

# **A preliminary investigation into the effectiveness and cost-effectiveness of speech & language therapist led interventions for children with speech sound disorder versus programmes delivered by assistants**

## **Background and Rationale**

Children with speech disorder are the largest single client group referred to NHS speech and language therapy (SLT). Whilst the speech problems for as many as 75% of children are known to resolve between the ages of 3 and 6, a substantial number have speech sound disorder (SSD) which continues beyond the age of typical development. Prevalence rates for PSD vary with rates between 2.3% and 24.6% estimated for children between ages 5 and 7. However, recent research by the main applicant obtained a prevalence estimate of 3.6% for children aged 8 within the Avon Longitudinal Study of Parents and Children (ALSPAC).

When SSD persists beyond age 5, children are at risk for poor life outcomes in terms of education, employment, relationships, criminal behaviour and mental health. The long term implications can lead to a cycle of disadvantage and increased costs to the nation in terms of welfare, education and NHS support.

Many children receive NHS intervention for SSD at school. In some areas including Bristol, this is typically delivered by SLTs. In other areas including Weston, NHS SLT provision for some children with SSD consists of providing a programme which is delivered by SLT assistants. Anecdotal evidence suggests that in other parts of the country, programmes for children with SSD are delivered by teaching assistants in school. The decision regarding delivery of intervention by SLT or by assistant has been determined by service needs rather than research evidence.

Recent research from the main applicant suggests that intervention for children with SSD may be ineffective when delivered by non-SLTs. This study compared the outcomes for children who received intervention from a computer programme facilitated by a teaching assistant with children who received no intervention. No difference was identified between the two groups. It is unclear whether this was because the computer delivered intervention was ineffective or because it was delivered by an assistant rather than a SLT, who would have been able to modify the programme depending on individual children's responses.

There is a need to identify the impact on outcomes when intervention for children with SSD is delivered by SLTs versus assistants. If no difference between the two is determined, this will lead to significant cost savings to the NHS in terms of SLT time. Alternatively if a difference between the two treatment conditions is observed, an understanding of the degree of difference in outcome observed and the cost benefits of SLT versus assistant provision relative to the outcomes needs to be determined to guide future NHS provision for children with SSD.

In a recent prioritisation exercise carried out with specialist SLTs, direct versus indirect provision for children with SSD was identified as the 5th most important priority out of 23 priorities identified for research. With regards to local health concerns, improving the health of children is identified as a key priority for Bristol CCG, with a particular aim to ensure that all children have access to high quality services in order to ensure the best start in life.

## **Aims and objectives**

To estimate the impact of SLT led versus assistant led intervention for children with SSD on outcomes in speech. Specifically to:

- Explore the efficacy of SLT led versus assistant led interventions
- To examine the cost associated with SLT and assistant led interventions
- To gather information that will help to inform a future clinical trial