were needed to support clinical coordinators in their work. Therapists discussed the structural  
49 issues to a greater extent, including those pertaining to the availability of resources. For example,  
50 larger intervention rooms with observational windows were identified as being needed. Staff  
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3 turnover and the need to develop expertise for specific groups became issues. Secretarial support  
4 was needed to send invitations to families to participate in the groups. Forms were developed to  
5 record notes and group statistics. The most important issues discussed pertained however to the  
6 referral process for groups, the follow up and the coordination of services. Therapists felt  
7 responsible for referring children into the most appropriate groups for them. One of them said:  
8 *'You need to remind yourself to refer the child, if not, he won't participate in this group. [You]*  
9 *have no idea who would benefit [from the different groups]. We always worry about forgetting*  
10 *someone'*. Therapists wanted to make sure they chose the best service delivery option and did not  
11 believe parents could identify the groups best fitting their child's needs. One therapist reported:  
12 *'Before registering a child in a group, we talk to the teacher, the parent. That is what takes time.*  
13 *We make sure we respond to a real need. We do not want the child to waste his time, nor waste*  
14 *anyone's time. (...) We provide groups, but we try to personalize this approach'*. Although the  
15 program had identified guidelines for choosing one method of service delivery over another, they  
16 were not completely implemented by 2009. Consequently, therapists expressed dissatisfactions  
17 regarding trying to fit children in groups. An occupational therapist said: *'We are told [by clinical*  
18 *coordinators] to put a particular child in a group, and [if we think the child would benefit more*  
19 *from individual interventions], we have to prove that the group does not respond to his needs...*  
20 *this is a danger we face because groups are prioritized compared to individual interventions'*.  
21 Therapists would have liked receiving more support from clinical coordinators in how to plan and  
22 follow up on the different groups (e.g. relaying information to other therapists providing one-on-  
23 one interventions, who may work in a different subprogram). However, the therapists  
24 acknowledged the current service organization posed many challenges for everyone. Including  
25 children from different subprograms in a group required therapists seeing children from other  
26 therapists' caseloads, while therapists reported struggling to provide services to all of the children  
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3 in their own caseloads. Clinical coordinators also reported being challenged and needing  
4 additional help to identify children with similar needs. An occupational therapist said the  
5 program might need a clinical coordinator whose only role would be to organize groups. A  
6 clinical coordinator said: *'Human resources have always been by allocated by teams [e.g. by  
7 subprograms and regions] as it is the simplest way. If we want to do it in a different way, it will  
8 be much more difficult to [create teams and allocate resources]'*. Despite these challenges, many  
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10 beneficial group-related outcomes were identified.  
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### 19 20 Outcomes

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22 According to administrators, the most important outcome of the service reorganization was  
23 increased service accessibility. Reduced waiting times were mainly due to the new admission  
24 procedures, but groups contributed by increasing the number of children served. Administrators  
25 were not worried about the effect on service quality. One director said: *'[The] idea is to respond  
26 well to children's needs, not to respond to all of their needs without considering other children's  
27 needs'*. With regards to social participation, most of the administrators perceived community  
28 interventions constituted the method of service delivery having the greatest benefit, but groups  
29 might contribute to these outcomes, especially when community partners were involved.  
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41 Therapists also believed groups favor social participation, principally because of the social  
42 interactions between participants and the kind of objectives achievable with groups. Examples  
43 were also given of children seeing each other after groups. A special educator said: *'We are  
44 talking about social participation, having friends is terrific, having people with whom you can  
45 share things. They are less isolated'*. Still, not all groups were perceived to impact social  
46 participation. A therapeutic pool group to foster dressing skills was one of the groups  
47 discontinued because the team felt it had little impact on social participation; skills learned during  
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3 this activity were not felt to be transferable to real life. Therapists emphasized time was still  
4 necessary for follow up in the community to fully optimize a child's social participation. Offering  
5 groups to children was not perceived to be a bad thing, rather some felt they might not respond to  
6 the children's principal needs. A therapist mentioned: *'Parents did not want groups, they wanted  
7 individual interventions. But after the groups, they were happy. But as a therapist, I can say I  
8 have responded to some of the children's needs, but not to all of them. We [as therapists] tend to  
9 see more discipline-specific needs...'*

10  
11 Families appeared very satisfied with the groups saying their children liked it; children were able  
12 to meet persons like themselves and make new friends. Parents also talked about the impact on  
13 their child. One parent said: *'It increased her well-being, just to be able to talk about how she is  
14 different (...). My child has communication difficulties. It gave her words instead of aggressive  
15 behaviors'*. Groups also appeared to be an effective method to develop skills by observing others,  
16 as the focus is not constantly on the child, providing him or her with some «down time». To  
17 foster children's learning in different life settings, follow-up with families and partners was  
18 deemed important. For example, a mother reported a group using pictograms helped her child.  
19 However, this technique was not used at home, so *'when [her child] was home, he was lost'*. The  
20 father added *'at school, it worked well, as the teacher was familiar with this technique'*.

