Questionnaire Survey on the use of Outcome Measures in Assessment & Treatment Evaluation of Children with Cerebral Palsy receiving BTX-A Injection

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Introduction

The idea of clinical governance within the NHS is fairly recent, but one of the fundamental elements of this idea is the use of outcome measures and their importance in clinical practice to evaluate treatment (Chartered Society of Physiotherapy (CSP), 2001). The demand for evidence-based treatment and cost-effectiveness has challenged many traditional practices and has brought pressures on physiotherapists to change attitudes and develop skills (Bower & Ashburn, 1998). As a result of the increasing call for outcome-oriented and evidence-based practice, there are now an increasing number of paediatric measures and instruments specifically geared to the paediatric rehabilitation profession (Helders et al, 2003).

Cerebral Palsy (CP) presents as a disorder of motor function due to a non-progressive (static) lesion of the developing brain and children with CP often have problems in addition to disorders of movement and posture (Budd & Gardiner, 1999). 75% of all cases of CP present with spasticity (Pope et al, 1990). The management of spasticity is complex and physiotherapy has a large role to play in this process. Botulinum A Toxin (BTX-A) has come to the fore in recent years as one method of treating spasticity (Jankovic & Schwartz, 1995).

Aim

To identify which outcome measures are used by physiotherapists in children's centres within the UK during the assessment and treatment evaluation of CP children with spasticity receiving BTX-A injection.

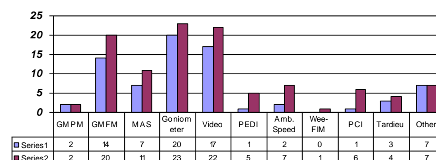
Method

The questionnaire was designed in two sections: to collect demographic information, and to collect data relating to the study objectives. The questionnaire was designed to be as short as possible (Stone, 1993) while still being comprehensive as a form of data collection.

100 centres were randomly selected from the Directory of Child Development Services and questionnaires sent with a covering letter and a SAE.

The data was analysed using descriptive statistics

Figure 1. Bar chart showing outcome measures used by respondents



Key:

Series 1 - the number of respondents who have used the measure in the last 3 months

Series 2 – the number of respondents who have ever used the measure

GMPM – Gross Motor Performance Measure

GMFM – Gross Motor Function Measure

MAS – Modified Ashworth Scale

PEDI – Paediatric Evaluation of Disability Inventory

Amb. speed – Ambulation Speed

Wee-FIM – Wee Functional Independence Measure

PCI – Physiological Cost Index

Tardieu – Tardieu Measure of Spasticity

Results

100 letters were sent out initially, and 60 were returned, of which 49 consented to participate in the study but only 40 were eligible for use.

The mean number of children (n=40) on caseloads was 22 patients with spastic CP which represented 31% of their total caseload and of these only 27% (6 children) were receiving BTX-A treatment. Out of the 40 respondents (n=40), 70% (28) used outcome measures in the assessment or treatment evaluation of children with spastic CP receiving BTX. Those used are shown in Figure 1.

Table 1 shows that the most highly ranked outcome measure was video analysis for the purpose of assessment, and goniometry for the purpose of treatment evaluation. These 2 measures, along with the GMFM were the 3 most highly ranked in both categories by respondents. The 3 commonest reasons for these choices were validity, reliability and that training had been received.

Discussion

Whilst 70% of respondents used outcome measures, 30% did not. The CSP (2000) has 2 core physiotherapy standards that relate to the use of outcome measures **'….standardised, valid, reliable and responsive outcome measure….'** and that **'the treatment plan is constantly evaluated to ensure that it is effective and relevant…'** This could imply that those respondents who did not use any outcome measure are practising outside the standards set by the professional body. This could indicate training needs, time factors and feasibility issues of the use of outcome measures in clinical practice.

Table 1. Score for the frequency of each Outcome measure used in Assessment and Treatment Evaluation

Outcome Measure	Assessment	Treatment Evaluation
GMPM	4	6
GMFM	35	32
MAS	8	11
Goniometer	46	49
Video	47	41
PEDI	2	2
Amb. Speed	1	1
Wee-FIM	0	0
PCI	3	3
Tardieu	8	9
Other	14	14

Conclusion

The majority of respondents (70%) are using outcome measures in the assessment and treatment evaluation of children with spasticity receiving BTX-A. The most commonly used are video, goniometry and GMFM. There is a concern that a minority of practicing physiotherapists are not choosing to use outcome measures as part of this evaluation. If evidence based practice can be developed to improve quality assurance in the National Health Service, physiotherapists can show they are clinically effective by using the tools that have been designed by rigorous methods.

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