

## Clinical validation of the Computer Articulation Instrument (CAI)

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Children with speech sound disorders (SSD) form a heterogeneous group, with respect to severity, etiology, proximal causes, speech error characteristics and response to treatment. Recently, we developed and collected norm-data for the Computer Articulation Instrument (CAI): a battery of speech production tasks to diagnose speech delay and subtypes of SSD in children at the age of 2 to 7 years.

The present paper presents data from a series of studies on clinical groups of children referred for speech assessment. Aim of these studies is to further validate the CAI, to determine its sensitivity for detecting speech delay, and to determine the differential diagnostic power of the resulting speech profiles. At the conference, comprehensive speech profiles from approximately 100 children in two clinical contexts are available: (1) first referrals of children suspect for speech or language delay (typically at preschool age), and (2) children with persistent speech and language difficulties in special education at the level of kindergarten and primary school. The preliminary results suggest that despite considerable overlap in speech symptoms, the tasks are sensitive in diagnosing speech delay, and yield profiles related to subtypes of SSD; these profiles express continuous traits rather than categorical diagnostic characteristics.