Physiotherapy Pathway for Children with CP (NI)

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11th November 2016
Remit from Regional Paediatric Managers Group

Northern Ireland Community Children’s Physiotherapy Services Practice Review
Referral – diagnosis of CP (confirmed or suspected)

Background information

Baseline Clinical Assessment: GMFCS, CP subtype, Gross motor milestones, CPIPs...

Problem list

Intervention
EBP
Gain/Maintain/ Review

Goal setting

Outcome measures

Family meetings

Discharge: empowerment, self management, participation
Physiotherapy Pathway for Children with CP (NI)

Family Meetings

- Parent and child problems and concerns
- Goals
- Intervention
- Outcome measures
Family meeting cycle: Parent and child problems and concerns

For example:

• From baseline assessment – motor skills, quality of movement
• Activities of daily Living – washing and dressing
• Discomfort associated with positioning and/or deformity
• Tripping/poor balance
• Fatigue
• Cosmetic
• Independence – mobility, carer dependence
• Participation in outside activities
Family meeting cycle: Goal setting

- **S**pecific
- **M**easurable
- **A**ttainable
- **R**elevant
- **T**ime Based
## Family meeting cycle: Goal setting

Goal setting: Goal Attainment Scaling (GAS) light Record Sheet

Child’s name: Child A………………………. Age: 4……………………. PARIS Number:…………………………….

Physiotherapist:……………………………………………………… Date:………………………………………………

<table>
<thead>
<tr>
<th>Agreed SMART goal</th>
<th>Baseline Date</th>
<th>Review Date</th>
<th>Achieved</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Supported standing with one hand holding for 2 mins</td>
<td>04/09/16</td>
<td>08/11/16</td>
<td>Yes</td>
<td>Much better □ □ A little better □ □ As expected</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Asymmetric posture with left leg flexed and weight through right leg</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>X</td>
<td>Partially achieved</td>
<td>□</td>
<td>□ Same as baseline □ □ Worse</td>
</tr>
</tbody>
</table>

2. Step standing with one hand holding on left leg for 1 minute | 08/11/16 | 04/01/16 | Yes | Much better □ □ A little better □ □ As expected |

|       |       |            |          | |
|-------|-------|------------|----------|-
| No    | □     | Partially achieved | □ | □ Same as baseline □ □ Worse |
Family meeting cycle: Outcome Measures

- Relevant to goals
- Objective data
- Demonstrates changes
- Serves to foster achievement and motivate
- Accountability
- Research re natural history
- More effective family counselling
- Health service providers
- Reflective practice approach
Family meeting cycle: Outcome measures using ICF-CY
### Family meeting cycle: Outcome Measures using ICF-CY

<table>
<thead>
<tr>
<th>Impairments</th>
<th>Outcome Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>↓ ROM</td>
<td>CPIPs protocol, upper limb ROM as required</td>
</tr>
<tr>
<td>Spinal malalignment</td>
<td>SAROMM</td>
</tr>
<tr>
<td>↓ Strength</td>
<td>Medical Research Council scale for muscle strength</td>
</tr>
<tr>
<td>↓ Selectivity</td>
<td>The Selective Motor Control Test, SCALE</td>
</tr>
<tr>
<td>↓ Hip integrity</td>
<td>CPIPs protocol</td>
</tr>
<tr>
<td>Leg length discrepancy</td>
<td>CPIPs protocol</td>
</tr>
<tr>
<td>Spasticity</td>
<td>Modified Ashworth Scale, Tardieu</td>
</tr>
<tr>
<td>Hypertonicity</td>
<td>Hypertonia Assessment Tool</td>
</tr>
<tr>
<td>Pain/discomfort</td>
<td>PPP, Faces Pain Scale</td>
</tr>
<tr>
<td>↓ quality of gait</td>
<td>Edinburgh gait scale</td>
</tr>
<tr>
<td>↓ functional walking capacity</td>
<td>Six minute walk test, 10m walk test</td>
</tr>
<tr>
<td>↓ balance</td>
<td>TUG, SATCo, Paed Berg Balance Scale</td>
</tr>
</tbody>
</table>
## Activity Limitation

