
An integrated pathway for children with coordination difficulties in Wakefield

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ABSTRACT

This article explains the development of an innovative service for children with coordination difficulties in the Wakefield district. The project, which was developed in partnership with the Local Education Authority, trains school staff to identify children with movement difficulties and to implement a tailor-made programme. Although in its infancy, the service has already eliminated waiting lists for physiotherapy. This paper explains why the service was introduced, summarises the research evidence underpinning the approach, and describes the integrated pathway devised in Wakefield for this group of children.

An integrated pathway was developed to address coordination difficulties in school-age children in Wakefield. Its purpose was to:

- [1] encourage early identification by training education professionals to recognise coordination difficulties;
 - [2] provide a standardised plan of action;
 - [3] provide graduated group intervention in a familiar environment;
 - [4] reduce inappropriate referrals to therapy services.
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Introduction

Coordination difficulties can have many causes including:

- [1] increasing survival rates of premature babies;
- [2] sensory and/or intellectual impairment;
- [3] limited opportunities to experiment with movement in the early years;
- [4] changes to the way babies are positioned and carried in recent years.

These have all had an effect on children's ability to move confidently and with skill.

One specific movement difficulty is known as Developmental Coordination Disorder (DCD). This group of children provided the stimulus for this project. DCD is thought to affect approximately 6% of the population (Gaines et al 2008, Missiuna et al 2006). The disorder is defined in the American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders (DSM IV 2000) and considered together with the Leeds Consensus Statement 2006. There are at present 4 criteria:

- [1] Performance in daily activities that require motor coordination is substantially reduced given the person's chronological age and measured intelligence - this change may manifest as marked delays in achieving motor milestones

(eg, walking, crawling, sitting) and as dropping things, clumsiness, poor performance in sports, or poor handwriting.

- [2] The disturbance in criterion 1 substantially interferes with academic achievement or activities of daily living.
- [3] The disturbance is not due to a general medical condition (e.g. cerebral palsy, muscular dystrophy), and it does not meet criteria for a pervasive developmental disorder.
- [4] If learning difficulties are present the motor difficulties are in excess of those usually associated with it.

We know this is a life-long condition with associated mental health, secondary medical conditions, reduced independence and poor integration into society particularly when there is a co-occurring disorder, and it affects the way in which the whole family functions (Rasmussen & Gillberg 2000, Cairney & Hay 2005 Chen & Cohn 2003, Drew 2005).

Intervention options have been reviewed most recently in 2007 (Hillier S, 2007). The findings are that any intervention is better than none but that those that target specific skills are more successful. This fits in with current practice in the UK where goal orientated therapy is popular.

Historically, children with coordination difficulties had either been referred directly to therapy by their GP or, more commonly, by their school doctor. Recent reductions in routine screening by school doctors has meant that parents and teachers need to be more alert to children's motor difficulties. Referrals were made to occupational or physiotherapists, who had tended to view these children as a low priority. Valuable time was then lost whilst children waited to be seen, and their school work and sociability continued to be adversely affected. (Dewey et al 2002, Missiuna & Moll 2006).

Health and Education in Wakefield wanted to provide a more unified approach that would become standard in all schools and sustainable across the district. Various researchers have described such joint working as the way forward. (Forsyth et al 2003; Salmon et al 2006). Group work is considered effective in offering an environment where children can persist with skills their peers already possess. (Forsyth et al 2008; Quigg et al 2003; Salmon et al 2006).

Government guidelines encourage agencies to work together in the following documents:

- [1] The National Service Framework (NSF) for Children, Young People and Maternity Services (DoH) suggests that "multi-agency pathways and collaboration between services are essential", therefore services should be "designed around the needs of the child to pick up problems and take preventative action". By 2014 public services are expected to adhere to these recommendations.
- [2] SENDA DfES 2001 recommends regular contact between practitioners in Education and Health to create a "culture of joint working".
- [3] Every Child Matters (Children Act) also encourages cross organisational teamwork to protect children and help them to achieve in the following areas:
 - a. Be healthy
 - b. Stay safe
 - c. Enjoy & Achieve
 - d. Make a positive contribution
 - e. Achieve economic well-being

Background and development

2005 - educational staff in Wakefield were concerned by the lack of therapy intervention for children with coordination difficulties. They felt this was having

an impact on their ability to access the curriculum. The Special Educational Needs Service therefore purchased a motor programme to provide intervention for these children. Some advisory teachers attended training in how to implement it in schools and began a pilot in 8 schools. Teaching assistants ran the groups that had an average of 7 children. Initially the programme was well received, but as it became more widely used, feedback suggested that it did not suit the needs of the Wakefield schools.

2006 - saw the appointment of a Clinical Specialist Physiotherapist to develop and coordinate a service for children with coordination difficulties across the Wakefield district.

The authors, H.A. and T. L. developed an alternative programme that was more flexible, sustainable and accessible throughout Key Stages 1 & 2 (i.e. for children aged 5 to 11 years). Alongside this the pathway was developed to make the referral process more equitable and understandable. This was done in consultation with other professionals and agreed with them.

