

The Cleft Collective Speech and Language Study

The Cleft Collective Speech and Language Study (CC SL) is working in partnership with the Cleft Collective Cohort Studies – a large scale national study of children born with cleft lip palate. The aim of the CC SL study is to create an adequately powered, detailed observational resource for the study of the early speech and language development of children born with cleft palate. The initial investigation will seek to identify factors which are associated with persistent speech disorder in children born with cleft palate.

However, it is anticipated that this dataset will be a resource for use by clinicians and researchers in the future who want to investigate other aspects of speech and language development in this group of children. In common with the main Cleft Collective dataset, researchers who wish to make use of the data will be required to submit a proposal to the executive team responsible for the data and will need ethical approval but once that is obtained, a wide range of research questions could be investigated using the data.

Why is this important?

Although clefts are generally repaired within the first year of life in the UK, and some affected children develop typical speech patterns, there is evidence that more than 50% of children born with a cleft palate require SLT intervention at some point. Indeed, a review of speech outcomes from the Cleft Speech Audit Group found that 19% of 5-year-olds and 4% of 12-year-olds were judged to be impossible to understand or only just intelligible to strangers.

When problems with speech persist, either because of reduced intelligibility or acceptability, there can be lifelong consequences. Whilst the type and degree of cleft are undoubtedly important in speech outcome, other factors related to the child's physical and psycho-social development as well as environmental and genetic factors are thought to play a part. This cohort study provides a unique opportunity to look at the speech and language development in a large group of children born with cleft palate alongside a wide range of other factors which may play a part in explaining the variance in speech outcome. The findings from this study will help clinicians, particularly speech and language therapists, as the data will provide information on which factors are important and should be encouraged and promoted in interventions.

What data is being collected?

We are collecting data on children's early vocalisations and interactions with their caregivers as well as data on their speech and language development at different time points, hearing and surgical history.

Data relating to the social, emotional, behavioural and cognitive development of the child, and the social, economic, psychological and health status of the mother and her partner, collected by the Cleft Collective Birth Cohort study will also be included in the analysis.

How and when is the data being collected?

The first stage of data collection specific to this study will be at 13 months. Recordings of children's speech and interaction patterns made over the course of a single typical day when the child is aged 13 months using the LENA (Language Environment Analysis) system will be carried out. This will provide a sample of the child's vocalisations at this early stage in their development plus information on conversational turns between the adult caregiver and the child. Parents will be sent the device along with instructions on how to use it. For more information about the LENA recorder and an explanation of how to use it, watch this video: [Click here ...](#)

In addition, parents will be asked to complete a questionnaire on their child's speech and language development at this time point. Parents will also be given a hearing record which they will be asked to take with them to all hearing assessment appointments. They will also be asked to take this to speech and language therapy appointments. The information on this record will be of interest to the speech and language therapist and will inform their management. Further data will be collected from speech and language therapists during routine speech and language therapy assessments at ages 24 months (where available) and 36 months.

What will happen to the data?

The LENA recordings will provide an automatic analysis of the number of conversational turns used throughout the day, the number of child vocalisations and the quality of the audio environment. In addition, between four and six 5-minute segments of the sample of child vocalisations will be analysed in terms of phonetic inventories and syllable/babble patterns. The scores from all these analyses will be uploaded to a database together with the results from the developmental questionnaire given to parents at age 13 months, the hearing record and the speech and language assessments at age 24 months and 36 months.

These data will form a dataset which, in combination with the dataset from the Cleft Collective Birth Cohort study, will become a large and comprehensive resource for future researchers. The initial investigation for the CC SL study will use statistical analysis (multiple linear regression) to look for associations between speech outcome at age 36 months and possible risk factors identified through the psychology questionnaires, parent interaction measures, babbling and speech patterns at age 12 months and speech output at age 24 months.

How can I get involved?

This research plan has been developed in consultation with the lead speech and language therapists for cleft palate throughout the UK. If you want to know more about the study, you could talk to your local cleft centre speech and language therapy team if you are based in the UK, or you could contact Dr Yvonne Wren, principal investigator for the CC SL study Yvonne.wren@speech-therapy.org.uk. Or please see below and click on the Project Participant link.

Useful links:

Cleft Collective www.cleftcollective.org.uk

Cleft Special Interest Group for speech and language therapists www.cleftsig.co.uk

Royal College of Speech and Language Therapists www.rcslt.org

Researchers:

[Yvonne Wren](#)

Publications: