The One Child, One Chair project was an 18 months service development focusing on children with complex physical disabilities who have multiple static and mobile seating for home/education. This development reviewed the efficacy of the provision of ONE customised seat evaluating their posture, comfort, activities of daily living (ADL) and lifestyle at home/education.

This presentation aims to present the findings of the One Child, One Chair service development (Sept 16 to March 18) which explored the efficacy of the provision of one customised seat for children who are functioning at or to an equivalent level to the gross motor classification system (GMFCS) for CP level 3-5. Quantitative and qualitative outcomes were used to evaluate posture, comfort, ADL, lifestyle needs and finance.

Background
Concerns were initially raised by community therapists (Leicestershire Partnership Trust) that children with an equivalent GMFCS of 3-5 often had up to 5 seats. These included a buggy, static seats for home, special needs education, mainstream education, and also an “easy chair”. The commercial seats were not meeting all the children’s postural and comfort needs in the short and long term. The paediatric community therapy team approached Blatchford Clinical Services at the Leicester Wheelchair Service to ascertain if we could work in partnership to jointly assess for ONE customised chair that would fully meet the child’s postural and lifestyle needs. This service development was carried out to guide us in developing our clinical practice, and to ascertain if this was a development that would benefit both child/family/education & healthcare services.

Working in partnership, the criteria, provisos and pathways were jointly agreed between the two services, working closely with the commissioners and families throughout.

Techniques and clinical detail
All children who met the criteria underwent a full postural management assessment utilising the Oxford Enablement Centre Assessment Tool which uses descriptive data for posture in sitting and lying, joint range of motion (ROM) recording for the lower limbs, and photographic recording of spinal posture. Spinal mapping was mandatory for children with fixed spinal and/or pelvic deformities. All participating children had a 24 hour postural management programme in place in education and home, and there was no commercial static or mobile seat that fully met their needs. Children were assessed by a Blatchford seating engineer, community therapist and wheelchair service clinicians to determine, in consultation with family, which customised seat best met the child’s needs. All funding of seats for this project was through the Leicester and Leicestershire & Rutland CCGs.

Results
On provision of the customised seat on a mobility base, community therapists, child, family and education participated in providing us with outcome measures. These included scoring by family and clinician on comfort and posture of child in existing and customised seat at the handover appointment. This was followed by a telephone interview with family at 1 month post-handover to family, and a questionnaire to education to gather information on posture, comfort, ADL, use of the chair in the different environments, and manual handling. Financial comparisons were also compiled to look at cost differentiations between the purchase of one customised seat that is used for the child’s static and mobility needs and the cost of multiple chairs in the various environments.
Discussion

Over 70 children were considered for the project, and this service development confirmed that there are children for whom commercially readily available seating equipment does not address their postural and functional seating needs. The project identified that there was a gap in local service provision as regards addressing the static seating needs of some children with complex postural needs. The outcomes support the view that this can be successfully addressed through one customized chair which addresses both static and mobile seating needs. Close partnership working of local NHS Children’s Physiotherapy services (Leicestershire Partnership Trust) and the commissioned local provider for mobility equipment (Blatchford) was pivotal to the development and completion of this project.

Outcomes have been collated over an 18 month period from clinical (comfort, posture), environmental and financial perspectives. Feedback from school staff around the practical issues of using customized seating has brought about changes in the special seating provision.

Due to the success of the project this practice will soon become mainstream with deployment of finances to support this work.

Next steps include working closely with adult commissioners to see if this way of addressing seating needs can be rolled out on a larger scale, and a pathway put in in place for adults with complex postural needs.

References

Sahinoğlu, D., Coskun, G. and Bek, N., 2016. Effects of different seating equipment on postural control and upper extremity function in children with cerebral palsy. Prosthetics and orthotics international, p.0309364616637490
The Children’s Occupational Therapy and Physiotherapy services have worked together to improve the existing postural management assessment guidance specifically for children with a neurodisability. The service now offers an annual multi-disciplinary assessment, using the MPD 24-7, to any non-ambulant child or young person with a neurodisability.

**Aims & Objectives**
To provide a streamlined approach to assessment and provision that is cost-effective and appropriate.

Following attendance at the Oxford posture management short course it was apparent that the local knowledge base was not good enough to provide an adequate service for children and young people. Working with colleagues from other NHS trusts within Gloucestershire the pathway, assessment form and report summary were reviewed.

A new pathway was established concentrating on night-time support as seating provision was well established. However, reflecting on learning, prescription was not based on a full assessment, so the seating assessment process would change.

**Standards/guidelines**
The MPD 24-7 (Pope, 2007) including the Neutral-0 method of measuring joint range (Ryf, Weyman 1999) was the established assessment of choice.

NICE guidelines for the management of spasticity (NICE, 2016) and management of young people under 25 with cerebral palsy (NICE, 2017) include some guidance on the management of posture.

**Technique/Assessment**
Children were identified and offered a multi-disciplinary assessment in a central clinic. Clinics ran monthly with two appointments available. A therapy assistant scribed during the assessment.

**Prescription**
The team reviewed all available static chairs to identify the specific features as a guide to match with assessed clinical need. This work has just been repeated to ensure our knowledge is up to date as the market changes.

**Training**
It was recommended that all band 6s and appropriate 7s completed the short course at Oxford, and that an additional lead completed the Oxford post-graduate course.

**Electronic recording**
Work was completed with the clinical systems team to create a web-based format that transferred the information into a letter/report with minimal additional time spent.

**Results/Assessment**
There is a greater availability of assessments with a corresponding increase in staff training and access to clinic space in special schools. In most weeks there are around six assessments across the county. The scribe role has become an analyser role carried out by a therapist who records the data, identifies critical measures, and takes the lead in setting up the posture on the edge of the plinth.
Prescription
A decision-tree has been developed to assist with clinical reasoning
The number of multiple assessments with company representatives has reduced
The use of refurbished chairs has increased
Children are sitting in more appropriate seating
There has also been a significant increase in the number of custom-moulded seats that are being prescribed following a more thorough assessment.

Training
All band 6s and some 7s have attended the short course. Two band 7s have completed the postgraduate course. There is mentoring support in place, and resources have been developed on three levels to support the assessment and its evaluation.

Electronic recording
The assessment form is completed by a therapist who records the data and analyses the critical measures during the assessment, then takes the lead on positioning on the plinth. This reduces the assessment time. The form generates two different reports – one containing all the data which is shared with wheelchair services, and a briefer report outlining critical measures, clinical reasoning, and an action plan.

The service is continuing to develop in most areas. Anecdotally there are an increasing number of children being seen by the service; postural management assessments are being conducted early and for some children deformities have already developed, so there is further development work to do with the neo-natal unit to identify children with postural needs much earlier.

The feedback from parents and carers is positive and the introductory level of information has been written with input from parents. Clinical reasoning is encouraged to be clear and prescriptive as a learning tool and to enable any staff member with postural management skills to be able to interpret the assessment data and cover interventions if required.

It is expected that a postural management assessment is completed prior to any seating or lying assessments for equipment, and forms the basis of discussion at the assessment. This has been quite a cultural shift carefully managed with clinicians and management. The service has been recognised within the adult services of the trust and a similar pathway is being developed. The benefits of postural management have been clearly outlined with commissioners in terms of cost efficiency.

References