In previous studies, children with speech sound disorders, including childhood apraxia of speech, have demonstrated higher speech movement variability than their typically developing peers and typical adults. Likewise, nonwords tend to generate higher speech movement variability in both children and adults. In the interest of replication (Open Science Collaboration, 2015), this study compared lip aperture variability in children with childhood apraxia of speech and other speech sound disorders, typically developing children, and typical adults across three different conditions: non-words with trochaic versus iambic lexical stress; two-syllable non-words versus four-syllable non-words; and word-level production versus phrase-level production. An infrared camera system was used to track 3D movement data. Differences in lip aperture variability measures will be reported.