21  
22 Families reported greater well being as their children acquired new skills. A mother reported her  
23 daughter used a symbol learned in a group on self-esteem (a styrofoam cup with a hole) to  
24 explain to her brothers how she felt. This mother said this particular exercise helped increased  
25 family cohesion. She also commented on the need for groups for siblings, to *'reduce some  
26 pressure coming from the feeling of being the only one in the world with a sister who is different'*.  
27 Parents also appreciated the opportunity to socialize with other families. One mother said a form  
28 of mentoring is created among parents, providing answers to parents' questions: *'If your child is*

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3 *older and the other parent has just received the diagnosis, one can explain what is coming (...). It*  
4 *is helpful'*. Moreover, when asked to compare services received in 2009 and 2007, parents said  
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6 therapists were as helpful as always, but now seemed to take more time to discuss with families.  
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## 10 DISCUSSION

11  
12 To our knowledge, this is the first study to explore families', therapists' and administrators'  
13 perceptions relating to an increased use of groups within a rehabilitation program. Environmental  
14 contexts, characterized by budget constraints, led to the decision to increase the use of groups in  
15 the program. This decision was also related to the assumptions that this method of service  
16 delivery is more cost-effective than individual interventions and thus can help increase service  
17 accessibility (Bell, et al., 2010; Miller, et al., 2008). Regarding structural issues, results showed  
18 that many challenges must be addressed to effectively integrate groups into a service delivery  
19 model. Some of those identified (e.g. group referrals and service coordination) were not  
20 previously discussed in the literature and some of the issues described in the literature (e.g.  
21 scheduling constraints) were not specifically discussed by our respondents, although they  
22 probably also need consideration.  
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39 Groups challenged actors' practices, creating some professional discomfort. This finding echoes  
40 others reporting new methods of service delivery require professionals to acquire new  
41 competencies (King et al., 2007; Palisano & Murr, 2009). Relationships between therapists and  
42 families may be more difficult to establish in groups due to the division of time between many  
43 children and the difficulty of including parents in sessions. Groups may however create  
44 opportunities for new forms of therapeutic relationships within rehabilitation programs, such as  
45 the peer support provided among families. Given that a group's objectives may be more holistic  
46 and less discipline-specific, our results suggest that children's well-being and social participation  
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3 may be interesting outcomes to use when comparing different rehabilitation approaches.

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5 Therapists doubts about service quality might be explained by the professional ‘dilemma’ coined  
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8 by King et al. (2006) and referring to a focus on discipline\_ and skill-specific developmental  
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10 goals rather than those related to children’s well-being and social participation.

11  
12 Finally, reported group outcomes are similar to those presented in the literature: groups increase  
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14 feelings of support and well-being, decrease families’ feelings of isolation and provide  
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16 opportunities for children to develop and practice various skills (Eliasson, et al., 2009; Graham &  
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18 Avent, 2004; Kayihan, 2001; Hendriks, De Moor, Oud & Savelberg, 2000; LaForme Fiss &  
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20 Effgen, 2007; LaForme Fiss et al., 2009; Odman, et al., 2009). Group benefits on self-esteem  
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22 were also reported. This is an important outcome since poor self-esteem may limit a child’s  
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24 participation more than poor functional skills (Majnemer, 2009). Improvements in self-esteem  
25  
26 also help improve family cohesion. The latter could be further improved through the use of  
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28 groups for siblings, by contributing to siblings’ adjustment and fostering positive behavior  
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30 (Lobato & Kao, 2002). Interestingly, the «down time» to take turns during group activities,  
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32 previously reported as a disadvantage by therapists (Laforme, Fiss and Effgen, 2007), was seen as  
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34 a benefit, providing time for children to relax and observe others while fostering learning.

