Lip kinematics in people who stutter: Comparisons within and across days. Aravind Kumar Namasivayam & Pascal H. H. M. van Lieshout, Oral Dynamics Lab, Graduate Dept. of Speech-Language Pathology, Univ. of Toronto, Toronto, Canada.

Various studies have claimed a relationship between articulator movement variability and stuttering etiology (Zimmerman, 1980), severity (McClean, Levandowski & Cord, 1994), and treatment outcome (Story, Alfonso & Harris, 1996). Less researched is the issue of short and long-term movement variability and its relationship to stuttering. Alfonso and Van Lieshout (1997) found that for both people who stutter (PWS) and control speaker's (CS) discrete spatial and temporal indices of movement characteristics were not stable across three measurement sessions spaced 2 weeks apart. For the current study, we predict that if PWS have an inherent difficulty in spatiotemporal control of articulatory movements then they would be more variable in their movements both within a given day and across days, in comparison to CS. To this end, 5 PWS and 5 fluent speakers repeated a set of non-words at 2 different rates (normal and fast) across three test sessions (T1, T2 on the same day, and T3 on a separate day). Means and standard deviations of amplitude, peak velocity, duration and the cyclic spatiotemporal index (cSTI) for upper and lower lip movements were calculated. The findings indicated that PWS made larger, faster and more variable upper lip movements than CS. No significant group x session interaction was found for any of the measured variables, indicating that spatio-temporal characteristics of articulatory movements of PWS and CS remain stable within and across test days. Interesting practice effects were also observed, which will be discussed in the poster presentation.