

The relationship between articulator movement and
error consistency in childhood apraxia of speech
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Functioning of the oral articulators in children with childhood apraxia of speech (CAS) is not well understood. Identifying the parameters of articulator movement that breakdown in this population is an essential step toward understanding the underlying deficit in CAS. The present work examined oral articulator movement in children with CAS and their age-matched, typically developing peers during speech tasks with varying linguistic demands. Lip and jaw kinematics were studied using a facial capture system. Both accurate and inaccurate productions were examined to study whether the duration, displacement and velocity of articulator movement differed between children with CAS and those with typically developing speech and language skills. In addition, the relationship between articulator movement and error consistency was explored. Preliminary findings showed longer movement durations in the children with CAS than in the typically developing children. Displacement and velocity into oral opening was greater in the typically developing children than the CAS group. In contrast, displacement and velocity into oral closing were similar between groups. These early findings support the notion that motor processes may differ between children with CAS and those developing speech normally.