#### 35 36 37 38 39 40 41 ADMINISTRATIVE AND CLINICAL IMPLICATIONS

42  
43 An increased use of groups can have many benefits. However, implementing group interventions  
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45 into everyday rehabilitation practice requires some organizational considerations closely related  
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47 to the structural issues presented in the results. Figures 1 and 2 summarize some of the group  
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49 benefits and issues.  
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54 **[Insert Figures 1 and 2 here]**  
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3 Service coordination is one of the most important group-related challenges programs must  
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5 address when increasing their use of groups. Processes and structures should be in place to plan,  
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7 administrate and offer client-specific services (King & Meyer, 2006). Eligibility and discharge  
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9 criteria for group interventions must be identified. Specific individuals or teams could be given  
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11 the responsibility of determining the most appropriate method(s) of service delivery for a  
12  
13 particular child. Innovative forms of service organization including the development of  
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15 interconnected (i.e. across subprograms/regions) specialized teams should be created and tested.  
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18 Alternative ways of integrating different methods of service delivery and collaborating with  
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20 families and community partners should also be explored. Suggestions include: combining home  
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22 exercises and individual recommendations with group interventions, developing community-  
23  
24 based groups in collaboration with partners, evaluating and setting goals on a one-on-one basis  
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26 prior to including children into groups, and linking consultative activities with group  
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28 interventions (Bayona, McDougall, Tucker, Nichols, & Mandich, 2006; Candler, 2003; Cohn,  
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30 2007; Eliasson, et al., 2009; Hung & Pang, 2010; Storvold & Jahnsen, 2010). As mentioned in  
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32 our results, using interdisciplinary groups, where one therapist treats children while another  
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34 discusses with parents, may also be an option. These collaborative endeavors require time and  
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36 effort, perhaps leaving less time to provide interventions. However, since a child's function may  
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38 be more influenced by the number of opportunities to practice than by the frequency of  
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40 interventions (Palisano & Murr; 2009), collaborative efforts are necessary to help families and  
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42 community partners provide these opportunities to children.  
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50 Finally, groups may require therapists to gain new knowledge, work collaboratively and assume  
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52 new roles; from clinical experts they also become consultants, information providers and service  
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54 coordinators (Chiarello & Kolobe, 2005; Harrison, et al., 2007; King, 2009; King & Meyer,  
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56 2006). Academic programs, professional associations and rehabilitation programs need to support  
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3 therapists in the acquisition of these new roles. Opportunities for learning could be experiential  
4 (e.g. by providing opportunities for mentorship and feedback), instructional (e.g. by providing  
5 tools and framework) and observational (e.g. by supporting team co-delivery of services) (King,  
6 2009). Strategies to foster therapists' adaptation to new group-related roles are needed and  
7 everyone's responsibilities must be revised (e.g. clinical coordinators, secretary). Program  
8 managers can help everyone feel comfortable by managing by talents and ability, and by  
9 matching therapists' interests with different methods of service delivery.

### 10 11 LIMITS AND FUTURE RESEARCH

12 The generalizability of our study is limited since only one program, three of the 12 therapists who  
13 were not members of the planning committee, and four families (three from the same  
14 subprogram) participated in this research. Moreover, there is always a risk of social desirability  
15 bias, especially for families but also for program actors who might not want to criticize too  
16 severely a service reorganization in which they were involved. Future research should determine  
17 which methods of service delivery work best for what children, and under what circumstances.  
18 Financial constraints limit options of adding services, and choices must be made about offering  
19 one method of service delivery over another. Research is needed to compare a broad range of  
20 outcomes with the costs related to different service delivery methods.

### 21 22 CONCLUSION

23 Group interventions seem to be a promising alternative way of providing services to increase  
24 accessibility. According to several actors, groups also seem to adequately respond to the majority  
25 of children's needs. However, they must be carefully planned and coordinated to address the  
26 challenges associated with their effective implementation.

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## Declaration of Interest

The authors report no declarations of interest.

## References

- Bayona, C. L., McDougall, J., Tucker, M. A., Nichols, M., & Mandich, A. (2006). School-based occupational therapy for children with fine motor difficulties. *Physical & Occupational Therapy in Pediatrics*, 26(3), 89-110.
- Bell, A., Corfield, M., Davies, J., & Richardson, N. (2010). Collaborative transdisciplinary intervention in early years - putting theory into practice. *Child: Care, Health and Development*, 36(1), 142-148.
- [Camden, C., Swaine, B., Tétreault, S. & Bergeron, S. \(2009\). SWOT analysis of a paediatric rehabilitation programme: A participatory evaluation fostering quality improvement. \*Disability and Rehabilitation\*, 31\(16\): 1373-1381.](#)
- Camden, C., Swaine, B., Tétreault, S., & Brodeur, M.-M. (2010). Reorganizing pediatric rehabilitation services to improve accessibility: Do we sacrifice quality? *BMC Health Services Research*, 10, 227.