2007 - the new programme, called "Fit to Learn", was again introduced to a small number of pilot schools, primarily those who had used the previous programme. It was well received as being easy to assess the child's ability, easy to use and enjoyable for staff as well as the children. The authors provided the training for school staff. A teacher and at least one teaching assistant from each school attended. Following the training, the assistant then took the lead in running the group in their school, with the teacher providing mentoring and managerial support.

The training aimed to:

- [1] built on the observational abilities that teachers already possess;
- [2] increased understanding of coordination disorders;
- [3] introduced the pathway and the programme.

Further development training was held for those running groups to improve provision and skill in delivery.

2008 - a high level of interest in the training led to 90% of 125 infant and junior schools completing training by the end of 2010.

A secondary programme – “Fit to Learn Extra”, was piloted in 3 schools to cater for the children who had participated in their junior school but would benefit from the further input and support from a teaching assistant. The feedback was mixed and it seemed that the only feasible way to run the group was as an after school club once a week. This ensured that staff could access the space and equipment they required.

2009-11 - interest started to be received from other education authorities to purchase the training and the programme.

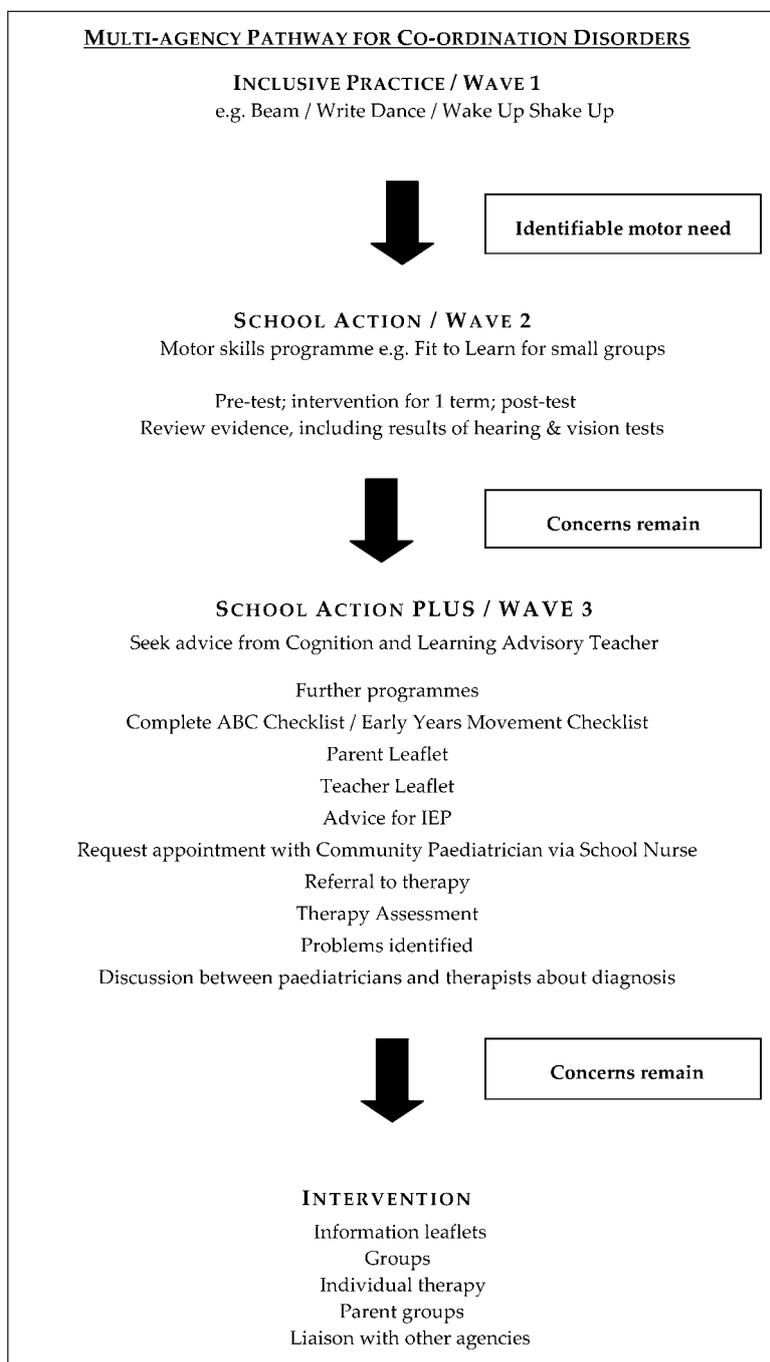
The Pathway (Figure 1)

The aim of this pathway was to:

- [1] improve the understanding of movement difficulties in schools (Stafford 2000, Missiuna & Moll);
- [2] identify children earlier;
- [3] provide an intervention within the familiar school environment (Pless & Carlsson 2000).