<table>
<thead>
<tr>
<th>↓ Functional mobility</th>
<th>Functional mobility scale, 1 minute walk test, GMFM</th>
</tr>
</thead>
<tbody>
<tr>
<td>↓ Gross motor development</td>
<td>Bayley Scales of Development III, Movement ABC</td>
</tr>
<tr>
<td>↓ Wheelchair ability</td>
<td>Wheelchair skills programme, Dalhousie University, Canada</td>
</tr>
</tbody>
</table>

## Participation Restriction

<table>
<thead>
<tr>
<th>↓ Functional capability and ↑ caregiver assistance</th>
<th>Paediatric Evaluation of Disability Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>↓ Participation in everyday activities outside mandatory school activities</td>
<td>Children’s Assessment of Participation and Enjoyment/Preferences for Activities of Children (CAPE/PAC)</td>
</tr>
<tr>
<td>↓ Attendance &amp; involvement in activity</td>
<td>Participation and Environment Measure for children and youth &amp; Young children’s participation and Environment measure</td>
</tr>
</tbody>
</table>
Family meeting cycle: Intervention

Evidence Based Practice

‘The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical experience with the best available external clinical evidence from systematic research.’ Sackett et al (1996)
Family meeting cycle: Intervention

Evidence Based Practice

EBP in paediatric physiotherapy:
• Patient preferences
• Research evidence
• Clinical Experience
• Service Resources
Family meeting cycle: Intervention

Evidence based diagnosis, health care, and rehabilitation for children with cerebral palsy.

• Child Active rehabilitation approaches
• Compensatory and environmental adaptation approaches
• Health and secondary prevention approaches
Family meeting cycle: Intervention

Child Active rehabilitation approaches

• Early Intervention
• Goal-directed training
• Therapeutic Horse Riding
• Aquatic Exercise
• Child-active physiotherapy during first year following SEMLS
• Treadmill training
• Goal-directed or functional training
• Home programme
• Bi-manual training
• Constraint therapy

(Novak et al., 2014)
Family meeting cycle: Intervention

Compensatory and environmental adaptation approaches

• Standing frames
• Walking Aids, frames and crutches to promote independent mobility

(Novak et al., 2014)
Family meeting cycle: Intervention

Health and secondary prevention approaches

- Casting
- Fitness training
- Hip surveillance
- Electrical stimulation
- Strength training

(Novak et al., 2014)
Evidence based intervention for CP based on typography (Novak 2014)
Evidence based intervention for CP based on typography (Novak 2014)
Family meeting cycle: Intervention

Clinical Experience

• Rebound therapy
• Passive stretches
• Massage
• Therapeutic Taping
• Pilates/core stability
• Bobath/NDT
Family meeting cycle: Intervention

Frequency

• **Gain:** a time limited goal oriented intervention to facilitate change

• **Maintain:** Regular reviews/blocks of intervention to maintain function/ability, minimise risk

• **Review:** Minimum risk of change
Family meeting cycle: Intervention

Timing

Stability and decline in gross motor function among children and youth with cerebral palsy aged 2 to 21 years

Family meeting cycle: Intervention

Timing

Knee - extension, mean range of motion (with 95% confidence interval) related to age at measurement and gross motor function classification system level in a total population of children with cerebral palsy.

Nordmark et al 2009 BMC Med; 7: 65
Family meeting cycle: Intervention

Communication

- Family
- MDT: therapists, consultants
- Neurodisability service
- Gait Analysis Lab
- GP
- Orthotist
- Podiatrist
- Social Worker
- Health Visitor
- Education (statementing, staff training)
- NICPR
- Transition to adult services
- Voluntary support agencies
- Private physiotherapist
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Family Meetings

- Parent and child problems and concerns
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- Intervention
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Thank you
Questions?

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