1  
2  
3 Camden, C., Swaine, B., Tétreault, S. & Carrière, M. (Under press). Going beyond the  
4 identification of change facilitators to effectively implement a new model of services:  
5 Lessons learned from a case example in pediatric rehabilitation. *Developmental*  
6 *Neurorehabilitation.*  
7  
8  
9  
10  
11

12 Candler, C. (2003). Sensory integration and therapeutic riding at summer camp - Occupational  
13 performance outcomes. *Physical & Occupational Therapy in Pediatrics*, 23(3), 51 - 64.  
14

15 Chiarello, L. A., & Kolobe, T., HA. (2005). Early Intervention Services. In Campbell, S. K.,  
16 Vander Linden, D. W., & Palisano, R. J. *Physical Therapy for Children, third edition.* St-  
17 Louis, MO: Saunders Elsevier.  
18  
19

20 Cohn, S. L. (2007). School-Based Practice - Physical therapists collaborating with physical  
21 education teachers. Give it a try! *Physical & Occupational Therapy in Pediatrics*, 27(3), 1  
22 - 4.  
23  
24

25 Contandriopoulos, A.-P., Champagne, F., Denis, J.-L., & Avargues, M.-C. (2000). L'évaluation  
26 dans le domaine de la santé : Concepts et méthodes. *Revue d'Epidémiologie et de Santé*  
27 *Publique*, 48, 517-539.  
28  
29

30 Coulter, C. L., Weber, J. M., & Scarvell, J. M. (2009). Group physiotherapy provides similar  
31 outcomes for participants after joint replacement surgery as 1-to-1 physiotherapy: A  
32 sequential cohort study. *Archives of Physical Medicine and Rehabilitation*, 90(10), 1727-  
33 1733.  
34  
35

36 Crompton, J., Imms, C., McCoy, A. T., Randall, M., Eldridge, B., Scoullar, B., et al. (2007).  
37 Group-based task-related training for children with cerebral palsy - A pilot study.  
38 *Physical & Occupational Therapy in Pediatrics*, 27(4), 43 - 65.  
39  
40  
41  
42  
43  
44  
45  
46  
47

- 1  
2  
3 Davies, P. L., & Gavin, W. J. (1993). Comparison of individual and group/consultation treatment  
4 methods for preschool children with developmental delays. *American Journal of*  
5  
6 *Occupational Therapy, 48*, 155-161.  
7  
8  
9
- 10 Eliasson, A.-C., Shaw, K., Pontén, E., Boyd, R., & Krumlind-Sundholm, L. (2009). Feasibility  
11 of a day-camp model of modified constraint-induced movement therapy with and without  
12  
13 botulinum toxin A injection for children with hemiplegia. *Physical & Occupational*  
14  
15 *Therapy in Pediatrics, 29*(3), 311-333.  
16  
17  
18
- 19 Graham, M. S., & Avent, J. (2004). A discipline-wide approach to group treatment. *Topics in*  
20  
21 *Language Disorders, 24*(2), 105-117.  
22  
23
- 24 Grilli, L., Feldman, D. E., Swaine, B., Gosselin, J., Champagne, F., Pineault, R. (2007). Wait  
25 times for paediatric rehabilitation. *Healthcare Policy, 2*(3), e171-187.  
26  
27  
28
- 29 Harrison, C., Romer, T., Simon, M. C., & Schulze, C. (2007). Factors influencing mothers'  
30 learning from paediatric therapists - A qualitative study. *Physical & Occupational*  
31  
32 *Therapy in Pediatrics, 27*(2), 77 - 96.  
33  
34  
35
- 36 Hendriks, A.H., De Moor, J.M., Oud, J.H., & Savelberg, M.M. (2000). Perceived changes in  
37 well-being of parents with a child in a therapeutic toddler class. *Research in*  
38 *Developmental Disability, 21*, 455-468.  
39  
40  
41  
42
- 43 Hong, C. S., & Howard, L. (2002). Occupational Therapy in Childhood. London: Whurr  
44 Publishers. Retrieved from [http://www.findphysio.com/E-](http://www.findphysio.com/E-books/OT%20in%20Childhood.pdf)  
45  
46  
47  
48  
49
- 50 Hung, W. W. Y., & Pang, M. Y. C. (2010). Effects of group-based versus individual-based  
51 exercise training on motor performance in children with developmental coordination  
52 disorder: A randomized controlled pilot study. *Journal of Rehabilitation Medicine, 42*,  
53  
54  
55  
56  
57  
58  
59  
60