Only children who did not improve were to be referred for specific diagnosis and therapy. All individuals and services involved with the process

Figure 1
The Pathway



had agreed to the stages in the pathway. The school is central to the process, and takes the main responsibility for identifying the child with movement difficulties in discussion with parents. Strategies are put in place to improve the child's skills either through the use of the 'Waves of Intervention' (DfES 2005) in whole class (Inclusive Practice / Wave 1 – Figure 1) or through small group intervention (School Action / Wave 2 – Figure 1), in a non-threatening and fun environment.

'Fit to Learn' is a Wave 2 daily group activity of 15-30 minutes. The recommended group size is 6-8 children of similar ages. The programme initially continued for 2 half terms. This was so that children who might display coordination difficulties as a result of the onset of a neuro-muscular condition could be identified and referred to the Health Service without delay. The testing that was scheduled at the beginning and end of each half term was found to be too time consuming so this was revised in response to the feedback and will in future only be carried out once each term.

If improvement is seen between the assessments, then inclusion in the programme continues. The trained school support assistant carries out both the assessments. They take about 10 minutes per child and cover the 10 areas of the programme. To make it easier for the assessors 2 areas have been combined so assessments cover the following 8 categories:

[1] Balance and Postural Control (2 sections combined)

Stand on preferred leg for 10 seconds.

[2] Fine Motor

Using only the preferred hand, place 10 pegs, one at a time, into a pegboard.

[3] Bilateral Skills

Cut between two lines, 2cm apart across an A4 piece of paper.

[4] Body Awareness

Jump backwards five times. Feet do not have to land together.

[5] Ball Skills

Bounce a large ball against the wall and catch after bouncing.

[6] Listening, Planning and Sequencing (2 sections combined)

Carrying a beanbag, walk heel to toe along a one metre line, put the beanbag in the hoop and turn the bucket upside down.

[7] Visual Perception

Copy a circle, triangle and square.

[8] Proprioception and Sensory Perception

With the child's eyes closed, place one arm in a posture. Child copies position with their other arm.

The child is assessed before starting the programme and progress is monitored at the end of the term by the teaching assistants using this 4 point score:

0 – can't do it

1 – can partially do it

2 – can complete

3 – completes and has improved from last time

If the child does not improve, the school will ask an advisory teacher to become involved (School Action Plus / Wave 3 – Figure 1). The advisory teacher will provide individual advice to the school, together with information leaflets for the parents and teacher. The leaflets introduce the concept of Developmental Coordination Disorder (DCD). A standardised and validated checklist (Movement Assessment Battery for Children 2nd edition, Pearson Assessment) is also completed. If the checklist reveals a problem, the school can refer to the community paediatrician. The school nurse checks that eyesight and hearing test results are satisfactory and passes on the referral.

The paediatrician will examine the child and exclude conditions such as muscular dystrophy, cerebral palsy or global delay. The therapy service will then assess the child using the Movement ABC2, and decide on the best course of action taking into account the perceived needs of the child, parents and school staff to set functional goals. Some children will receive a diagnosis of Developmental Coordination Disorder (DCD).

Results and implication for future practice

When the service began in 2007 there was a 2 year waiting list for physiotherapy. There is now no physiotherapy waiting list for this group of children. Referrals for occupational therapy have also fallen.

Collaboration between Health and Education has meant that there is adequate support and expertise to ensure sustainability of the 'Fit to Learn' programme and timely onward referrals. Use of the Pathway has reduced the incidence of inappropriate referrals.

The average assessment time that is taken up with a new referral is 3 hours. This includes the Movement ABC2 second edition (Pearson Assessment), a school

or home visit, identification of functional goals and provision of a programme and report for all interested parties. The children, parents and teachers are asked what the functional difficulties are for the child and in which areas they would welcome improvement. These then become the priority for therapy.

Some children will be discharged at this point with individual programmes, whilst others are offered further support from a range of options such as small therapy groups, after school clubs, holiday activities e.g. cycling, drumming, parent groups, advice leaflets, etc. Children who are discharged can continue to attend a low level sports club set up by the physiotherapist but run by Leisure Services.

Coordination difficulties are commonplace in the classroom. This project seeks to increase the understanding of school staff so that they are equipped to address the difficulties as they arise.

The authors believe that this is the first service of its type in the UK, in which different agencies work together using a standard pathway to identify coordination difficulties.

As the service is still in its infancy, long-term effects are unknown. The early results are encouraging and consistent with findings of earlier research. The principles of the Pathway and the Programme are easily transferable to other situations and enquiries have been received from as far away as Australia.

It is believed that early intervention (Missiuna et al 2003) can reduce the impact of coordination difficulties on day-to-day life. It can increase the child's ability to understand and cope when intervention is received in a familiar and supportive environment without the need to attend their local hospital or health centre (Sugden & Chambers 1998).

One of the authors has begun work on a similar project for use in early years settings. The results of a small pilot project appear encouraging.

A key factor in continued success will be schools' ability to maintain momentum. Ongoing training should facilitate this, but it will need regular review. At the time of writing proposed cuts in public expenditure have yet to bite. It will be interesting to see if collaborative projects such as this can survive a more austere spending environment.

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