- 1  
2  
3 Kayihan, G. B., Hulya (2001). Effectiveness of two different sensory-integration programmes for  
4  
5 children with spastic diplegic cerebral palsy. *Disability & Rehabilitation*, 23(9), 394-399.  
6  
7  
8 King, G. (2009). A framework of personal and environmental learning-based strategies to foster  
9  
10 therapist expertise. *Learning in Health and Social Care*, 8(3), 185-199.  
11  
12  
13 King, G., Currie, M., Bartlett, D. J., Gilpin, M., Willoughby, C., Tucker, M. A., Stratchan, D., &  
14  
15 Baxter, D. (2007). The development of expertise in pediatric rehabilitation therapists:  
16  
17 Changes in approach, self-knowledge, and use of enabling and customizing strategies.  
18  
19 *Developmental Neurorehabilitation*, 10(3), 223-240.  
20  
21  
22 King, G. A., Tucker, M. A., Baldwin, P., & LaPorta, J. (2006). Bringing the Life Needs Model to  
23  
24 life: Implementing a service delivery model for pediatric rehabilitation. *Physical &*  
25  
26 *Occupationnal Therapy in Pediatrics*, 26(1), 41-68.  
27  
28  
29 King, G., & Meyer, K. (2006). Service integration and co-ordination: A framework of approaches  
30  
31 for the delivery of co-ordinated care to children with disabilities and their families. *Child:*  
32  
33 *Care, Health & Development*, 32(4), 477-492.  
34  
35  
36 LaForme Fiss, A. C., & Effgen, S. K. (2007). Use of groups in pediatric physical therapy: Survey  
37  
38 of current practices. *Pediatric Physical Therapy*, 19(2), 154-159.  
39  
40  
41 LaForme Fiss, A. C., Effgen, S. K., Page, J., & Shasby, S. (2009). Effect of sensorimotor groups  
42  
43 on gross motor acquisition for young children with down syndrome. *Pediatric Physical*  
44  
45 *Therapy*, 21(2).  
46  
47  
48 Lawlor, M. C., & Henderson, A. (1989). A descriptive study of the clinical practice patterns of  
49  
50 occupational therapists working with infants and yound children. *American Journal of*  
51  
52 *Occupational Therapy*, 43(11), 755-764.  
53  
54  
55  
56  
57  
58  
59  
60

- 1  
2  
3 Lobato, D. J., & Kao, B. T. (2002). Integrated sibling-parent group intervention to improve  
4  
5 sibling knowledge and adjustment to chronic illness and disability. *Journal of Pediatric*  
6  
7 *Psychology*, 27(8), 711-716.  
8  
9  
10 Majnemer, A. (2009). Promoting participation in leisure activities: Expanding role for pediatric  
11  
12 therapists. *Physical & Occupational Therapy in Pediatrics*, 29(1), 1 - 5.  
13  
14  
15 Miller, A. R., Armstrong, R. W., Mâsse, L. C., Klassen, A. F., Shen, J., & O'Donnell, M. E.  
16  
17 (2008). Waiting for child developmental and rehabilitation services: An overview of  
18  
19 issues and needs. *Developmental Medicine & Child Neurology*, 50(11), 815-821.  
20  
21  
22 Odman, P., Richt, B., & Oberg, B. (2009). Parents' conceptions of intensive group training. The  
23  
24 case of cerebral palsy. *Disability & Rehabilitation*, 31(4), 293-301.  
25  
26  
27 Palisano, R. J., & Murr, S. (2009). Intensity of Therapy Services: What are the Considerations?  
28  
29 *Physical & Occupational Therapy in Pediatrics*, 29(2), 107 - 112.  
30  
31  
32 Schwartzberg, S. L., Howe, M. C., & Barnes, M. A. (2008). *Groups. Applying the Functional*  
33  
34 *Group Model*. Philadelphia, PA: F. A. Davis Company.  
35  
36  
37 Storvold, G., & Jahnsen, R. (2010). Intensive motor skills training program combining group and  
38  
39 individual sessions for children with cerebral palsy. *Pediatric Physical Therapy*, 22(2),  
40  
41 150.  
42  
43  
44 Tandon, R. (2002). Participatory research: Main concepts and issues. In Tandon, R. *Participatory*  
45  
46 *research: Revisiting the roots*. New Delhi: Mosaic books.  
47  
48  
49 Trahey, P. J. (1990). A Comparison of the cost-effectiveness of two types of occupational therapy  
50  
51 services. *American Journal of Occupational Therapy*, 43(11), 397-400.  
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Table 1. Characteristics of the participants

	Number in 2008	Number in 2009	Total number
<b>Administrators</b>	<b>7</b>	<b>6</b>	<b>13</b>
Director	4	4	8
Head of the program	1	1	2
Research coordinator	1	1	2
Change management counsellor	1	0	1
<b>Therapists</b>	<b>7</b>	<b>12</b>	<b>19</b>
Clinical coordinators	2	3	5
Members of the planning committee	5	6	11
-Neuropsychologist	0	1	1
-Occupational therapist	1	1	2
-Physical therapist	1	1	2
-Social worker	1	1	2
-Special educator	1	1	2
-Speech and language therapist	1	1	2
Program therapists not members of the planning committee	0	3	3
-Occupational therapist	0	1	1
-Special educator	0	1	1
- Speech and language therapist	0	1	1
<b>Families</b>	<b>0</b>	<b>5</b>	<b>5</b>
Relation to child			
-Mother	0	4	4
-Father	0	1	1
Child subprogram*			
-Dyspraxia	0	3	3
-Motor	0	1	1
Child's age*			
-5-12 years old	0	4	4

\* Information on child leads to a total of 4, instead of 5, as 2 parents were from the same family.

Table 2. Group-related perceptions according to [themes](#) and [actors](#)

<a href="#">Themes</a>	Group-related perceptions	Adminis- trators	<a href="#">Actors</a> Therapists	Families
<a href="#">1. Environmental contexts</a>	Recognition of a problematic situation ( <a href="#">e.g. waiting times and budget constrains</a> ) and previous group experience facilitate the initiation of the service reorganization	√	√	
<a href="#">2. Actors' practices</a>	Therapists' practices are perceived to be modified significantly by the new service delivery model and the increase in groups	√	√	
	Therapists are reported being inadequately trained in school to provide group interventions and no training was offered by the program before increasing the number of groups	√	√	
	Therapists felt unsupported by the project's leaders in their efforts to provide group interventions		√	
	Clinical coordinators see themselves as having new roles in the service delivery model to coordinate group interventions, but felt unsupported in their new roles	√	√	
	Relations with families were presumed to be modified because of the increase in group interventions		√	
<a href="#">3. Structural issues</a>	Work organization in subprograms and regional locations is challenging for the new service reorganization, including the development of groups		√	
	Groups take time to prepare – increases the therapists' workload		√	
	Referral procedures, support and information tools are lacking to identify children with similar needs and refer them to a particular group		√	
	Fears regarding fewer possibilities to customize services according to needs in the new service delivery model – predominance of groups over other types of services. Need for detailed criteria to help decisions regarding service delivery method of choice		√	
<a href="#">4. Outcomes</a>	Groups allow more children to receive services at time (i.e. increase service accessibility)	√	√	
	Groups foster motivation and generalization of learning		√	√
	Groups contribute to fostering children's social participation and well being		√	√



Concerns about the quality of services provided in groups

√

For Peer Review Only

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**G**ang. Being with peers breaks isolation and motivates children. Contributes to well being.

**R**espond to the needs of a greater number of children. Could help improve service accessibility.

**O**bservation. Parents observe other parents and their children. Children observe their peers. Facilitates sharing and learning.

**U**tilization of a service delivery model integrating different intervention methods.

**P**articipation. Groups create opportunities for practice and facilitate achievement of objectives relating to social participation.

**S**uccess. Children develop new skills and perform new tasks. Successes increase their self-esteem.

Figure 1. Group-related benefits

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8 **G**oals. Objectives of each group need to be carefully selected. Can be centered on general goals (e.g. social participation).  
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10 **R**eferral process. Criteria to identify children with similar needs and mechanisms to refer them to particular groups are required.  
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12 **O**rganization of services (e.g. service coordination) and work organization (e.g. division into specialized teams) need to be  
13 reviewed.  
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15 **U**nsuitable for all children all of the time. Groups should not be used as a one-size fits all modality.  
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18 **P**rofessional practices. Therapists need support to adapt their practice. Training might be needed (e.g. how to moderate a  
19 group).  
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21 **S**upport of logistics is required to prepare and run groups efficiently (e.g. to send invitation to families).  
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29 Figure 2. Group-related issues  
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